



The Community Health Worker's Sourcebook

A Training Manual for Preventing Heart Disease and Stroke



**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION**



Dear Community Health Workers and Trainers:

Cardiovascular disease (CVD), which includes heart attack, stroke, heart failure, and other conditions, is a main cause of death and disability in the United States. Every 45 seconds someone suffers a stroke, and every 3 to 4 minutes a stroke kills someone. Every 26 seconds someone has a heart attack, and about every minute someone dies from one.

There are many ways people can protect themselves from CVD. People can reduce their risk by making lifestyle changes, such as maintaining a healthy weight; being more physically active; eating more fruits and vegetables; eating less salt, sugar, and animal fat; avoiding excessive intake of soft drinks and alcohol; and avoiding or stopping smoking.

People can also reduce their risks by checking and keeping their blood pressure and cholesterol under control; talking to and keeping appointments with their doctors and nurses; and taking their medicines as prescribed. If a CVD event occurs, people can increase their chance of survival and minimize the damage by knowing the warning signs of heart attack, stroke, and heart failure; knowing how to prepare for CVD emergencies; and understanding the importance of calling 9-1-1 for help.

The Community Health Worker's Sourcebook: A Training Manual for Preventing Heart Disease and Stroke is a user-friendly curriculum that community health workers can use in their training and also as a resource. The sourcebook offers basic information and activities to increase skills in preventing heart disease and stroke.

Please use this sourcebook to lead others to healthier lives. You can make a difference.

Sincerely,

A handwritten signature in black ink, appearing to read "Darwin Labarthe". The signature is fluid and cursive, written in a professional style.

Darwin Labarthe, M.D., M.P.H., Ph.D.
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About *The Community Health Worker's Sourcebook: A Training Manual for Preventing Heart Disease and Stroke*

In the United States, community health workers (CHWs) help us meet our national Healthy People goals by conducting community-level activities and interventions that promote health and prevent diseases and disability. CHWs are trusted, respected members of the community who serve as a bridge between their community members and professionals in the field of health and human services. They provide an important service by establishing and improving relationships between these professionals and members of the community. As community health educators and role models, CHWs promote, encourage, and support positive, healthful self-management behaviors among their peers. As community advocates, CHWs help people get the services and follow-up care they need. CHWs serve as patient and community advocates, as “coaches” for disease management, and as patient “navigators,” guiding patients through the health care system. They also strengthen their community’s understanding and acceptance of medical care. The recognition of their successes has led to recommendations that CHWs be included as members of health care teams to help eliminate racial and ethnic disparities in health care (see Appendix A: Resources at the end of this sourcebook).

The sourcebook contains information and activities on heart disease and stroke and on the major risk factors for these diseases in adults. It also contains information on risk factors that begin in childhood. Additionally, it addresses people’s adherence to treatment and their communication with health care providers. Because the sourcebook contains some technical information, it is **recommended for CHWs who already have some experience in their profession**. The sourcebook **is not a replacement for basic CHW training**, which addresses core skills (See *The National Community Health Advisor Study*, Chapter 3: Core Roles and Competencies of Community Health Advisors pp. 11–17; May 1998 University of Arizona, Tucson, Arizona, in Appendix A for more information). Examples of some basic CHW training curricula are listed in Appendix A: Resources at the end of this sourcebook. Although the sourcebook does not address “patient navigation,” Appendix A lists a link to a useful online toolkit that contains information on the topic; also, a future online version of this sourcebook will provide updated information on patient navigation.

The sourcebook is a resource that builds on strong partnerships between the National Center for Chronic Disease Prevention and Promotion at the Centers for Disease Control and Prevention (CDC) and other agencies and organizations. The material in the sourcebook has been adapted from *The*

Women's Wellness Sourcebook: Module III: Heart Disease and Stroke was developed for CHWs by the International Medical Services for Health, an international nonprofit organization. Staff within CDC have updated, reviewed, provided additional content, and pilot-tested the sourcebook. They have done so in partnership with the University of Alabama at Birmingham Research Prevention Center; the American Heart Association; the American Stroke Association; the National Heart, Lung, and Blood Institute (NHLBI); the Indian Health Service (IHS); the National Institute for Neurological Diseases; and the Oak Ridge Institute for Science and Education. The sourcebook reflects the latest research and national guidelines on heart disease and stroke and their prevention.

The sourcebook follows the familiar format of the well-known NHLBI training curricula *Your Heart, Your Life: A Lay Health Educator's Manual* (www.nhlbi.nih.gov/health/prof/heart/latino/eng_mnl.pdf) and *Honoring the Gift of Heart Health: A Heart Health Educator's Manual for American Indians and Alaska Natives* (www.nhlbi.nih.gov/health/prof/heart/other/aian_manual/index.htm). This format makes the sourcebook a compatible training companion for those familiar with the NHLBI training manuals.

The sourcebook references the Web sites and products of other federal agencies and of private or not-for-profit organizations. A reference in the sourcebook to a specific Web site, commercial product, process, service, or company does not constitute its endorsement or recommendation by the U.S. government or by CDC.

We thank you for your interest in this new resource. We welcome feedback on your experiences in putting it to use. We are producing a limited number of hard copies of the sourcebook, but we plan to make English and Spanish language versions available on CDC's Heart Disease and Stroke Web site in the near future. Please send your comments on this sourcebook to:

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We wish to acknowledge our appreciation for community health workers everywhere for their dedication to improving the health and well-being of their fellow community member

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Overview

Community health workers (CHWs) can play a critical role in promoting healthy living by educating community members about heart disease and stroke prevention and by helping people understand the importance of health care self-management, especially in underserved communities throughout the United States.

The Community Health Worker's Sourcebook: A Training Manual for Preventing Heart Disease and Stroke serves two purposes: 1) as an instruction manual for training CHWs and 2) as a reference and a resource for CHWs working with community members. The sourcebook may be used as an instruction manual by college instructors, health educators, nurses, and other health care professionals at health departments, community clinics, community colleges, and other organizations and agencies.

Experienced CHWs should be included as part of the training team. However, the sourcebook is not intended as a train-the-trainer manual for CHWs to use with people in the community (as are the curricula *Your Heart, Your Life: A Lay Health Educator's Manual* and *Honoring the Gift of Heart Health: A Heart Health Educator's Manual for American Indians and Alaska Natives*) because the sourcebook chapters are too detailed. In addition to providing guidance to trainers, the sourcebook is meant to serve as a reference and a resource 1) for CHWs working with community members in preventing heart disease and stroke and 2) for CHWs working with those who already have heart disease, or who have already had a heart attack or stroke. In our pilot training using this sourcebook, we found that the CHWs wanted access to the entire sourcebook during the training. The sourcebook contains a variety of handouts, which are appropriate for CHWs to use as tip sheets and to give to community members as aids for understanding and living with heart disease and stroke disability.

After completing the sourcebook, CHWs should—

- Have a basic understanding of how the heart and blood vessels work.
- Know risk factors for and causes of heart disease and stroke.
- Know the warning signs of heart attack and stroke.
- Know the signs of heart disease and other conditions that can lead to heart attack and stroke.
- Know the most common treatments for diseases of the heart and blood vessels, for heart attack and stroke, and for contributing conditions, such as high blood pressure, high blood cholesterol, and diabetes.
- Know how they can help people in the community who are living with heart disease or a stroke-related disability take care of themselves, and prevent a second heart attack or a second stroke.

- Be able to work with communities and community members to prevent heart disease and stroke by encouraging healthy eating, physical activity, tobacco control, and stress reduction at the individual, family, and community level.
- Be able to show people how to take greater control over their health.

Trainers working with CHWs can teach the sessions (chapters) in the sourcebook from beginning to end, or they can teach individual lessons as needed. The first chapter is an overview. It is followed by chapters on stroke, heart attack, and two related cardiovascular diseases—heart failure and atrial fibrillation (Chapters 2 to 5). The next four chapters (Chapter 6 to 9) cover related physical and mental health issues, most of which are risk factors for heart disease and stroke: depression and stress, high blood pressure, high blood cholesterol, and diabetes. The following two chapters (Chapters 10 and 11) focus on talking to your doctor and taking medicine. Four chapters (Chapters 12 to 15) provide information on lifestyle behaviors that can significantly reduce the risk for heart disease and stroke or can reduce the chances for a second heart attack or stroke. These chapters discuss healthy eating and weight control, physical activity, and tobacco control. The final chapter (Chapter 16) addresses preventing heart disease by encouraging healthy lifestyle behaviors in children and teens. Appendix A contains selected resources for the trainer and the CHWs to use. Finally, Appendix B contains medicine charts that the trainer may or may not choose to use or provide to the CHWs.

Note to trainer: Two commonly used terms found throughout the sourcebook are *diagnose* and *prescribe*. You may want to define these terms, in lay terms, for the CHWs.

Diagnose means to identify or find the cause of an illness or disorder in a patient through a physical exam, an interview, and medical tests.

Prescribe means to recommend a good medicine to help a patient.

How to Use the Sourcebook

Each of the chapters is designed to be a learning session. Each of the 15 chapters in the sourcebook contains—

- An overview—an introduction to the topic and why it is important.
- A lesson—what CHWs should know about the topic.
- A summary—a review of the key points.

The format of the instruction for the 15 sessions is conversational. The sessions are intended to be taught in an informal manner with as much input from, and interaction with, the CHWs as possible using principles of adult and popular education.

Instructors should explain at the beginning of the course that the instruction is informal and that questions and comments are encouraged. If the CHWs are reluctant to speak out, the instructor should look for visual cues (for example, questioning or puzzled looks) that signal the need to stop and ask if anyone has a question.

The lesson in each chapter provides an opportunity for active discussion by introducing a handout to be reviewed and discussed, a group activity, or a structured group discussion. Each opportunity for interaction is identified by a symbol.



Handout



Activity



Discussion

Overheads and slides are not provided, but pictures that promote understanding of the topics are provided in the handouts. Instructors should provide their own visual aids if they believe that more graphics are needed to represent their communities.

Excellent sources for visual aids, and for culturally appropriate activities for CHWs to do with community members, to promote heart-healthy and stroke-free living, are the educational materials available from the National Heart, Lung, and Blood Institute (NHLBI), especially the training manuals *Your Heart, Your Life: A Lay Educator's Manual* (www.nhlbi.nih.gov/health/prof/heart/latino/eng_mnl.pdf), and *Honoring the Gift of Heart Health: A Heart Health Educator's Manual for American Indians and Alaska Natives* (www.nhlbi.nih.gov/health/prof/heart/other/aian_manual/index.htm).

Also, check Appendix A for sources of other educational materials.

Before Beginning the Training Sessions

Instructors should read through the entire sourcebook. As they review it, they should consider the following suggestions for enhancing the curriculum and involving other community providers in the education of CHWs. If the trainer does not already work with the organizations or persons mentioned below, he or she may need as long as six months to establish partnerships before beginning the training course.

- Arrange for CHWs to get professional training on taking blood pressure and pulse measurements if they are not able to get this training themselves.
- Arrange for CHWs to get training in CPR (cardiopulmonary resuscitation) and in the use of an AED (automated external defibrillator).
- Arrange, if possible, for CHWs to visit stroke and cardiac rehabilitation centers and hospital emergency departments to view the equipment used for stroke and heart attack patients and to meet staff. Perhaps the staff could review the tests and equipment used and answer questions on site.
- Invite emergency medical technicians (EMTs) to class, or take the class members to an EMS (emergency medical services) training center to learn more about signs of heart attack, heart failure, and stroke; the importance of calling 9-1-1; and what is done during transport to the hospital in order to keep people alive.
- Invite a pharmacist to the class so that students can learn tips for medicine management and ask questions. Perhaps the pharmacist could review the “Medicine” handouts (located in the Appendix B).
- Teach or arrange for CHWs to learn stress-reduction techniques, such as deep breathing and visual imagery.
- Invite local staff to the class, or arrange for the class members to visit local human resources and medical agencies to learn how to bridge the gaps in basic living and medical needs in order to support patient self-management.

- We recommend that trainers also research local community resources and prepare a resource manual for the CHWs. There may already be community resource handouts to which information could be added (for example, caregiver support group information; locations and times of free blood pressure screenings or measurements; locations of hospitals designated as “stroke centers”; locations of the closest hospitals in the CHWs’ neighborhoods; and locations of clinics and other resources for getting free or low-cost medications, blood pressure machines, bathroom scales, and other needed medical items).

For the Instructor

The average instruction time for each session (each chapter) is approximately 2½ hours. Some chapters, such as Chapter 10: Talking to Your Doctor and Chapter 11: Taking Medicine, take less time to cover. Others, such as Chapter 9: Diabetes and Chapter 12: Healthy Eating and Weight Control, may require more time. The length of time for each session will be determined mainly by how involved the CHWs are in the discussions.

Your Heart, Your Life: A Lay Health Educator’s Manual offers the following tips for instructors.

Breaks

You should take a short break in the middle of each session. You may want to use the time to have participants do some easy stretches.

Refreshments

You may want to serve a small, heart-healthy snack and a beverage during the break. Some ideas for heart-healthy snack foods are salsa with baked unsalted tortilla chips, fruits or vegetables with low-fat dip, juices, and water.

Working with Your Group

Leading the Group

- Get to know the members of your group. They may have different backgrounds, interests, and needs.
- Use words and terms that are familiar to the people in your group. A banana is known as a *plátano* to some and as a *guineo* to others. Oranges may be called *naranjas* or *chinas*.
- Encourage the group to ask questions to
 - Help them see how the information applies to their lives as well as their community work.
 - Help them remember what they learn.
- Occasionally summarize key points and concepts.
- Keep the sessions flowing smoothly so everyone stays interested and involved.
- Be ready to deal with people who talk too much. Thank the person for sharing his or her opinion. Then quickly ask if anyone else has something to share.
- Help CHWs who do not read or write well in a way that will not bring attention to them.
 - Offer help. Do not force anyone to accept help.
 - Change the activity to a group discussion.
- Watch for clues from CHWs who do not understand; such as,
 - Puzzled looks
 - Wrinkled foreheads
 - Looking away from you(Try to present the information in a different way if you see these signs.)

Motivating Group Members

- To keep CHWs motivated, praise or reward their efforts.
 - Give praise when it is deserved. Doing so gives the praise more meaning.
 - Praise people in front of others. Doing so can help them stay committed.
- Encourage the CHWs to share their opinions.
 - Show interest in the members and what they have to say.
 - Be patient. Some people may not speak because they have never been asked to share their opinions in a group setting.
 - Try to involve everyone in the discussion and activities, but do not force anyone to speak. People will speak up when they become used to the group.

Taking Small Steps toward Change

- Tell the CHWs that people are more likely to develop new habits if you promote small changes, slowly. This approach takes patience but often brings success.
- Relate new concepts in the lessons to the CHWs' work and personal lives.
- Provide opportunities for the CHWs to practice new skills.

Getting People to Come to the Sessions

Remind the CHWs that it is important to come to all the sessions. Tell them that they will—

- Learn something new at each session.
- Help community members.
- Socialize and meet people.

Answering Hard Questions

Remember that it's okay not to know all the answers! Tell the group that you will have the correct answer after the break or by the next training session. Call a local health educator, nutritionist, nurse, or doctor to find the answer.

Keeping People on Track

If a CHW gives incorrect or incomplete information during a session, provide the group with the correct information. Give the CHW credit for any part of his or her answer that is correct. Tell the group that people often hear incorrect information and believe it to be fact. Tell the CHWs that one important reason why they are taking the course is to get correct information.

And finally...

Have a good time. You are doing an important service for your community.

What Community Health Workers Can Do

Throughout the sourcebook chapters you will find lists of helpful suggestions about what Community Health Workers can do (with program support) to help community members prevent heart disease and stroke. We encourage you to take the time to have the CHWs talk about and share these and many other things they do to help community members. The following is a list of general tips and practices that CHWs can use to help community members improve their health and support people in their access to health care.

Supporting People in Their Health Care Needs:

- Remind community members to get screened for high blood pressure, high blood cholesterol, and for high blood glucose.
- Remind community members to regularly check their blood pressure.
- Tell them about places in community (fire stations, community centers, drug stores) where they can get blood pressure checked free.
- Help people make and keep appointments and follow-up visits with their doctors.
- Help community members who do not speak English.
- Help those who do not have a doctor, find a doctor.
- Help those who cannot afford a doctor find free health care or places where cost is based on ability to pay (for example, public health departments, clinics run by churches, community clinics).
- Help community members who do not have transportation, or do not know how to use public transportation to get to the clinic.
- Be a bridge between the stroke survivor and the healthcare team (doctors, nurses, pharmacists, etc.).
- Tell the health care team about specific patient needs, successes, and barriers to self-care (for example, cultural beliefs, motivation, disability, safety issues).

Helping People Make Better Lifestyle Choices:

- Help people choose a diet with plenty of vegetables, fruits, and grain products. Encourage people to eat foods rich in minerals and vitamins such as citrus fruits, tomatoes, bananas, grains, leafy green vegetables, and navy, pinto, and kidney beans.
- Help people choose a diet low in fat, saturated fat, trans fat, and cholesterol.
- Encourage people to eat less fatty food and to decrease the foods they fry.
- Help community members learn how to reduce their intake of salt and sodium.

- Get the family involved in making healthy choices about eating—at home and away from home.
- When making home visits look for clues that the family may need tips for eating healthier food (for example, lots of snack foods, sodas, or high-fat items in the house).
- Encourage people to limit alcohol intake to no more than one (women) or two (men) drinks a day. One drink is 1 oz. of hard liquor, 4 oz. of wine, or 12 oz. of beer
- Work with community members to find ways to make low-cost fruits and vegetables and low-salt and low-fat foods available in the community, schools, and work sites.
- Encourage people to be more active.
- Get the family involved in making healthy choices about being active.
- Work with community leaders to find safe places for people to walk, as well as other physical activity resources in the community and in worksites. CHWs can start and lead walking groups.
- Encourage overweight people to lose weight.
- Encourage people to quit smoking.

Cultural Activities

In a course for CHWs who work with community members in areas that heavily use more traditional forms of medical care, and where health care practices and traditions differ from "Western medicine," an activity that provides the opportunity for CHWs to talk about problems they might encounter as a result of differences in cultures and traditions could be helpful.

Include a Cultural Activity in Each Session

Let the CHWs talk about the barriers in their community and how they can get community members to follow the advice given in each session.

Following is one example of a cultural activity on heart attack.



Discussion: Preventing Heart Attacks in Your Community

Ask the CHWs to name some of the problems or barriers they think they will encounter when promoting heart disease and stroke prevention. Then ask the CHWs to think of ways to overcome these barriers.

Using a flipchart, draw a line down the middle of the paper. Write the problems that CHWs identify on the left and the ways to overcome these problems on the right.

► **Say:**

What do your community members feel is the cause of heart attacks and stroke?

What is the best way to inform them of the risk factors for heart attack and the healthy lifestyle behaviors that you have just learned?

Some questions to ask the CHWs might be—

- What type of problems might you encounter when teaching Western medicine to elders in the community?
- What are some beliefs that members of your community have about heart disease and stroke?
- How are heart attacks treated in your culture (or native country)?
- Think of ways you can combine traditional treatments with the treatments used by doctors.

► **Say:**

Now that you know about the risk factors and behaviors that might lead to a heart attack, how can you help prevent heart attacks in your community?

It might help to talk about some of the problems you could face.

- For example, could you face problems with older community members not taking their medicine? Not trusting the doctor? Fearing tests that diagnose health problems?
- Could you face problems with men not going to the doctor? Not providing the information the doctor needs and not answering the doctor's questions truthfully?
- What might keep women from doing what they need to prevent a heart attack?
- How might a member of your community react when learning that he or she has had a heart attack or stroke?

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The Community Health Worker's Sourcebook: A Training Manual for Preventing Heart Disease and Stroke

Chapter	Title
1	Heart Disease and Stroke Overview
2	Stroke
3	Heart Attack
4	Heart Failure
5	Atrial Fibrillation
6	Depression and Stress
7	High Blood Pressure
8	High Blood Cholesterol
9	Diabetes
10	Talking to Your Doctor
11	Taking Medicine
12	Healthy Eating and Weight Control
13	Physical Activity
14	Tobacco Control
15	Children and Teens
Appendix A	Resources
Appendix B	Medicine Charts

Objectives

By the end of this session, community health workers will be able to—

1. Define heart disease and stroke.
 2. Explain what heart disease and stroke have in common.
 3. Define risk factor.
 4. Explain how the heart works.
 5. Explain the role of blood vessels in heart disease and stroke.
-

Materials and Supplies

Flipchart, markers, tape, blackboard, chalk, eraser, and a model of a heart, if available.

Handouts:

- 1–1: The Heart
 - 1–2: How the Heart Works
 - 1–3: Arteries
-

Chapter Outline

1. Overview
2. Lesson
 - A. Introduction to the Heart Disease and Stroke Prevention Course
 - B. What Is a Risk Factor?
 - C. Facts about Heart Disease and Stroke
 - D. How the Heart Works
 - E. The Brain
 - F. What Do Blood Vessels Have to Do with Heart Disease and Stroke?
 - G. How Is Blood Flow Blocked?
 - H. What Can the Community Health Worker Do to Help Prevent Heart Disease and Stroke?
3. Summary

Resources

Centers for Disease Control and Prevention (CDC) Web sites:

- Diabetes. www.cdc.gov/diabetes/
- Heart Disease and Stroke Prevention. www.cdc.gov/dsdsp/
- Nutrition and Physical Activity. www.cdc.gov/nccdphp/dnpa/
- Tobacco. www.cdc.gov/healthyyouth/index.htm
- WISEWOMAN (Well-integrated Screening and Evaluation for Women Across the Nation). www.cdc.gov/WISEWOMAN/
- Adolescent and School Health. www.cdc.gov/healthyyouth/index.htm

Other resource Web sites:

- American Heart Association. www.americanheart.org
- American Stroke Association. www.strokeassociation.org
- National Heart, Lung, and Blood Institute. www.nhlbi.nih.gov
- *Your Heart, Your Life: A Lay Health Educator's Manual*. National Heart, Lung, and Blood Institute; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov/health/prof/heart/latino/lat_mnl.htm
- National Institute of Neurological Disorders and Stroke. www.ninds.nih.gov/disorders/stroke/stroke.htm

1. Overview

► **Say:**

You know from the title of this sourcebook that we'll be talking about heart disease and stroke in our training sessions and we'll also talk about other health problems related to these conditions.

What is heart disease?

Heart disease is any disease or condition that affects or damages the heart or blood vessels.

Sometimes doctors or other health care professionals use the word **cardiovascular** to describe a number of diseases and conditions that affect the heart.



Activity: Write *cardiovascular* on the flip chart. Tell the CHWs that the first part of the word—*cardio*—means “related to the heart,” and the second part of the word—*vascular*—means “related to the blood vessels.”

► **Say:**

We'll use the term heart disease in this course.

The second condition you'll hear a lot about in today's session is stroke. A stroke happens when a blood vessel to the brain becomes blocked, or when the vessel bursts open and blood can no longer reach the brain. This blockage or rupture causes brain damage. Later in this session we'll talk about how this damage happens.

A medical term used to describe a stroke is cerebrovascular disease.

Cerebrovascular is a broad term that includes stroke and other diseases involving the blood vessels that affect the brain. Cerebro means “related to the brain,” and vascular means “related to blood vessels.”



Activity: Write *cerebrovascular* on the flip chart above cardiovascular. Ask the CHWs if they see a similarity between the two words.

► **Say:**

From these two words, we learn that something that heart disease and stroke have in common is blood vessels, or rather problems with the blood vessels.

2. Lesson

A. Introduction to the Heart Disease and Stroke Prevention Course

► **Say:**

There are so many types of heart disease and diseases of the blood vessels that we won't be able to cover all of them in this course; but we will learn about the most common and most serious diseases, what causes them, and what can be done to prevent them.

We'll also talk about what people can do to prevent these serious health problems. In this training course you'll learn about heart disease and the top two killers of people who suffer from diseases of the heart or blood vessels: heart attack and stroke.

You'll also learn about three conditions that can damage your heart and blood vessels and can lead to heart disease and stroke. These are—

- High blood pressure.
- High blood cholesterol.
- Diabetes.

High blood pressure, high blood cholesterol, and diabetes are three of the most important risk factors for heart disease and stroke.

B. What Is a Risk Factor?

► **Say:**

You'll hear the term risk factor again and again in this course. A risk factor for heart disease or stroke is a behavior or condition that makes a person more likely to have heart disease or to have a stroke or heart attack.

Heart disease and stroke have many of the same risk factors. Reducing your risk for heart disease will reduce your risk for stroke; and any change in lifestyle that reduces your chances of having a stroke will improve your heart's health.

In this course we will talk about how people who are at risk for heart disease and stroke can improve their health by taking their medicine, talking to their doctor, knowing the warning signs for heart attack and stroke, and knowing what to do in case of an emergency.

Changing unhealthy behaviors is very important for those who have the risk factors of high blood pressure, high blood cholesterol, or diabetes. It is also important for those who have heart disease or who have had a heart attack or stroke.

The good news is that people can prevent or lower their risk for heart disease and stroke by choosing healthy lifestyle habits and behaviors, such as eating healthy foods, becoming more physically active, keeping or reaching a healthy body weight, and not using tobacco.

C. Facts about Heart Disease and Stroke

► Say:

Here are some facts about heart disease and stroke:

- Heart disease is the number one cause of death in the United States.
- Stroke is the third leading cause of death in the United States.
- Together, heart disease and stroke cause more than half of all deaths in America.

► Say:

But that's only part of the story.

Heart disease and stroke are also the leading cause of permanent disability among working-age adults.

Having a disability means a person is unable to do some or all of the tasks of daily living.

We often think of heart disease and stroke as affecting mostly men or older people, but heart disease is also the leading cause of death in women—and it's a major killer of people in the prime of life.

It's very important for men and women, young and old, to understand what causes heart disease and stroke and what can be done to prevent these conditions.

Heart disease rarely just happens. In most cases, a process starts in childhood. But this process can be prevented, stopped, or maybe even reversed. At the very least, we can slow down heart disease.

Before we learn about how we can prevent heart disease and stroke, it's important to understand how the heart works.

D. How the Heart Works



Handout 1–1: The Heart

► **Say:**

The heart is a powerful muscle that pumps blood through the blood vessels to every part of the body. It's about the size of your fist and is located beneath the breastbone almost in the middle of your chest. About one-third of the heart is on the right side of the body, and about two-thirds of the heart is on the left.



Handout 1–2: How the Heart Works

► **Say:**

The right side of the heart collects blood that has already traveled through the body and has given out most of the oxygen and nutrients (food) it carries to the body's cells and organs. It sends this blood to the lungs, where it gets a fresh supply of oxygen and nutrients.

The left side of the heart collects blood that is rich in oxygen from the lungs and sends it circulating through the body where, once again, it supplies the body's cells and organs with oxygen and nutrients. The blood then returns to the right side of the heart, where it is pumped to the lungs, which will replace the oxygen and remove carbon dioxide from the blood.

For you to stay alive your heart can never stop pumping blood. If it does stop for more than a few minutes, food and oxygen carried by the blood can't get to the other organs of the body and they will be damaged. You will die unless the heart's pumping action is restored quickly.

E. The Brain

► **Say:**

The brain controls many of the body's functions. If the brain becomes damaged, it may become unable to send messages to the muscles and could leave a person unable to walk, talk, or to use the hands. Damage to the brain can also affect mental functions, such as memory, emotions, and learning.

Because the brain controls such critical functions as breathing, heart beat, and kidney function, a person can die if the brain is seriously damaged.

The brain, like the heart, works constantly, even while we sleep, to keep all our organs working. All this work means that the brain needs a lot of nutrients (food) and oxygen.

F. What Do Blood Vessels Have to Do with Heart Disease and Stroke?

► Say:

Earlier, I mentioned one thing heart disease and stroke have in common. They are both diseases of the blood vessels.

The blood vessels and the heart work together to bring blood to every part of the body.

Arteries are blood vessels that carry blood away from the heart. Veins are blood vessels that carry blood back to the heart.

Blood contains nutrients and oxygen that every cell in your body needs to live and to stay healthy.

Just as we need food and air to live, every cell in every organ of our body needs food and oxygen to live.

Blood carries nutrients and oxygen to the cells and organs, through blood vessels, to all parts of the body. If the blood carrying nutrients and oxygen to the cells is blocked or cut off, the cells begin to die, and the organs become damaged.

In addition to carrying food and oxygen to all organs and tissues, blood picks up and takes away waste produced by the body's cells.

G. How Is Blood Flow Blocked?

► Say:

The two most common causes of blocked blood flow are—

- Problems in the blood vessels.
- Problems with the heart's ability to pump blood.

Blood is carried to the heart muscle by blood vessels that are known as coronary arteries because they circle around the heart muscle in the shape of a corona, or crown.

Over time, deposits of fats and other substances build up inside the arteries. The name of this built-up material is plaque. Plaque usually affects large and medium-sized arteries.

As the passageway through an artery becomes smaller because of this build-up of plaque, blood flow decreases and gradually reduces the oxygen supply to other parts of the body.

The plaque can clog an artery gradually, or pieces of plaque may rupture, or break away, and cause a blood clot to form suddenly. The clot can travel through the bloodstream to another part of the body and block a blood vessel, cutting off the oxygen supply all at once.



Handout 1–3: Arteries

► Say:

The build-up of plaque in the arteries is a disease known as atherosclerosis, sometimes called hardening of the arteries.

If a piece of plaque or a blood clot blocks a blood vessel that feeds the heart, it can cause a heart attack. If it blocks a blood vessel that feeds the brain, it can cause a stroke.

Plaque causes the arteries in the heart to become hardened and narrowed. Doctors often call this condition coronary artery disease.

Coronary artery disease is the leading cause of heart attacks in the United States today. It is also the most common type of heart disease. It is the single largest killer of men and women in America.

Half of men and more than half of women who die suddenly from coronary artery disease have no earlier signs of disease.

Many people have occasional mild chest pain or pressure without having a heart attack. This happens when the heart muscle does not get enough blood, but a feeling of severe chest pain or pressure is a warning sign that a person should get immediate medical help.

H. What Can the Community Health Worker Do to Help Prevent Heart Disease and Stroke?

► **Say:**

As community health workers you have a very important role to play in helping members of your community learn about heart disease and stroke. You will become a role model to your families and the community.

You can help people in your community choose healthy lifestyle changes to prevent or lessen the effect of heart- and stroke-related problems.

You can also make a difference in your community by teaching and encouraging people to take better care of themselves. You can help them understand how to prevent or to better control and manage high blood pressure, high blood cholesterol, diabetes, and heart conditions.

You will be an advocate for community members by helping them understand that they are partners in their own health care. You can also help them get the treatment and services they need.

When you put into practice what you learn in this course, you will become a role model for your community and your families.

3. Summary

► **Say:**

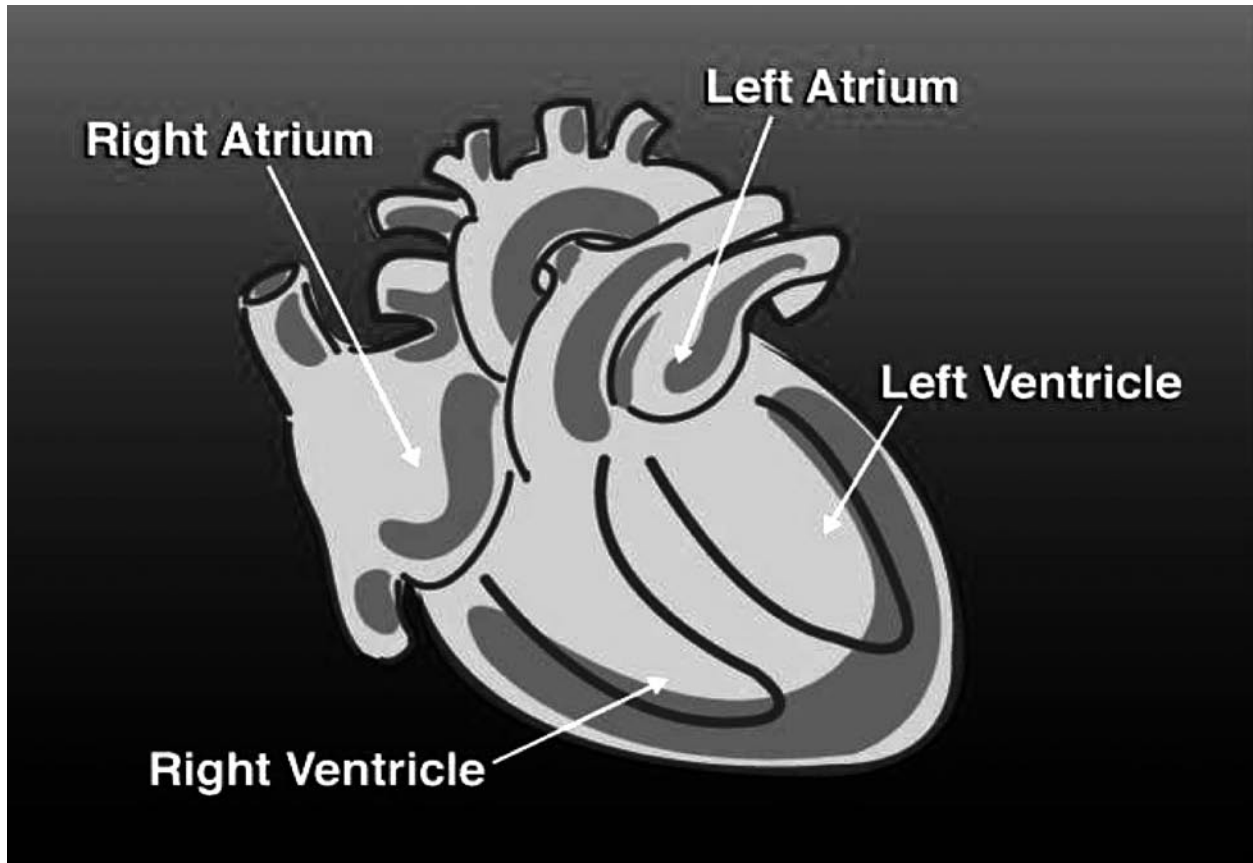
Heart disease is the number one cause of death in America when all ages are considered.

Stroke is the third leading cause of death.

But most deaths caused by heart disease can be prevented.

As community health workers you can play an important role in improving heart health and preventing heart attack and stroke among members of your community. We will be talking about ways to do this later in the course.

The Heart



The heart is a hollow, muscular, cone-shaped organ, about the size of a fist.

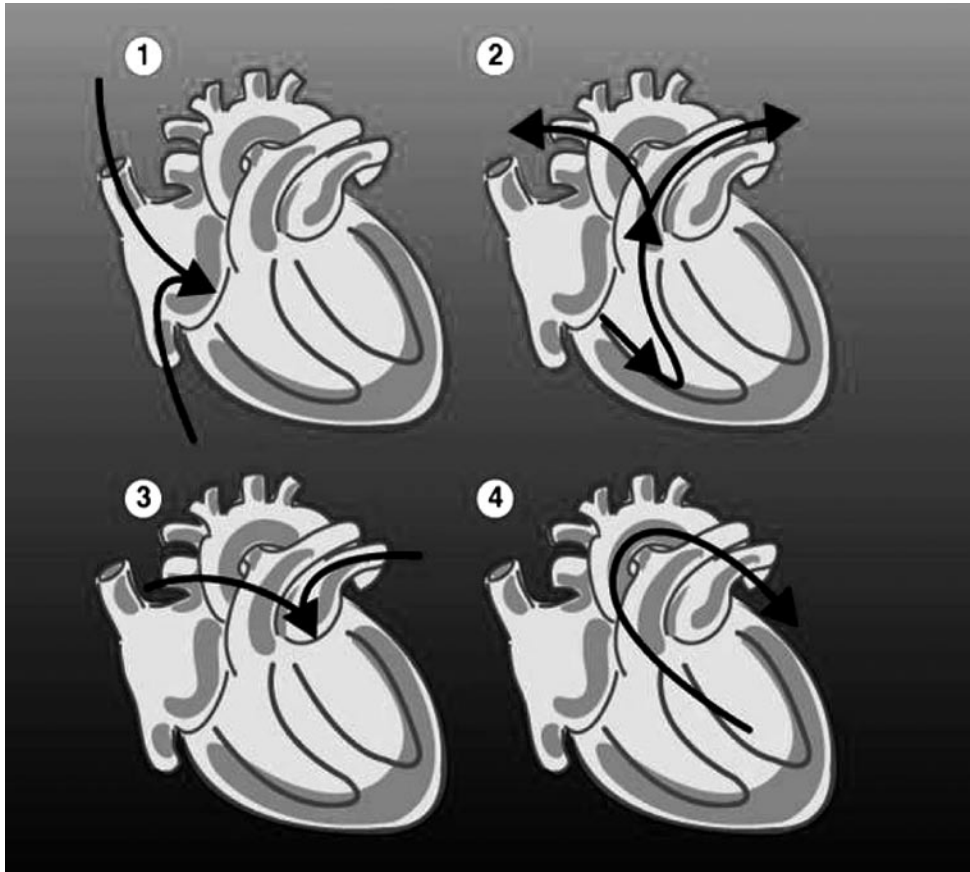
It is located in the middle of the chest.

The heart has two upper chambers and two lower chambers.

The upper chambers (right atrium and left atrium) receive blood.

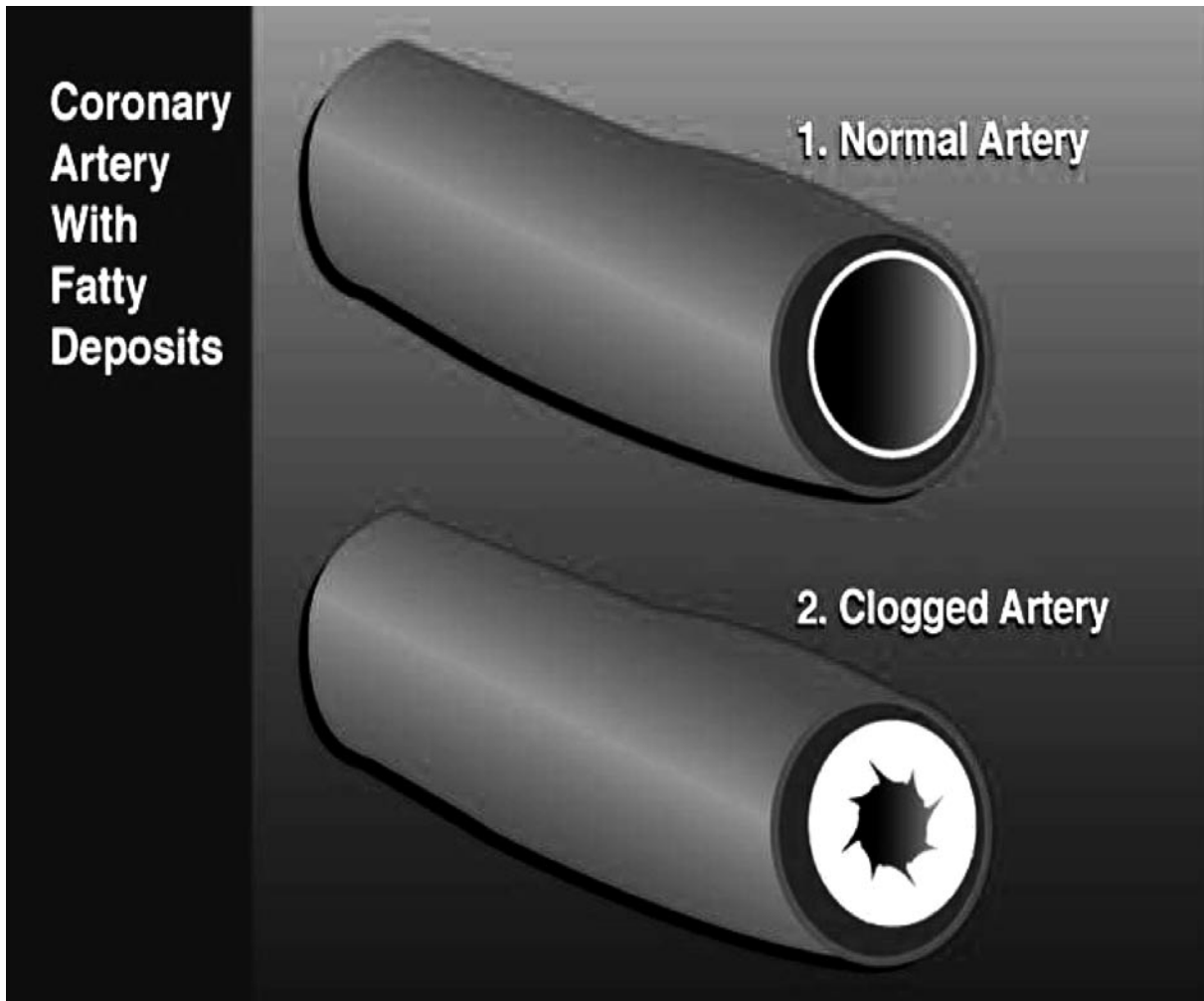
The lower chambers (right ventricle and left ventricle) pump blood.

How the Heart Works



1. Blood (with little oxygen) enters the right top chamber of the heart.
2. Blood then flows down to the right lower chamber so it can be pumped out to the lungs.
 - a. In the lungs, waste such as carbon dioxide is taken from the blood.
 - b. The blood then gathers more oxygen.
3. The blood, made rich with oxygen in the lungs, returns to the heart and enters the upper left chamber.
4. The blood then flows down to the lower left chamber and is pumped to all of the body organs and tissues and even to the heart muscle itself.

Arteries



1. The top picture is a normal, healthy artery. Blood can flow through the opening easily.
2. The bottom picture is a clogged artery. The opening has been narrowed by plaque made up of fatty deposits, cholesterol, and possibly waste from tobacco smoke. Blood cannot flow easily through the opening and blood pressure against the artery walls is increased. Pieces of plaque can break off and form a blood clot that completely blocks the flow of blood in the artery.

Objectives

By the end of this session, community health workers will be able to—

- Describe the two main types of stroke.
- List major risk factors for stroke.
- Describe the warning signs of stroke.
- Explain how medicines prevent stroke.
- Explain some of the methods used to treat stroke.
- Describe the effects of a stroke.
- Describe some of the methods used for stroke rehabilitation.
- Explain how community health workers can help people who are at risk for stroke or who have had a stroke.

Materials and Supplies

Flipchart, markers, tape, blackboard, chalk, and eraser.

Handouts:

- 2–1: What Is a Stroke? What Are the Warning Signs of a Stroke?
- 2–2: Risk Factors for Stroke
- 2–3: Tips for Taking Medicine to Prevent First or Repeated Stroke
- 2–4: Stroke: What Happens at the Hospital?
- 2–5: What Community Health Workers Can Do to Help Community Members Who Are at Risk for Stroke or Who Have Had a Stroke

Training Aid:

- Training Aid 2–1: Recognizing the Warning Signs of a Stroke
- Pencils and paper

Chapter Outline

1. Overview

2. Lesson

- A. What Is a Stroke?
- B. What Are the Risk Factors for Stroke?
- C. How to Prevent Strokes
- D. What Are the Warning Signs of a Stroke?
- E. Why Call 9-1-1?
- F. How Do Medicines Help Prevent a First or Second Stroke?
- G. How Does a Doctor Diagnose a Stroke?
- H. How Is a Stroke Treated?
- I. What Are the Results of Stroke?
- J. What Is Stroke Rehabilitation?

3. Summary

Resources

The following are American Stroke Association patient handouts (available at www.strokeassociation.org):

- Let's Talk About High Blood Pressure and Stroke
- Let's Talk About Risk Factors for Stroke
- Let's Talk About Hemorrhagic Strokes and Their Causes
- Let's Talk About Ischemic Strokes and Their Causes
- Let's Talk About Stroke Warning Signs
- Let's Talk About Anticoagulants and Antiplatelet Agents
- Let's Talk About Lifestyle Changes to Prevent Stroke

Know Stroke: What You Need to Know About Stroke. *National Institute of Neurological Disorders and Stroke*. NIH Publication No. 4-3517. April 2004. www.ninds.nih.gov/disorders/stroke/stroke_needtoknow.htm

National Institute of Neurological Disorders and Stroke. www.ninds.nih.gov/disorders/stroke/stroke.htm

New Patient Education Tool Kit, Know Stroke Poster, Know the Signs: Act in Time (one-page sheet on how to recognize stroke and what to do). *National Heart, Lung, and Blood Institute*. www.nhlbi.nih.gov/actintime

Patient Handouts and Operation Stroke (community education and community-wide events). *American Stroke Association*. 1-888-478-7653 or www.strokeassociation.org

Survivor and Caretaker Resources. *National Stroke Association*. www.stroke.org

1. Overview

► **Say:**

Every 45 seconds, someone in America has a stroke, and every 3 to 4 minutes, someone dies of a stroke.

Each year in this country, about 700,000 people have a stroke (500,000 are first attacks and 200,000 are repeat attacks).

More than 100,000 women and 63,000 men die each year from stroke.

Stroke is the third leading cause of death for women and men in the United States.

Stroke is a leading cause of serious, long-term disability in the nation.

Lesson

A. What Is a Stroke?

► **Say:**

A stroke, or brain attack, is a condition that occurs when the blood flow to the brain is disrupted and the brain is unable to function properly.

Like all other parts of the body, the brain needs a regular flow of blood to provide it with the oxygen and nutrients that it needs to function and stay healthy. Without oxygen, brain cells die in a few minutes and cannot be replaced.

There are two main ways a stroke can occur:

- **A blood vessel in the brain can become blocked** by a clot. This type of stroke is called an **ischemic** (is KE mik) stroke. Eight out of 10 strokes are ischemic strokes.
- **A blood vessel in the brain can burst.** This type of stroke is called a **hemorrhagic** (hem uh RAJ ik) stroke.

Either type of stroke can cause serious damage to the brain.

Strokes can affect your ability to move, to speak, to see, and to remember.

The amount of damage is different in each person who has had a stroke.



Handout 2–1: What Is a Stroke?

*(Read only the **top half** of the handout. You will present the second part later in the lesson.)* Ask CHWs to review the top half of the handout. Then ask if they understand the two types of stroke: ischemic and hemorrhagic.

B. What Are the Risk Factors for Stroke?

► Say:

A risk factor is a condition or behavior that increases a person's chance of having a stroke. Stroke shares many risk factors with heart disease.

**Handout 2–2: Risk Factors for Stroke**

Review the handout with the CHWs. Tell them they will learn more about the risk factors for stroke in later chapters.

Ask them if they can think of other conditions or behaviors that might increase the risk of stroke. Write their responses on the flipchart. Check the risk factors listed below under “Other risk factors.” If any have not been mentioned, add them to the flipchart and discuss them with the CHWs.

Main risk factors. There are five main risk factors for stroke:

- Hypertension or high blood pressure (most important risk factor).
- Heart and artery disease.
- Diabetes (people with diabetes have two to four times greater risk for stroke than those who don’t have diabetes).
- Smoking (or living or working with people who smoke).
- Transient ischemic attack (TIA; stroke-like symptoms that appear for a very short period of time and then disappear. While TIAs are not strokes, they are a powerful warning that a full stroke may soon follow). Only a doctor can tell for sure if you are having a stroke or a TIA.

Other risk factors. These factors contribute to the main risk factors and can increase the risk of having a stroke:

- High blood cholesterol (a diet high in fat and cholesterol can cause high blood cholesterol).
- Too little physical activity.
- Atrial fibrillation (irregular heart beat that makes stroke up to six times more likely).
- Increasing age.
- Diet (too much salt, fat, and cholesterol in the diet can cause high blood pressure and high blood cholesterol).
- Obesity or being overweight.
- Alcohol abuse (too much alcohol).
- Sleep apnea (irregular breathing during sleep).
- Stress (too much stress raises blood pressure).
- Family history of heart disease or stroke.
- Race/ethnicity (African Americans have a higher risk of stroke than other populations, possibly because many African Americans have high blood pressure that is uncontrolled).
- Gender (men tend to have strokes at an earlier age than women).
- Prior stroke or heart attack.

C. How to Prevent Strokes

► Say:

Having one or more risk factors does not mean a person will have a stroke, but it does increase the chances of having one.

If you make lifestyle changes such as eating a healthy diet, being more physically active, stopping smoking, and keeping a healthy weight, you can prevent or control the most important risk factor for stroke—high blood pressure.

It is also important to keep your blood sugar at normal levels.

Limit the amount of alcohol you drink (no more than one drink each day for women and two for men).

Taking medicines to control high blood pressure, if advised by your doctor, greatly reduces your risk for stroke.



Activity: Modifying Risk Factors

- Ask the CHWs to break into groups of equal numbers.
- Assign each group two different risk factors related to lifestyle.
- Have each group talk about how they can help people in the community change unhealthy habits that increase the risk for stroke.
- After 10 to 15 minutes, ask the groups to wrap up their discussion.
- Ask each group to share ideas on how to help people change unhealthy habits that can lead to stroke.

D. What Are the Warning Signs of a Stroke?

► Say:

Not all strokes are the same, but there are general signs to warn a person that he or she may be having a stroke.

The signs are—

- Sudden numbness or weakness of the face, arm, or leg, especially on one side of the body.
- Sudden confusion, trouble speaking, or trouble understanding.
- Sudden trouble seeing in one or both eyes.
- Sudden trouble walking, dizziness, or loss of balance or coordination.
- Sudden severe headache with no known cause.

These warning signs can last for a few minutes or for hours.

A stroke can often take place without a person knowing that it is happening.

People may know right away that they are having a stroke, or they might not notice that something is wrong until hours or days after they have had the stroke.



Handout 2–1: What Are the Warning Signs of Stroke?

Ask the CHWs to review the **bottom half** of the handout. Ask if they have any questions.

**Discussion: Recognizing Warning Signs of Stroke**

Ask if the CHWs know anyone who has had a stroke and survived.

- Did this person know right away that he or she was having a stroke?
- How did this person know he or she was having, or had already had, a stroke?
- Did this person get treatment immediately, or did it take a while for him or her to seek treatment?
- How did the stroke change this person's life?

Allow CHWs time to share their stories and to ask questions about stroke.

Tell them it is important for community health workers to be help others learn to recognize the warning signs of stroke—so that community members can safeguard their own health and also spot warning signs in someone who is having a stroke but is unaware of what is happening.

**Training Aid 2–1: Recognizing the Warning Signs of a Stroke**

This activity consists of two role plays that can help CHWs learn the skills needed to teach community members about the warning signs of a stroke and the importance of getting emergency care—quickly—when a stroke occurs.

- Ask CHWs to break into four or five groups.
- Hand out Training Aid 2–1: Recognizing the Warning Signs of a Stroke.
- Read the first role play to the CHWs.
- Ask the CHWs in each group to decide how to answer the questions. Ask two people to play the roles of Danny and a CHW.
- Do the same for the second role play. Ask two people to play the roles of Maria and a CHW.
- Allow 5–10 minutes for the groups to complete each role play.
- Ask groups to share what information they gave to Danny and Marie.

E. Why Call 9-1-1?

► **Say:**

Why should people call 9-1-1 or the local emergency number when someone is having a stroke?

Because a stroke is a medical emergency, and every minute counts.
It's critical to get the person to the hospital for treatment quickly!

There are treatments that can greatly improve recovery, but only if they are started soon after the stroke has occurred. So it's very important to act in time.

F. How Do Medicines Help Prevent a First or Second Stroke?

► **Say:**

If you have had a stroke or are at high risk for having a stroke, your doctor may advise you to take medicine that will help prevent stroke.

Several types of medicine help prevent stroke, and your doctor may advise you to take one or more of them. They include the following:

- **Blood pressure-lowering medicines** might be needed if blood pressure is high. Keeping your blood pressure down is very important in reducing the risk of stroke. High blood pressure is a leading cause of stroke and damages blood vessels in the following ways:
 - If blood presses against the blood vessel walls with too much force as it flows, the vessels may become damaged. They may become thick and lose their ability to stretch. This narrowing of the blood vessels reduces blood flow.
 - Blood clots can form in damaged areas of the blood vessel walls.
 - High blood pressure can damage blood vessel walls to the point that they burst open.
- **Cholesterol-lowering medicines** might be needed if blood cholesterol is high. In the overview session, we talked about arteries, which are the blood vessels that carry blood away from the heart and to other parts of the body such as the brain. When you have too much cholesterol (a type of fat) in the blood it can

join with other fats and substances to build up in the walls of your blood arteries. The arteries become clogged and narrow, and as a result less blood can flow through the arteries. A blood clot can form and when it blocks an artery in the brain or an artery leading to the brain, it can cause a stroke.

- **Insulin and oral diabetes medicines** might be needed for persons with diabetes to reduce high levels of blood sugar. People with diabetes are at greater risk for strokes than those who don't have diabetes. High levels of blood sugar over time damages the arteries and can lead to stroke.

Two types of medicine are commonly given to prevent a second stroke:

- **Anticoagulants.** These medicines are blood thinners that prevent the blood from clotting and causing a stroke.
- **Antiplatelet agents.** Platelets are blood cells that help the blood clot when blood vessels are injured. Antiplatelet medicines prevent platelets from causing a clot in blood vessels.



Handout 2–3: Tips for Taking Medicine to Prevent First or Repeated Stroke

Review the handout with the CHWs. Help them come up with answers doctors might give to the questions in the “Questions to Ask the Doctor” box. Discuss why it is important for a community member to know the answers to these questions.

G. How Does a Doctor Diagnose a Stroke?

► Say:

To determine if a person has had a stroke, a doctor or another member of the emergency department staff of the hospital will—

- Ask about the warning signs the person felt.
- Ask the person about his or her health history.
- Order certain blood tests.
- Do a physical and neurological (brain) exam.
- Do other tests to get an idea of what is happening in the brain.

**Handout 2–4: Stroke: What Happens at the Hospital?**

Review the handout with the CHWs. Ask if there is any other information they might like to have if they were being treated in an emergency room for a possible stroke.

► Say:

Other tests must be done to determine if there is bleeding in the brain, the amount of damage to the brain, and the location of the damage.

Some common tests include the following:

- Tests that create pictures of the brain that look like ordinary X-rays. These tests are computed tomography (CAT or CT) scans and magnetic resonance imaging (MRI).
- Blood flow tests that find blockages in blood vessels in the brain.

Emergency medical personnel decide whether such tests will be useful, and, if so, which ones to use on each patient.

H. How Is a Stroke Treated?**► Say:**

The key to stroke survival and recovery is to get medical attention as soon as possible.

For many strokes, the chance of recovery is good if treatment is given within a few hours. Speedy treatment also ensures that the person will have as little disability as possible from the stroke.

Treatment for stroke will most likely include medicine. These medicines are usually given to prevent blood clots or to lower blood pressure in those who have high blood pressure.

A new medicine is available that dissolves the blood clot that's causing the stroke, but it must be given within three hours of the start of the stroke to have the best effect. During a stroke every minute that brain cells don't get oxygen means greater damage to the brain. The medicine may stop and even reverse this brain damage if it is given immediately after the stroke. The longer the delay in treatment the less likely it is that the medicine will help.

That's why it's so important that everyone recognizes stroke as an emergency and takes action immediately.

Treatment for stroke may also include surgery to remove a blockage in a neck artery or to stop the bleeding in a blood vessel in the brain.

Newer treatments use devices that can be inserted into blocked or narrowed blood vessels to expand the vessels and increase blood flow to the brain.

The amount of time a person has to stay in the hospital after having had a stroke depends on the amount of damage to the brain.

The greater the damage, the longer the person will have to stay in the hospital.

I. What Are the Results of Stroke?

► Say:

The effects of a stroke depend on the location of the damage in the brain and how much brain tissue is damaged.

A person who has had a stroke and has survived may have physical problems or other disabilities from the stroke. He or she may recover from the stroke completely or only partially.

A person who has had a stroke is likely to face emotional problems in addition to the physical ones.

Disabilities caused by stroke include—

- Paralysis or inability to move (usually limited to one side of the body).
- Vision problems.
- Memory loss.
- Difficulty talking or understanding what others are saying.
- Change in behavior, such as asking question after question over and over.

A stroke survivor may cry easily or may have sudden mood swings, often for no clear reason. Uncontrollable laughter also may occur but isn't as common as crying.

A person can suffer depression and mood swings as a result of the stroke-related brain damage. The person may also suffer from depression as he or she adjusts to changes in physical or mental abilities. Depression is common in stroke survivors and needs to be treated.

A person may react with anger, depression, or withdrawal as damage from the stroke changes him or her from an independent person on whom others have leaned for support to a highly dependent person who feels that he or she is a burden to family and friends.



Discussion: How Stroke Affects a Person

- Ask CHWs if they have a friend or relative who has had a stroke and has survived it.
- Ask them to share some of the physical and emotional changes the person experienced as a result of the stroke.
- List their answers on the flipchart.
- Ask if any of the changes were permanent, or if the person recovered completely from the stroke.

J. What Is Stroke Rehabilitation?

► Say:

To recover from physical and other disabilities that result from a stroke, a person nearly always needs therapy or rehabilitation (often called rehab).

The type of therapy or rehab a person needs depends on the disabilities he or she has.

The four main types of therapy include—

- **Physical therapy.** A person who has a problem with movement (for example, cannot walk, cannot move the arms, or cannot keep his or her balance) will need physical therapy.
- **Occupational therapy.** A person who has lost memory or knowledge will need occupational therapy to relearn activities basic to daily living, such as bathing and dressing.
- **Speech therapy.** A person who has difficulty with speech (for example, who cannot move the tongue, lips, or jaw properly to form words) will need speech therapy.

- **Emotional support therapy.** People who have a stroke often become depressed, anxious, frustrated, or angry. They can be helped with “talk therapy” (talking to a mental health care provider or social worker). Depression can also be treated with medicines. We will talk more about this in our session on depression and stress.

The different forms of therapy cannot repair the brain, but they can teach the brain to work in different ways to make up, partially or fully, for brain function that has been lost.

These different types of therapy help the person who has had a stroke become stronger, more physically capable, and more confident.

3. Summary

► **Ask:**

What are some ways you can support community members who have had a stroke?



Handout 2–5: What Community Health Workers Can Do to Help Community Members Who Are at Risk for Stroke or Who Have Had a Stroke

Review the handout with the CHWs. Ask for suggestions and give cues to help CHWs remember the importance of teaching and reminding people to keep their blood pressure under control, to check their blood pressure regularly, to keep medical appointments, to know the warning signs of stroke, and to act in time if someone is having a stroke. Talk about what CHWs can do to help people who are at risk for stroke or who have already had a stroke.

► **Ask:**

- What are the two main types of stroke?
- What are the risk factors for stroke?
- What are the warning signs of stroke?
- How is stroke treated?
- What physical and emotional effects can a stroke have on a person?
- What types of therapy are used for stroke rehabilitation?

What Is a Stroke?

A stroke happens when the brain does not get the blood it needs.

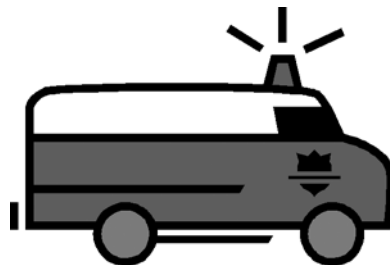
There are two main ways a stroke can happen:

- A blood vessel in the brain becomes blocked by a blood clot.
- A blood vessel in the brain bursts and stops the supply of blood to part of the brain.

A stroke can cause serious brain damage, disability, or even death.

What Are the Warning Signs of Stroke?

- Sudden numbness or weakness of the face, arm, or leg, especially on one side of the body.
- Sudden confusion, trouble speaking, trouble understanding.
- Sudden trouble seeing in one or both eyes.
- Sudden trouble walking, dizziness, or loss of balance or coordination.
- Sudden severe headache with no known cause.



If you notice one or more of these signs, call 9-1-1 and get to a hospital right away!

Risk Factors for Stroke

Risk Factors for Stroke

A risk factor is something that increases your chance of having a stroke. Common risk factors are listed below.



Check the risk factors you have—

High blood pressure. Treat it!

Change your habits. Eat a balanced diet, maintain a healthy weight, and increase your physical activity to reduce blood pressure. If needed, take medicine as your doctor advises to control your high blood pressure.

Heart disease. Manage it!

Change and maintain the heart healthy habits listed above for high blood pressure. Take medicines as your doctor advises to prevent the formation of clots, which can travel to the brain and cause strokes.

Diabetes or a problem with blood sugar. Control it!

Change and maintain the heart healthy habits listed above for high blood pressure. Taking insulin or other medicines as your doctor advises can delay complications (medical problems) that increase the risk of stroke.

Use of tobacco. Quit!

Medical treatment is available to help you quit.

Tips for Taking Medicine to Prevent First or Repeated Stroke

- Make sure you take medicine every day, not only on the days when you don't feel well.
- Tell the doctor the names of all other medicines, herbs, or supplements you take. Bring everything with you when you have a doctor's appointment (or bring a list).
- Tell the doctor or health professional right away if the medicine makes you feel strange or sick. Ask the doctor about changing the dosage or switching to another type of medicine.
- Refill your medicine before you run out.
- Have your blood pressure checked often to see if the medicine is working.
- Don't stop taking your medicine if your blood pressure or clotting time is OK. That means the medicine is working.

Questions to Ask the Doctor

When the doctor gives you medicine to prevent stroke, ask:

Name of medicine(s): _____

Amount of medicine to take: _____

When to take it: _____

What to eat or drink with it: _____

What other medicine is OK to take at the same time: _____

Other: _____

If problems happen, call this number immediately: _____

Stroke: What Happens at the Hospital?

If someone is having or has had a stroke, it is important to get medical help right away. Survival and chances for successful recovery depend largely on how quickly the person gets treatment and how rapidly normal blood flow returns to the brain. The longer the brain, or part of the brain, is without blood, the worse the outcome of the stroke will be.

The doctor at the hospital must decide first if a stroke has really had a stroke. To find out if it is a stroke, the doctor—

- Asks about the person's symptoms (what they feel).
- Asks about his or her medical history.
- Does different tests to get an idea of what is happening in the brain. Tests will tell if there is bleeding or if a clot is blocking the flow of blood.

To find the cause of the stroke and to give the proper treatment, the doctor will order one or more of the following tests:

- **Computed tomography (CAT or CT) scan** is a key test. It takes a picture of the brain. It's usually one of the first tests given to patients who may have had a stroke. CT scanning takes from 20 minutes to an hour to complete. Test results give information about the cause of the stroke and the location and seriousness of brain injury.
- **Magnetic resonance imaging (MRI)** is a more detailed test than a CT and is used to find small, deep injuries.
- **Blood flow** tests find blockages in blood vessels.

Some strokes are treated as soon as possible with clot-busting medicines that dissolve the blood clot. Other medicines may be given to lower the blood pressure. Treatment may include surgery.



What Community Health Workers Can Do to Help Community Members Who Are at Risk for Stroke (with Program Support)

Ways to Support People in Their Health Care Needs:

- Help community members understand the importance of regularly taking their blood pressure medication in order to prevent a stroke.
- Help community members understand the importance of regularly taking their other medications (blood pressure and cholesterol-lowering medicines, diabetes medicine, and other medicines) in order to prevent a stroke.
- Teach everyone the warning signs of stroke.
- Teach people that stroke is a medical emergency and that they should call 9-1-1 immediately.

Ways to Help People Make Better Lifestyle Choices:

- Teach people to get regular physical activity, stop smoking, lose weight (if they are overweight), and drink no more than one alcoholic drink a day for women and no more than two for men. One drink is 1 oz. of hard liquor, or 4 oz. of wine, or 12 oz. of beer.
- Help community members learn how to reduce their intake of salt and sodium.
- Learn and teach relaxation exercises.

What Community Health Workers Can Do to Help Community Members Who Already Have Had a Stroke (with Program Support)

All of the suggestions above for people at risk for stroke apply plus the following:

- Help community members get follow-up rehabilitation services after a stroke.
- Link patients to follow-up care for (stroke rehabilitation) for vision, memory, speech, or movement problems.
- Support caregivers by providing information, linking them to caregiver resources, and helping them communicate with members of the health care team.
- Encourage stroke survivors and their caretakers to get help for managing stress and depression.
- Help community members learn how to keep track of the medicine they are taking.
- Help community members understand the importance of regularly taking their other medications (such as blood thinners, blood pressure and cholesterol-lowering medicines, and diabetes medicine) in order to prevent another stroke.

Recognizing the Warning Signs of a Stroke (Role Play)

Role Play 1

► **Say:**

You have been visiting Danny for several weeks now. During this visit, he complains of being dizzy and seems confused. Danny's doctor has recently found that Danny has diabetes and high blood pressure that are not under control.

- What would you do in this situation?
- Could Danny be having a stroke?
- How can you tell?

Role play: Ask a person in your group to be Danny and another to be the community health worker. *Remind the CHWs of the importance of getting a person to a hospital as quickly as possible when she/he shows several signs of stroke. Minutes count!*

Role Play 2

► **Say:**

You are working at a table at the health fair in your community. Maria comes up and tells you about Rosa, a friend of hers, who has just had a stroke. She says that her friend was lucky because she was with someone who knew the signs of stroke. Maria wants to learn more about stroke so that she will be ready to help someone herself.

- What would you tell her?
- What are the warnings signs of stroke?
- Why must you call 9-1-1 immediately if you suspect a stroke?

Role play: Ask a person in your group to be Maria and another person to be the community health worker. *Ask the CHW to educate Maria about the warning signs of stroke and the need to call 9-1-1.*

Objectives

By the end of this session, community health workers will be able to—

- Name the risk factors for heart attack.
- Describe the warning signs of a heart attack.
- Describe how a heart attack is diagnosed.
- Describe how a heart attack is treated.
- Discuss at least three ways a CHW can help reduce the number of new heart attacks in the community.

Materials and Supplies

Flipchart, markers, tape, blackboard, chalk, and eraser.

Handouts:

- 3–1: The Heart
- 3–2: Act in Time to Heart Attack Signs Action Plan
- 3–3: What is Cardiac Rehabilitation?
- 3–4: What Community Health Workers Can Do to Help Community Members Who are at Risk for Heart Attack or Who Have Already Had a Heart Attack

Training Aid:

- Training Aid 3–1: Reducing The Risk of a Heart Attack: A Case Study
- Optional Activity: Learning from Others

Chapter Outline

1. Overview
 2. Lesson
 - A. What Is a Heart Attack?
 - B. What are the Risk Factors for Heart Attack?
 - C. How to Prevent a Heart Attack
 - D. What Are the Warning Signs of a Heart Attack?
 - E. What to Do in Case of a Heart Attack
 - F. Why Is Immediate Medical Attention Important?
 - G. How Is a Heart Attack Diagnosed?
 - H. How Is a Heart Attack Treated?
 - I. What Is Angina?
 - J. Don't Delay!
 - K. Prepare
 - L. CPR (Cardiopulmonary Resuscitation)
 - M. AED (Automated External Defibrillator)
 - N. Coping
 3. Summary
-

Resources

Act in Time to Heart Attack Signs. National Heart, Lung, and Blood Institute; National Institutes of Health; U.S. Department of Health and Human Services, in partnership with the American Heart Association. www.nhlbi.nih.gov/actintime/index.htm

AED Implementation Guide. American Heart Association www.americanheart.org/presenter.jhtml?identifier=3027225

American Heart Association www.americanheart.org

Honoring the Gift of Heart Health: A Heart Health Educator's Manual for American Indians National Heart, Lung, and Blood Institute and Indian Health Service; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov/health/prof/heart/other/aian_manual/index.htm

Ornato, Joseph P Hand, Mary M. Cardiology Patient Page: Warning Signs of a Heart Attack. *Circulation* 2001; 104:1212–1213.

Your Heart Your Life—A Lay Health Educator's Manual. National Heart, Lung, and Blood Institute; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov/health/prof/heart/latino/lat_mnl.htm

1. Overview

► **Say:**

Each year more than 1 million people in the United States have a heart attack and more than one-third of them die.

More than half of those who die will die before reaching the hospital.

Heart attacks are the leading cause of death in the United States.

The chances of surviving a heart attack are greater if people get immediate medical attention.

As a community health worker, you play an important role in educating your community about the warning signs of a heart attack, the importance of getting immediate attention, and steps to surviving a heart attack.

2. Lesson

A. What Is a Heart Attack?

► **Say:**

A heart attack happens when the blood supply to a part of the heart is stopped or dangerously reduced.

In the first chapter, we learned how the heart works. We know that the blood vessels that supply the heart muscle with the blood it needs are called coronary arteries. Blood flow to the heart is reduced or stopped when one or more coronary arteries are blocked.



Handout 3–1: The Heart

- Have the CHWs look at the handout of the heart.
- Do a quick review of Handout 1–2: How the Heart Works from Chapter 1.
- Point out the major blood vessels and coronary arteries and explain how the lack of blood flow to a part of the heart can damage that part.

► **Say:**

If the blood supply to the heart is cut off for more than a few minutes, the cells of the heart muscle begin to die and the heart rhythm may change and become irregular.

As the heart muscle cells die or the heart rhythm changes, the heart may not be able to pump enough blood enough or any blood at all. The part of the heart that depends on the blocked artery for its blood and oxygen is damaged and cannot work properly.

This lack of blood flow can kill a person or can cause heart damage. The damage may cause a person to be disabled (disability makes it hard to do some or all of the basic tasks of daily life). The outcome depends on how much the heart is damaged. The amount of damage depends on how quickly a person gets medical care.

Timing is important! The sooner a heart attack is treated, the greater a person's chances of surviving.

B. What Are the Risk Factors for Heart Attack?

► **Say:**

Remember, a risk factor is a condition or behavior that increases a person's chance of having a heart attack. These are some of the factors that can increase the chance of having a heart attack:

- A previous heart attack
- Family history of early heart attack
 - Father or brother who has a heart attack before age 55
 - Mother or sister who has a heart attack before age 65
- Diabetes
- High blood cholesterol
- High blood pressure
- Cigarette smoking
- Overweight
- Physical activity
- Stress
- Age

C. How to Prevent a Heart Attack

► **Say:**

Having one or more risk factors does not mean a person will have a heart attack, but it does increase the chances.

Making the same life-style changes to reduce the risk of heart disease will also reduce the risk of heart attack. If you make changes such as eating a healthy diet, being more physically active, stopping smoking, and keep a healthy weight, you can prevent or control the most risk factors.

It is also important that you keep your blood sugar at normal levels.

Limit the amount of alcohol you drink (no more than one drink each day for women and no more than two for men)

If your doctor has advised you take medicines to control high blood cholesterol or high blood pressure, taking these medicines as advised will greatly reduce your risk of heart attack.

D. What Are the Warning Signs of a Heart Attack?

► **Say:**

Typical warning signs of a heart attack, especially for men, are—

- Sudden chest pain or pressure (chest hurts or feels squeezed).
- Sudden pain or pressure in one or both arms, back, neck, jaw.
- Sudden shortness of breath.
- Sudden breaking out in a cold sweat, feeling nauseated or feeling light-headed.

**Handout 3–2.1 - 3–2.11: Act in Time to Heart Attack Signs**

Review the handout with the CHWs. Stress the importance of not ignoring warning signs. Explain that people may have any combination of the warning signs. Also explain that the warning signs may go away and then return. Stress that heart attacks do not always happen the way we see them shown on television.

Handout 3–2 is from the National Heart, Lung, and Blood Institute (NHLBI). It is part of the Act in Time materials. This brochure and other helpful materials, such as a video and a wallet card listing the signs of a heart attack, can be ordered from the NHLBI Web site: www.nhlbi.nih.gov/actintime/index.htm.

Note to trainer: Arrange for the CHWs to get training in cardiopulmonary resuscitation (CPR) and in the use of the automated external defibrillator (AED).

► Say:

The warning signs we have talked about are the most common ones and most people will have a combination of these signs. For example, many people who have chest pain will also have shortness of breath. Also, a person may have arm pain, sweating, and nausea at the same time.

Not everybody will experience a heart attack in the same way. Sometimes a heart attack doesn't produce any warning signs at all. Women often have less common warning signs than men. Typical warning signs, especially for women, are—

- Fatigue or tiredness
- Inability to sleep
- Shortness of breath
- Severe indigestion
- Anxiety

Be aware that a man or a woman may have any of the symptoms we've talked about. The warning signs may go away and then return again. Some people may not have any clear warning signs at all, and the only way they learn that they have had a heart attack is through later medical testing.

If you feel that you are having a heart attack, you should insist on getting medical help immediately, even if others do not believe you. If you are wrong about the heart attack, you may be a bit embarrassed, but if you are right, you'll be alive!

It's important to recognize the warning signs of a heart attack and to act fast to get medical help.

E. What to Do in Case of a Heart Attack?

► Say:

If you think you or someone else is having a heart attack, **call 9-1-1 immediately**. Don't wait!

Calling 9-1-1 for an ambulance is the best way to get to the hospital because—

- Emergency medical services (also called EMS) will give you treatment right away—even before you arrive at the hospital.
- The heart may stop beating during a heart attack. This condition is called sudden cardiac arrest. Emergency medical technicians (EMTs) have the equipment needed to get the heart beating again.
- Heart attack patients who arrive by ambulance tend to receive faster treatment on their arrival at the hospital than those who are driven to the hospital by others.

If for some reason, you are having warning signs of a heart attack and cannot call 9-1-1, have someone else drive you to the hospital at once. Never drive yourself to the hospital, unless you have absolutely no other choice.

If someone who appears to be having a heart attack is not awake, does not know what is going on, or stops breathing, begin cardiopulmonary resuscitation (CPR).

F. Why Is Immediate Medical Attention Important?

► **Say:**

A heart attack is a medical emergency!!

The chances of survival (staying alive) after a heart attack are greater if medical treatment is given immediately.

The chances of surviving the heart attack and limiting the damage to the heart are best if a person receives treatment within the first hour after a heart attack. The longer that the treatment is delayed the worse the damage to the heart. Each minute that treatment is delayed is a minute the heart is without enough oxygen.

There are many “clot-busting” medicines that can quickly stop a heart attack by restoring the flow of blood to the heart. A reason that it’s so important to call 9-1-1 (or the local emergency number) immediately is that the EMS staff can give medicines and tests to help stop a heart attack.

Time is an important factor. Getting immediate medical attention increases the kinds of treatment that can be given and decreases the amount of damage to the heart muscle.

G. How Is a Heart Attack Diagnosed?

► **Say:**

When a person arrives at the hospital with heart attack warning signs, the emergency room staff goes into action. Diagnosing a heart attack usually includes four basic steps:

1. Review of a person’s medical history information, including risk factors.
2. A physical exam.
3. An electrocardiogram (EKG or ECG) to test for damage to the heart.
4. Blood tests to detect abnormal levels of certain substances (enzymes) in the blood that can show that the heart has been damaged.

H. How Is a Heart Attack Treated?

► **Say:**

If the person having a heart attack gets to an emergency room fast enough, the first treatment given will be medicines that dissolve clots. To work best these medicines need to be given within three hours of a heart attack. If this treatment isn't given or doesn't work, other procedures may be needed.

The two most common types of procedures are—

- Coronary artery bypass
 - Sometimes doctors use emergency coronary artery bypass surgery following a person's heart attack. In bypass surgery, doctors cut and sew veins or arteries to a place past the blockage.
- Coronary angioplasty
 - During coronary angioplasty doctors pass a thin tube through an artery until it reaches the blocked artery in the heart. A small balloon attached to the end of the tube is then inflated to open the blocked artery.
 - Sometimes a small wire mesh tube is put in place to hold the artery open. This tube is called a stent.

I. What Is Angina?

► **Say:**

Angina is chest pain or discomfort that a person has if the heart doesn't get enough blood.

If the heart is not receiving enough blood then it is not getting the oxygen and nutrients it needs. A person usually has angina because one or more of the heart's arteries is narrowed or blocked.

Usually angina is felt as uncomfortable pressure, fullness, squeezing or pain in the center of the chest. A person may also feel the discomfort in the neck, jaw, shoulder, back or arm. These feelings are also signs of a heart attack, but if it's angina, the pain or discomfort will last only a few moments before going away. If they last longer, it could be a heart attack.

A person may have angina during physical exercise, when strong feeling strong emotions or when in extreme temperatures. For example, running to catch a bus, for example, could trigger an attack of angina, while walking might not.

Angina is a sign that a person is at a higher risk of heart attack and should not be ignored!

J. Don't Delay!

► Say:

As we talked about earlier, the chances of surviving a heart attack and limiting the damage to the heart are best if people get treated as soon as possible. Within one hour of having warning signs is best.

Sadly, most people wait several hours, or even days before seeking medical attention.



Discussion

Ask participants to share some reasons or barriers that they know prevents people from seeking medical help for the warning signs of a heart attack?

Note: Give the group about 5 minutes to answer.

Possible answers: People often take a wait-and-see approach, delaying because they—

- Think what they are feeling is heartburn.
- Don't recognize the warning signs.
- Don't want to be a bother to others.
- Decide to wait and see if the pain goes away on its own.
- Are afraid of being embarrassed if it was a false alarm.
- Think only elderly people have heart attacks.
- Are hoping it isn't a heart attack.
- Plan to make an appointment with the doctor.
- Have limited or no medical insurance.

► **Say:**

The longer the delay in getting treatment, the more damage the heart is likely to have. Quick reactions to signs of a heart attack can greatly improve the chance of surviving the heart attack.

If you or someone else is having a heart attack, **don't wait! Call 9-1-1.**

If symptoms stop completely in less than 5 minutes, you should still call your doctor or nurse.

K. Prepare

► **Say:**

It's important to be prepared in case the warning signs of a heart attack occur. The **T.I.M.E. Method** of preparing was developed by the National Heart, Lung, and Blood Institute (NHLBI: www.nhlbi.nih.gov) for doctors to use with heart patients, but it's also a good guide for CHWs. T.I.M.E. stands for **T**alk, **I**nvestigate, **M**ake a plan, and **E**valuate.

Talk with people at risk and their families about—

- Risk of heart attack.
- Recognizing warning signs.
- Right action steps to take for rapid action.
- Rx, for those whose doctor told them to take certain medicines when warning signs occur.
- Remembering to call 9-1-1 immediately.

Investigate (or ask about)—

- Feelings about heart attack.
- Problems with recognizing warning signs and how to respond to warning signs.
- Personal and family experience with medical treatment.

Make a plan—

- Help people at risk and their family members make a plan for exactly what to do in case of warning signs and encourage them to identify friends and family members who will be there for them at that time.
- Encourage patients and their family members to practice the plan.

Evaluate (or make sure the person at risk and his or her family members understand)—

- The risk in delaying medical attention.
- The need for a plan for action.

L. CPR (Cardiopulmonary Resuscitation)

► Say:

Cardiopulmonary Resuscitation (CPR) involves mouth-to-mouth respiration (breathing into another's person's mouth) and chest compression (pressing on another's person's chest at a steady pace).

CPR provides oxygenated blood to the brain and heart and keeps these organs alive.

The American Heart Association says that if CPR is given immediately to a person who is not breathing, it can double a heart attack victim's chance of survival.

M. AED (Automated External Defibrillator)

► Say:

An AED (automated external defibrillator) is a medical device designed to “shock” the heart of a person who is in cardiac arrest (who has no pulse and is not breathing) back into a normal rhythm. Timing is very important. *For every minute without immediate CPR and defibrillation, the odds of survival decrease by 7% to 10%.*

You can find AED's in public and/or private places where large numbers of people gather such as airports, sports stadiums, schools, or places where people who are at high risk for heart attacks live, such as nursing homes.

For more information contact your local American Heart Association office.

CHWs should become certified in CPR and the use of an AED!

N. Coping

► Say:

A positive attitude and outlook are important when recovering from a heart attack or heart surgery. Community health workers can work with resources within the community to make sure that community members get the full support they need during their recovery.



Discussion

Ask the CHWs how they think they would feel if they had recently suffered a heart attack. Write their responses on the flipchart. Possible responses include—

- Scared: uncertain of the future (fearful of loss of income; worried about how bills will be paid?).
- Overwhelmed: feelings that they have too many things to remember or changes to make in their life.
- Helpless: feeling that they can't do anything to control their heart health.
- Angry that it happened to them.
- Grief-stricken over the loss of good health.
- Relieved at having a chance to start over.
- Thankful for having survived.

When referring to their responses ask them which ones they feel that they can help others with in their role as community health workers. Put a check next to these responses. Then ask them for specific suggestions for how they can help a person who is recovering from a heart attack cope with these same reactions. Write these responses on the flipchart as well. Possible responses include—

- Educating both the person who has had the heart attack and his or her family. (Help them understand medical terms and procedures. Use hand outs and other resources from this course to help them change unhealthy behaviors.)
- Helping develop a support system for the person. (Find information on support groups in your community. Involve the person's family and friends in his or her education and counseling sessions. Provide the person with heart attack success stories. Check out the "Patients and Families" section of the American Heart Association Web site: www.americanheart.org.)

**Handout 3–3: What Is Cardiac Rehab?**

Review the handout with the CHWs. Stress that CHWs should remind those who have had a heart attack that rehabilitation can do a lot to help them feel better faster, get back to normal activities, and reduce future chances of heart trouble.

**Optional Activity**

If possible, invite a person who has had a heart attack to share his or her experience with the class. Allow time for questions and answers. Emphasize the importance of a strong, positive attitude in recovering from a heart attack and leading a life that is heart healthy. It is important that people who have heart disease learn to live with it, and that they make lifestyle changes to minimize the risk that it poses to their overall health. At the same time, however, they should not make heart disease the central focus of their lives.

3. Summary



Handout 3–4: What Community Health Workers Can Do to Help Community Members Who Are at Risk for Heart Attack or Who Have Already Had a Heart Attack?

Ask the CHWs what they think they can do to help people who are at risk for heart attack. Then ask what they think they can do to help people who have already had a heart attack.

Ask for suggestions and give cues to help CHWs remember the importance of teaching and reminding people to keep their cholesterol under control by taking cholesterol-lowering medicine regularly, keeping medical appointments, knowing the warning signs of heart attack and acting in time, and calling 9-1-1 for immediate medical attention.



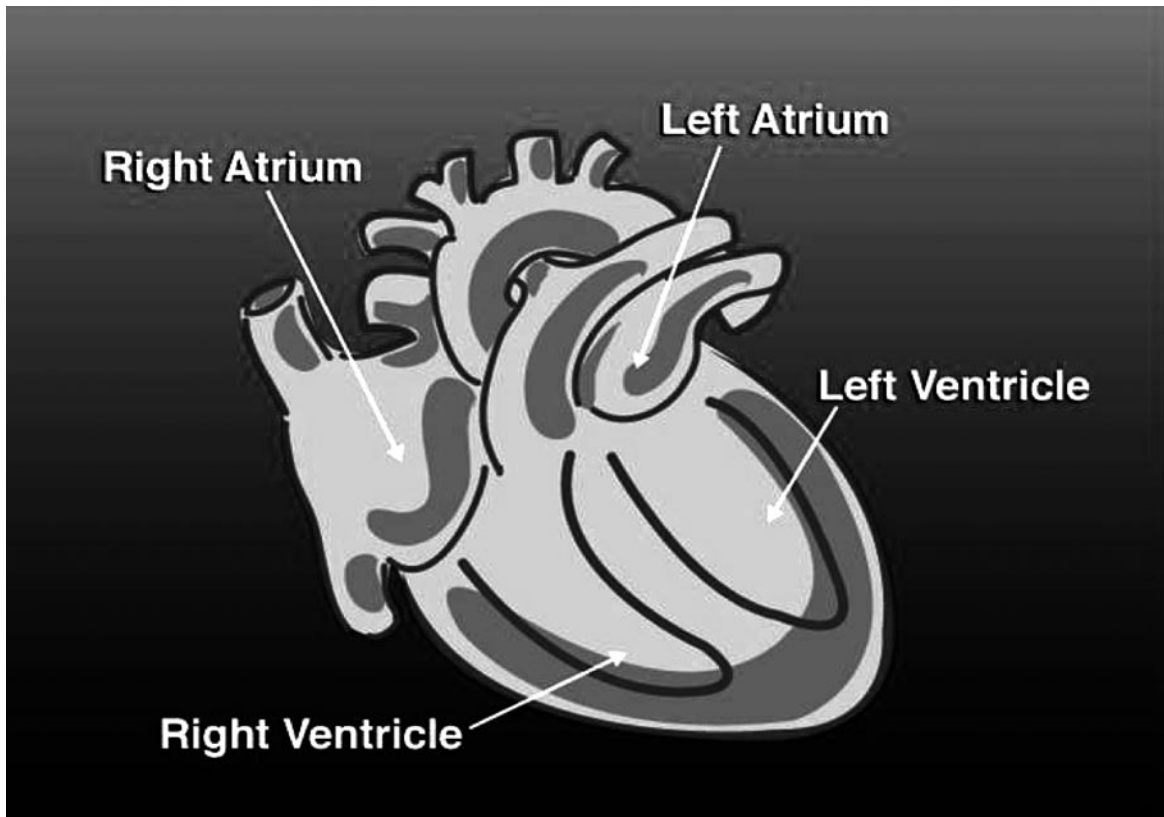
Training Aid, 1: Reducing the Risk of a Heart Attack: A Case Study

Pass out copies of Training Aid 3–1. Have the class form groups of 3 or 4 participants. Ask the first question on the handout and have each group determine an answer on their own. Ask each group for their answer. Have a discussion if the groups' answers differ from one another. Continue the same process for questions 2, 3, 4, and 5.

► Ask:

- What are the risk factors for heart attack?
- How can people prevent heart attacks?
- What are the warning signs of a heart attack?
- How is a heart attack diagnosed?
- How is a heart attack treated?

The Heart



The heart is a hollow, muscular, cone-shaped organ, about the size of a fist.

It is located in the middle of the chest.

The heart has two upper chambers and two lower chambers.

The upper chambers (right atrium and left atrium) receive blood.

The lower chambers (right ventricle and left ventricle) pump blood.



Act in Time to Heart Attack Signs Action Plan

Physician's Name _____

Patient's Name _____ Date _____

Heart disease is the top killer of men and women.

Learn the signs of a heart attack and the steps to take if one happens. You can save a life—maybe your own.

Treatment can stop a heart attack in its tracks.

Clot-busting drugs and other artery-opening treatments work best to stop a heart attack if given *within 1 hour* of the start of symptoms.

Heart Attack Warning Signs

- ▲ **Chest Discomfort**
Uncomfortable pressure, squeezing, fullness, or pain in the center of the chest that lasts more than a few minutes, or goes away and comes back.
- ▲ **Discomfort in Other Areas of the Upper Body**
Can include pain or discomfort in one or both arms, the back, neck, jaw, or stomach.
- ▲ **Shortness of Breath**
Often comes with or before chest discomfort.
- ▲ **Other Signs**
May include breaking out in a cold sweat, nausea, or light-headedness.

Minutes Matter

- ▲ If you or someone else is having heart attack warning signs:

Call 9-1-1

- ▲ **Don't wait more than a few minutes—5 minutes at most—to call 9-1-1.**
- ▲ If symptoms **stop completely** in less than **5 minutes**, you should still call your health care provider.

Plan Ahead

- ▲ For your safety, fill in this action plan and keep it in a handy place.
- ▲ Learn the heart attack warning signs. Talk with family and friends about them and the need to call 9-1-1 quickly.
- ▲ Talk with your health care provider about your risk factors for heart attack—and how to reduce them.

Information To Share With Emergency Medical Personnel/Hospital Staff

Medicines you are taking: _____

Medicines you are allergic to: _____

If symptoms **stop completely** in less than **5 minutes**, you should still call your health care provider.
Phone number during office hours: _____

Phone number after office hours: _____

Person You Would Like Contacted If You Go to the Hospital

Name: _____

Home phone number: _____

Work phone number: _____



How To Reduce Your Chance of a Heart Attack

To find your risk for a heart attack, check the boxes that apply to you:

- | | |
|---|--|
| <input type="checkbox"/> A family history of early heart disease
(Father or brother diagnosed before age 55)
(Mother or sister diagnosed before age 65) | <input type="checkbox"/> One or more previous heart attacks, angina,
bypass surgery or angioplasty, stroke, or block-
ages in neck or leg arteries |
| <input type="checkbox"/> Age (Men 45 years or older; Women 55 years or
older) | <input type="checkbox"/> Overweight |
| <input type="checkbox"/> High blood cholesterol | <input type="checkbox"/> Physical inactivity |
| <input type="checkbox"/> High blood pressure | <input type="checkbox"/> Cigarette smoking |
| | <input type="checkbox"/> Diabetes |

The more risk factors you have, the greater your risk for a heart attack.

Reduce Your Risk of a Heart Attack by Taking Steps To Prevent or Control Risk Factors

High blood pressure

- ▲ Have your doctor check your blood pressure.
- ▲ Aim for a healthy weight.
- ▲ Become physically active.
- ▲ Follow a healthy eating plan, including food lower in salt and sodium.
- ▲ Limit alcoholic beverages.
- ▲ Take medication, if prescribed.

High blood cholesterol

- ▲ Get your blood cholesterol level checked once every 5 years. (Check it more often, if necessary.)
- ▲ Learn what your numbers mean.
- ▲ Follow a low-saturated fat and low cholesterol eating plan.
- ▲ Become physically active.
- ▲ Aim for a healthy weight.
- ▲ Take medication, if prescribed.

Cigarette Smoking

- ▲ Stop smoking now or cut back gradually.
- ▲ If you can't quit the first time, keep trying.
- ▲ If you don't smoke, don't start.

Overweight

- ▲ Maintain a healthy weight. Try not to gain extra weight.
- ▲ If you are overweight, try to lose weight slowly, 1/2 to 1 pound a week.

Diabetes

- ▲ Find out if you have diabetes.
- ▲ Get your blood sugar level checked by your doctor.

Physical inactivity

- ▲ Become physically active.
- ▲ Do 30 minutes of moderate-level physical activity, such as brisk walking, on most and preferably all days of the week.
- ▲ If necessary, break 30 minutes into periods of at least 10 minutes each.

In partnership with:



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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
National Institutes of Health
National Heart, Lung, and Blood Institute

NIH Publication No. 01-3669
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ACT IN TIME TO HEART ATTACK SIGNS
Heart Attack Warning Signs

LEARN WHAT A HEART ATTACK FEELS LIKE.

Act fast. Call 9-1-1.

It could save your life.

Treatments can stop a heart attack as it is happening.

They work best if given within 1 hour of when heart attack signs begin.

If you think you are having a heart attack, call 9-1-1 right away.

KNOW THE HEART ATTACK WARNING SIGNS:

Your chest hurts
or feels squeezed



One or both arms, your back,
or stomach may hurt.



You may feel pain in the
neck or jaw.



You feel like
you can't breathe.



You may feel light-headed or
break out in a cold sweat.



You may feel sick
to your stomach.

ACT IN TIME TO HEART ATTACK SIGNS
Heart Attack Warning Signs

YOU MAY NOT BE SURE IT IS A HEART ATTACK.

A heart attack may not be sudden or very painful. You may not be sure what is wrong.
But it is important to check it out right away.



**ACT FAST.
CALL 9-1-1.**



**Call 9-1-1 in 5 minutes or less.
Do not drive yourself to the hospital.**



When you call 9-1-1, an emergency vehicle arrives right away. Treatment can begin at once.

**TO HELP SURVIVE A HEART ATTACK,
TAKE THESE STEPS:**

1

Learn the heart attack warning signs, and act fast if you feel them.

2

Talk with family and friends about the warning signs and the need to call 9-1-1 right away.

3

Ask your doctor about your heart attack risk and how to lower it.

ACT IN TIME TO HEART ATTACK SIGNS

Steps to Survival—Step 1

Learn the heart attack
warning signs.



ACT IN TIME TO HEART ATTACK SIGNS

Steps to Survival—Step 2

Think about what you would do
if you have a heart attack.



ACT IN TIME TO HEART ATTACK SIGNS

Steps to Survival—Step 3

Talk with your family and friends about the heart attack warning signs and the importance of calling 9-1-1.



ACT IN TIME TO HEART ATTACK SIGNS

Steps to Survival—Step 4

Talk to your doctor
about your risk of a heart attack.



ACT IN TIME TO HEART ATTACK SIGNS

Steps to Survival—Step 5

Talk to your doctor about what you should do if you experience any of the heart attack warning signs.



ACT IN TIME TO HEART ATTACK SIGNS

Steps to Survival—Step 6

Gather important information
to take along with you to the hospital.



ACT IN TIME TO HEART ATTACK SIGNS

Heart Attack Survival Plan

Information To Share With Emergency Personnel/Hospital Staff

Medicines you are taking:

Medicines you are allergic to:

If symptoms stop completely in less than 5 minutes, you should still call your health care provider.

Health care provider's phone number during office hours: _____

Health care provider's phone number after office hours: _____

Person You Would Like Contacted If You Go to the Hospital

Name: _____

Home phone number: _____

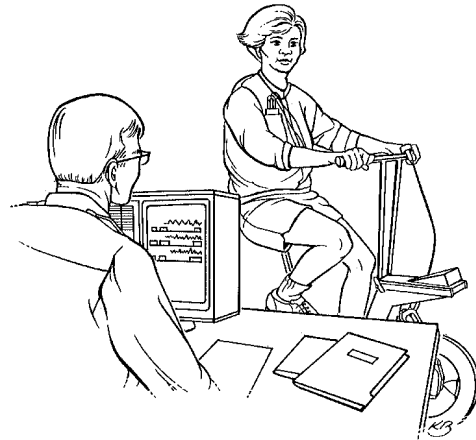
Work phone number: _____



What Is Cardiac Rehabilitation?

A cardiac rehabilitation program takes place in a hospital or in the community. “Rehab” is for patients who are getting better after heart problems or surgery.

One of the best things you can do for yourself is to get in a rehab program. Everything you need to get and stay healthy is in one place, and medical staff is on hand at all times. Rehabilitation can do a lot to speed your recovery and reduce your chances of future heart problems.



What happens in a rehabilitation program?

- Rehabilitation programs can help you change your lifestyle habits. These programs often take place at a hospital with a rehabilitation team or with the help of your doctor, nurse or other healthcare professionals.
- Many people find that rehab programs are very helpful after getting out of a hospital. They allow people to join a group to exercise and to get special help in making lifestyle changes.
- Start slowly, following a safe physical activity program that gradually helps you become stronger.
- Gradually move into a more intensive program that lets you work longer and harder.
- Possibly begin strength training, if your doctor says you can.
- Have your heart rate, blood pressure and EKG monitored.

During your rehabilitation program you'll...

- Exercise using a treadmill, bike, rowing machine or walking/jogging track.
- Be monitored for a change in symptoms by a nurse or another healthcare professional.

After you've completed the program, you may feel better than ever. Make these lifestyle changes a part of your everyday life!

How else does it help me?

- You may go to classes or get personal help to quit smoking and stay smoke-free.
- A nutritionist will help you create a healthy eating plan so you'll eat less of foods high in saturated fat, trans fat and cholesterol.
- You'll be weighed and taught ways to lose weight if you need to.
- You can learn relaxation skills to help manage and reduce your stress.
- You'll improve your cardiovascular fitness.
- You may meet others who've just been through a similar event.

How can I learn more?

1. Talk to your doctor, nurse or other health-care professionals. If you have heart disease or have had a stroke, members of your family also may be at higher risk. It's very important for them to make changes now to lower their risk.
2. Call 1-800-AHA-USA1 (1-800-242-8721) or visit americanheart.org to learn more about heart disease.

3. For information on stroke, call 1-888-4-STROKE (1-888-478-7653) or visit StrokeAssociation.org.

We have many other fact sheets and educational booklets to help you make healthier choices to reduce your risk, manage disease or care for a loved one.

Knowledge is power, so *Learn and Live!*

What are the warning signs of heart attack and stroke?

Warning Signs of Heart Attack

Some heart attacks are sudden and intense, but most of them start slowly with mild pain or discomfort with one or more of these symptoms:

- Chest discomfort
- Discomfort in other areas of the upper body
- Shortness of breath with or without chest discomfort
- Other signs including breaking out in a cold sweat, nausea or lightheadedness

Warning Signs of Stroke

- Sudden weakness or numbness of the face, arm or leg, especially on one side of the body
- Sudden confusion, trouble speaking or understanding
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance or coordination
- Sudden, severe headache with no known cause

Learn to recognize a stroke. Time lost is brain lost.

Call 9-1-1 ... Get to a hospital immediately if you experience signs of a heart attack or stroke!

Do you have questions or comments for your doctor?

Take a few minutes to write your own questions for the next time you see your healthcare provider. For example:

How often should I go to rehab?

Is it covered by my health insurance?

What Community Health Workers Can Do to Help Community Members Who Are at Risk for Heart Attack (with Program Support)

Supporting People in Their Health Care Needs:

- Help community members understand the importance of regularly taking their medications (medicines for lowering blood pressure and cholesterol levels, medicines for diabetes, and other medicines) in order to prevent a heart attack.
- Teach everyone the warning signs of a heart attack.
- Teach everyone that heart attack is a medical emergency and that if they or someone else is having the signs of a heart attack, they should call 9-1-1 immediately.
- Learn the T.I.M.E. method, CPR (cardiopulmonary resuscitation), and the use of AEDs (automated external defibrillators), and encourage community members to learn them as well.

Ways to Help People Make Better Lifestyle Choices:

- Teach people to get regular physical activity, eat healthy foods, stop smoking, lose weight (if they are overweight), and drink no more than one alcoholic drink a day for women and no more than two for men.

What Community Health Workers Can Do to Help Community Members Who Have Already Had a Heart Attack (with Program Support)

All of the suggestions for people at risk for heart attack apply to those who have already had a heart attack, plus the following:

- Help the heart attack survivor understand what he or she needs to do to stay as healthy as possible.
- Help community members get follow-up rehabilitation services after a heart attack.
- Help people understand why it is important to regularly take their heart medicines and other medicines (for diabetes, high blood pressure, high cholesterol, etc.) in order to prevent another heart attack.
- Help people learn how to keep track of the medicines they are taking. Suggest that they write down when they take their medicines or that they use a pill box container labeled to show the days and the times of the day.
- Help community members find affordable medicines.
- Support caregivers by providing information, by linking them to caregiver resources, and by helping them communicate with members of the healthcare team.
- Learn and teach relaxation exercises, such as deep breathing.
- Encourage heart attack survivors and their caretakers to get help for managing stress and depression.

Reducing the Risk of a Heart Attack: A Case Study

You have been doing follow-up visits with Harriet, a 55-year-old woman who recently suffered a heart attack. Her 34-year-old daughter, Melissa, cares for her. Melissa is overweight and she smokes. During one of your visits, Melissa tells you she feels “doomed” and she is certain she will have a heart attack at an early age like her mother and her grandfather, who died at age 52 following a heart attack.

Discussion Questions

1. Should Melissa be worried about her heart health? Why or why not?
2. Why do you think she feels doomed? What can you, as the community health worker, do to help her feel better about her situation and her health?
3. Is Melissa at risk for heart disease? Why or why not?
4. How would you work with Melissa to help her reduce her risk for heart disease? What changes could she make in her daily life to protect her health?
5. How would you follow up with Melissa?

Objectives

By the end of this session, community health workers will be able to—

- Explain the cause of heart failure.
- Describe the signs for heart failure.
- Describe tests used for diagnosing heart failure.
- Explain how heart failure is treated.
- Describe the signs of stress.
- Describe how smoking affects the heart.

Materials and Supplies

Flipchart, markers, tape, blackboard, chalk, and eraser.
Nutrition labels (cans and food packages with nutrition labels).
Example of salt substitute and spices/herbs.

Handouts:

- 4–1: Signs of Heart Failure
- 4–2: Tests for Diagnosing Heart Failure
- 4–3: Taking Medicine and Heart Failure
- 4–4: Walking For Health
- 4–5: Stress and Your Heart
- 4–6: Smoking and Heart Failure
- 4–7: What CHWs Can Do to Help Community Members Who Are at Risk for Heart Failure or Who Already Have Heart Failure
- 4–8: Caring for Your Own Health and Your Heart

Chapter Outline

1. Overview
2. Lesson
 - A. What Is Heart Failure?
 - B. What Causes Heart Failure?
 - C. What Are the Warning Signs?
 - D. How Is Heart Failure Diagnosed?
 - E. How Is Heart Failure Treated?
 - F. Taking Your Medicine
 - G. Diet, Fluids, and Weight Gain
 - H. Remaining Active with Heart Failure
 - I. Stress
 - J. Smoking
3. Summary

Resources

American Heart Association. www.americanheart.org/presenter.jhtml?identifier=1486

Heart Failure Society of America. www.abouthf.org

1. Overview

► **Say:**

Nearly 5 million Americans live with heart failure today.

In fact, it's one of the most common reasons people 65 and older go into the hospital.

Heart failure does not mean the heart has failed. It does mean the heart is not working well, but a person can live for many years with this condition.

But we can prevent heart failure and also treat it.

Community health workers can teach those who are at risk for heart failure that it can take years for it to develop and that making changes in their lifestyle can prevent it.

Community health workers can help people with heart failure learn to live more comfortably by teaching them the importance of getting good medical care, following their doctor's advice, and following their diet and exercise plan.

Help people in your community know the signs of heart failure.

2. Lesson

A. What Is Heart Failure?

► **Ask:**

Remember our discussion on how the heart works in the last session?

► **Say:**

The heart pumps blood carrying oxygen and nutrients to all parts of the body.

When a person has heart failure the heart does not pump blood as well as it should. Blood moves more slowly through the body and less oxygen and nutrients reach the body and the brain. This results in fatigue and shortness of breath. Everyday activities such as walking, climbing stairs or carrying groceries can become hard.

Also, when the heart pumps blood more slowly the blood can back up into the blood vessels around the lungs and leak into the lungs. Fluid may build up in the lungs and other organs or tissues in the body. The fluid causes congestion and makes it hard to breathe. People with heart failure can develop swelling in the feet, ankles, legs, or stomach and can suddenly gain weight. This is why people sometimes call it “congestive heart failure.”

B. What Causes Heart Failure?

► Say:

Heart failure can have many causes, but the most common causes are—

- Narrowing or blockage of the vessels that supply blood to the heart muscle (coronary artery disease).
- Heart attack, which causes scar tissue that weakens the heart and keeps it from working as well.
- High blood pressure, which makes the muscles in the heart thicken so that the heart does not pump as well and must work harder.
- Damaged heart valves, which makes some blood move through the heart in the wrong direction, resulting in an enlarged heart that does not pump as well.
- Diseases of the heart muscle itself (cardiomyopathy).
- Defects of the heart from birth (congenital heart defects).
- Infection of the heart valves (endocarditis).
- Infection of the heart muscle (myocarditis).

C. What Are the Warning Signs?

► Say:

If you or a family member has heart failure, chances are you've already made a trip to emergency room, or at least spent some time in the hospital. You can decrease the chances of another hospital stay by getting calling your doctor right away if any of these warning signs appear:

- Sudden weight gain (three or more pounds in one day, five or more pounds in one week, or whatever amount your doctor told you to report).

- Shortness of breath (a feeling of not getting enough air) when you are not active.
- Increased swelling of your feet, ankles, and legs.
- Swelling or pain in the abdomen (stomach).
- Trouble sleeping (waking up short of breath, using more pillows).
- Weakness or tiring very easily.
- Confusion or can't think clearly.
- Repeated, dry cough, especially when you are lying down.
- Coughing or wheezing when you are active.
- Cough up pink or bloody mucus.
- Dizziness or feel like you might pass out.
- The need to urinate many times at night.
- Loss of appetite.
- Faster heart beat (may feel like the heart is racing).



Handout 4–1: What Is Heart Failure?

Ask the CHWs about their experience with people who have heart failure. What did they notice? Do they remember how these people felt?

Review Handout 4–1. Stress the importance of knowing the signs of heart failure. Tell the CHWs that if someone they know has one or more signs, they should strongly encourage this person to call his or her doctor right away. CHWs can help the person arrange transportation to the doctor's office, if it is needed.

D. How Is Heart Failure Diagnosed?

► Say:

The doctor will ask about medical history, do a physical exam, and may want to do some of the following tests:

- Chest X-ray to see the condition of the heart and lungs.
- Electrocardiogram (ECG) to check the condition of the heart in a simple way.
- Blood tests to check for problems.
- Echocardiography to check how the heart is working.

- MUGA scan (multigated acquisition) to check the ability of the heart to pump blood.
- Coronary catheterization (angiogram) to look at the coronary arteries.



Handout 4–2: Tests for Diagnosing Heart Failure

Review the handout with the CHWs. Community health workers may use this handout to ease the fears of someone who has been diagnosed with heart failure and must have one or more of these tests.

E. How Is Heart Failure Treated?

► Say:

Heart failure cannot be completely cured, but it can be treated. Treatment can keep people feeling good and leading productive lives, often for many years.

To treat heart failure, a doctor usually prescribes medicine and will recommend rest. It's important that you take medicines the way your doctor or nurse advises you. Also, you need to weigh yourself every day to see if you are retaining (holding onto) fluid in your body.

There are medicines that can treat mild or moderate heart failure, but in severe cases surgery might be considered, or even a heart transplant.

But it is very important for a person, who has heart failure, to carefully manage it by making lifestyle changes; such as,

- Follow a low-sodium, low salt eating plan.
- Get regular, mild physical activity.
- Stop smoking.
- Lose weight, if overweight.
- Drink very little alcohol, if any at all.

F. Taking Your Medicine

► Say:

Doctors usually prescribe one or more medicines prescribed to treat heart failure.

Sometimes one medicine is given at first and others may be added later on, or two or more medicines may be given at the start.

It's easy to become confused about when to take medicines if you need to take several medicines at different times during the day. Even so, it's very important to take your medicines as prescribed.



Activity: Take Your Medicine!

Ask the CHWs: Can you think of something people might do to remind themselves to take their medicines? (Write answers on the flipchart.)

Answers could include—

- Take pills at the same time everyday, (for example, after breakfast, before bed, or when you get home from work).
- Write down each time you take your pills.
- Put your medicine in a weekly pill box. You can find these boxes at most drugstores and they are low in cost. Put the pill box where you'll be sure to see it everyday.
- Put “sticky” notes in places you'll be sure to see, such as the bathroom mirror, refrigerator, kitchen cabinet, TV, or car steering wheel.
- Ask a friend to call and remind you.
- Ask your children or grandchildren to call and remind you (children love to help and this is a good way to stay in touch).

Remember to get your prescriptions refilled on time!



Handout 4–3: Taking Medicine for Heart Failure

Review the handout with the CHWs. Community health workers can help people with heart failure understand the importance of always taking medicine as advised by the doctor to treat their condition.

G. Diet, Fluids, and Weight Gain

► Say:

Let's look at the things people with heart failure can do for themselves.

Diet is an important part of treating any heart condition.

For people with heart failure it is especially important to control the amount of salt and sodium in the diet.

The words salt and sodium are sometimes used as though they mean the same thing, but they are not the same. Sodium is found naturally in most foods. Salt is a substance used to help preserve foods or adjust their flavor. You can see how much salt or sodium food has by reading food labels and looking for the sodium content on the label. In our session on healthy eating and weight control you will learn more about sodium in foods and how to read food labels.

Both salt and sodium can cause your body to retain fluids. Too much water or fluid in your body adds weight and makes your heart work harder. Also, too much salt can cause swelling and shortness of breath and cause weight gain and if it is severe you may need to go to the hospital.

Limiting sodium and salt intake is one of the most important things that people with heart failure can do.

Doctors advise that most people keep salt intake below 2,300 milligrams (mg) each day. That is about one teaspoon. But they advise that people with heart failure limit their intake to no more than 2,000 mg a day; that is between $\frac{3}{4}$ and one teaspoon. You should ask your doctor or nurse about the limit that is best for you.

A low-sodium diet can help you feel better and allow your heart medicines to work better. It may even keep you out of the hospital.

You can change what you eat and how you cook. Start slowly and work up to bigger changes.

Tips for cutting down on salt:

- Take the salt shaker off the table.
- Limit salt when you cook.
 - Avoid using salty seasonings, such as bouillon cubes, soy sauce, steak and Worcestershire sauces.

- Try cooking with naturally low salt seasonings and herbs, such as lemon juice (on vegetables and salads), onions, garlic, and salt-free seasoning mixes, to bring out the flavor of food.
- Avoid spices and seasoning mixes with the words salt or sodium in the name. For example, just a teaspoon of garlic salt or celery salt contains about 1,500 mg of salt.
- Drain and rinse canned foods before using to remove some of the salt.
- Avoid high-sodium foods. The amount of salt is very high in fast foods, deli meats, and many canned, packaged, frozen, and other and processed foods. This includes—
 - Boxed noodle and rice items.
 - Cake, muffin, cornbread, and pancake mixes.
 - Canned vegetables and canned soups and dry soup mixes.
 - Canned meats and fish (buy water packed tuna or salmon instead).
 - Salad dressings.
 - Seasoning mixes (tacos, chili, rice) and ketchup, Worcestershire and steak sauce.
 - Salted butter and margarine.
 - Sauces (Hollandaise, Alfredo, spaghetti, gravies).
 - Snack foods (pretzels, potato chips, olives, cheeses, pickles).
 - Tomato and vegetable juice.
 - Fast foods.

Choose low-salt versions:

- Eat foods lower in sodium (lean pork roast instead of ham, cooked meat instead of packaged lunch meats).
- Use flavored vinegars and lemon as salad dressings.
- Eat more fresh fruits and vegetables.
- Other good choices include plain frozen vegetables.
- Choose foods without sauces or ask for sauce and salad dressing on the side and use just a small amount on your fork.
- When you eat out choose fresh food, and ask that your food be fixed without added salt, soy sauce or monosodium glutamate (often added to Chinese food).

- Check your medicine cabinet. People with heart failure should avoid using headache or heartburn medicines that contain carbonate or bicarbonate.
- Watch for other forms of sodium such as sodium bicarbonate or sodium carbonate on packages. Try not use these products if possible.
- Look for cans and packages labeled low-salt, low sodium, reduced-sodium, salt-free, sodium free, or unsalted.
- Sodium free or no sodium foods contain less than 5 mg of sodium and sodium chloride. Very low sodium foods contain 35 mg or less of salt. Low sodium foods contain 140 mg or less of sodium per serving and reduced or less sodium foods must have at least 25% (one-quarter) less sodium than regular products.
- It is important to check food labels for the amount of sodium in the product. The less salt the better. Be careful about foods that claim to be healthy and low-fat. In many cases salt is used to give low-fat foods more flavor.

Note: These topics are covered in the Chapter on Health Eating and Weight Control, Handout 12–4: Sodium in Foods; Handout 12–5A and B: Tips to Eat Less Salt and Sodium and Use Herbs and Spices Instead of Salt; and Handout 12–8: Read the Food Label for Sodium! Also, check out the Heart Failure Society of America’s Web site: www.abouthf.org. Especially useful are the many examples and tips in their Education Module 2: How to Follow a Low-Sodium Diet with Heart Failure: www.abouthf.org/module2/default.htm.

It is important to follow your doctor’s advice on fluid intake, or how much to drink each day.

If you have heart failure, you should weigh yourself at the same time every morning, wearing the same amount of clothes, after going to the toilet and before eating breakfast.

If you suddenly gain weight (three or more pounds in one day, five or more pounds in one week or whatever you were told to report to your doctor), call your doctor!

This weight gain probably happens when your body retains more fluids than usual and your treatment plan may need to be adjusted. This adjustment can be as simple as increasing or changing your medicines, **so call the doctor!**

H. Remaining Active with Heart Failure

► **Say:**

Learn to balance rest with activity.

Daily activity can help the heart get stronger.

Activity reduces weight gain and swelling in the legs and feet, decreases stress and boosts energy levels.

Regular activity also may improve your health. It may help with weight loss, lower blood pressure and cholesterol levels. All of these are especially important if you have heart failure.

For people who are having trouble being physically active, a cardiac rehabilitation program at a local hospital or clinic can help. A cardiac rehab program lets people start exercising slowly in a setting where nurses and therapists are there to help. Many people find it easier to stick with a cardiac rehab program and will remain active after they finish the program.



Handout 4–4: Walking for Health

Walking is an great activity. It's easy, it's safe, and it doesn't cost anything. Walking with a friend can be fun and good for both of you!

I. Stress

► **Say:**

Stress can cause changes in your body and your emotions. Stress is the way that you respond to situations in your life.

Stress can raise blood pressure and make your heart beat faster. It can also cause your heart to beat irregularly.

Some stress is good for you because it can help you meet the demands of daily life, but too much stress that lasts a long time can cause health problems such as nervousness, depression, or stomach ulcers. Also people under pressure may overeat, smoke or drink too much alcohol.

Some signs of stress are feeling tense or having muscle tightness, having an upset stomach, feeling depressed, and being easily distracted. If these signs last longer than a few weeks, you should talk to your doctor about them.

You should tell your doctor if you have these signs of depression:

- Not taking care of your appearance, cleanliness, diet, or exercise.
- Having a loss of interest in people or activities.
- Constantly thinking or worrying about your condition.
- Having trouble getting to sleep or sleeping too much or not enough.
- Using medicine or alcohol to help you sleep.
- Having thoughts of harming yourself.



Handout 4–5: Stress and Your Heart

CHWs can use the handout to discuss the problem of stress with their peers.

J. Smoking

► Say:

If you smoke or you are around a lot of secondhand smoke (from other people's smoking), the smoke can affect your heart and blood vessels.

The nicotine in cigarette smoke causes your heart to beat faster and, raises your blood pressure. Tobacco smoke damages blood vessels and this damage adds to plaque build-up in the blood vessels.

At the same time, nicotine causes blood vessels in your whole body to become smaller.

When your heart muscle is weak from heart failure, cigarette smoke makes your heart work too hard and it can't work properly.

A weak heart pumps less blood than a normal heart so less oxygen reaches the brain and other organs. Smoking lowers the amount of oxygen even more. This lack of oxygen may cause dizziness, lightheadedness, or tiredness.



Handout 4–6: Smoking and Heart Failure

Later we will talk about smoking and how it affects the heart. We will also talk about how to quit. Handout 4-6 focuses on coping without cigarettes during a hospital stay.

3. Summary

► **Ask:**

What are some of the ways to support people who are at risk for heart failure or already have heart failure?



Handout 4-7: What CHWs Can Do to Help Community Members Who Are at Risk for Heart Failure or Who Already Have Heart Failure?

Review the handout with the CHWs. Ask for their suggestions and give cues to help them remember the importance of teaching and reminding people to keep their blood pressure and cholesterol levels under control to check their blood pressure and cholesterol levels regularly, to keep medical appointments, and to know the warning signs of heart failure. Ask CHWs what they can do to help people who are at risk for heart failure or who already have heart failure?

► **Say:**

Let's review what we've learned today.

- What is heart failure?
- What causes heart failure?
- What are the signs of heart failure?
- How is heart failure diagnosed?
- How is heart failure treated?



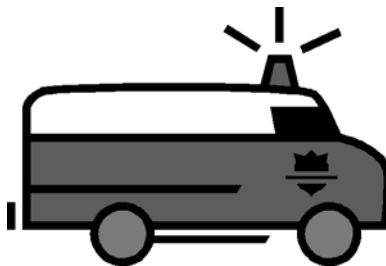
Handout 4–8: Caring for Your Own Health and Your Heart If You Have Heart Failure

End this chapter by reviewing Handout 4–8. It's important that people with heart failure know the things they can do for their own health. They'll live longer, they'll stay out of the hospital, and they'll feel better too.

The Signs of Heart Failure

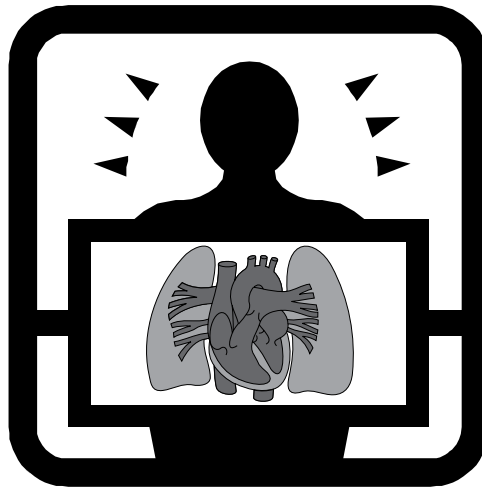
If you or a family member has heart failure, chances are you've already made a trip to emergency room, or at least spent some time in the hospital. You can decrease the chances of another hospital stay by getting calling your doctor right away if any of these warning signs appear:

- Sudden weight gain (3 or more pounds in one day, five or more pounds in one week, or whatever amount your doctor told you to report)
- Fast heart beat (feels like heart is racing)
- Shortness of breath when you are not active
- Coughing or wheezing when you are active
- Coughing-up pink or bloody mucus
- Increased swelling of feet, ankles, legs, or stomach
- Weakness or tiring very easily
- Confused or can't think clearly
- Repeated, dry cough, especially when lying down
- Dizziness or fainting
- Trouble sleeping
- Lack of appetite
- Nausea



Tests for Diagnosing Heart Failure

Chest X-ray	shows the condition of the heart and lungs
Electrocardiogram (ECG)	checks the condition of the heart in a simple way
Echocardiography (echo for short)	checks the function of the heart in detail
MUGA (multigated acquisition) scan	measures the pumping ability of the heart
Coronary catheterization (angiogram)	examines the coronary arteries



Taking Medicine and Heart Failure

Take your medicine as the doctor advises.

It may take your doctor a few days or weeks to determine the right amount of medicine for you. Your doctor may change the amount to improve how your heart works.



Do not skip or stop taking your medicine, even if you are feeling better.

Your heart failure may get worse if you stop your medicines. Your doctor will tell you when to stop taking a medicine.

Do not take more medicine than your doctor advises.

If you are not feeling better, or are feeling worse, be sure to tell your doctor.

Do not run out of medicine.

If you will be away from home, take your medicine with you. Be sure you have enough medicine on hand before the drugstore closes for holidays or the weather turns bad.

If you are worried about the cost, tell your doctor or pharmacist.

There may be another type of drug, or a generic drug, that costs less.

You can compare prices at different drugstores. You may also be able to get free medicines from drug companies. Low-cost medicines may be available from your local drugstore if you have a Medicare drug card.

Tell your doctor if you have other health problems and if you are taking other medicines.

Be sure to tell your doctor about any medicines that you buy at the drugstore without a doctor's prescription (for example, sinus, cough, and cold medications; aspirin; or other pain medications).

Tell your doctor if you are allergic to any medicines, foods, or other products.

Walking for Health

It's easy! It doesn't cost a thing. It's safe. It's good for you. And it's fun—especially if you walk with a friend.

Walk anywhere that is easy, close, and safe for you. Plan where you will walk before you go. Think of flat areas where you can walk, such as shopping malls, school tracks, or streets near your home. Pick a time and a place that work for you. Plan to walk with someone. If you can't, be sure someone knows when and where you are walking.

When should I not walk?

- Do not walk if you are not feeling well (if, for example, you have a cold) or if you have a fever. Wait for 24 hours after your temperature has returned to normal before increasing your activity.
- Do not walk outdoors if the weather is too hot or too cold. Find an indoor place to walk (such as a shopping mall) when the weather is not good.
- Do not walk right after you eat a meal. Your heart is busy pumping blood needed to digest your meal. Wait at least one hour after eating before you go walking.



If you miss more than three days of walking, decrease your time and begin again slowly. This is a plan for life, so don't worry too much about "catching up."

What do I wear? Wear loose-fitting clothes. If you have comfortable shoes that fit well, wear them. Well-cushioned shoes, such as oxfords or athletic shoes, work well. Wear socks to give a little more cushion and to help prevent blisters.

What else do I need to know? Your doctor or cardiac rehabilitation staff will tell you if you need special instructions, such as how to check your heart rate, or other information that will help you be more active.

SAMPLE WALKING PROGRAM

WEEK	COMFORTABLE WALKING	TIMES A DAY
1	5 minutes	3
2	7 minutes	3
3	10 minutes	2
4	12 minutes	2
5	13 minutes	2
6	15 minutes	2

When you are comfortable walking 15 minutes twice a day, you may want to talk with your health care provider about increasing your activity.

You should be able to walk and talk at the same time. If you can't talk because you are gasping for air, you are walking too fast. If you can talk as easy while walking as when you are still, then you should try walking a little faster.



Good luck and keep moving!

Stress and Your Heart

Can stress affect my body?

Yes, stress helps you meet the demands of daily life, but too much stress or stress that lasts a long time can cause health problems such as high blood pressure, nervousness, depression, or stomach ulcers.



What can stress do to my heart?

Stress can raise your blood pressure and make your heart beat faster or beat irregularly. Your muscles may get tight, you may feel more alert, or you may feel more nervous or upset.

When do I need to get special help for my stress?

If the following feelings last longer than a few weeks, you should talk with your doctor.

- Not tending to your appearance, cleanliness, diet, or exercise;
- Loss of interest in activities or people;
- Constantly thinking of or worrying about your condition;
- Trouble getting to sleep or sleeping too much or not enough;
- Using medicines or alcohol to help you sleep; or
- Having thoughts of harming yourself.

What can I do to reduce my stress?

Try to figure out what causes you to feel stressed. Talking to someone who cares about you often helps. It is important to talk about how you feel and what you think. Try to think about your situation in a hopeful way. Avoid blaming yourself or others for your situation or condition.

- Start by having a hopeful outlook;
- Avoid activities or situations that cause you stress;
- Learn how to relax;
- Start a regular exercise program when approved by your doctor;
- Follow a health diet; and
- Build a support group of family and friends.

Your doctor can help you learn ways to relax, follow a good diet, and start an exercise plan.

Smoking and Heart Failure

When your heart muscle is weak from heart failure, cigarette smoke makes it work harder than it should.

The nicotine in cigarette smoke causes your heart to beat faster, increases your blood pressure, and increases the amount of blood flowing in your heart's arteries.



A weak heart pumps less blood than normal. This means that less oxygen is going to your brain and the cells in your body. This lack of oxygen may make you feel dizzy, lightheaded, or tired.

Hospitals and No Smoking policies.

A hospital stay can be very stressful. If you are a smoker, it may be a little more stressful if you worry about how you will manage without cigarettes.

Some smokers use their hospital stay as an opportunity to quit. Here are some tips to help you during your hospital stay:

1. Think of other things to do when you get the urge to smoke.

Think of your hospital stay as practice for when you are home. Notice what you find helpful in getting past the urge for a cigarette.

2. Understanding your smoking urges. Being bored draws your attention to cravings for cigarettes. Try to find something to distract you. Take a walk, take some slow deep breaths, watch television, read a book, or talk with a friend.

3. Focus on relaxing. You may be tense or restless, you may become nervous, or you may have trouble concentrating when you try to quit smoking. If you focus on relaxing when symptoms appear, you will feel better.

- 4. Find cigarette substitutes.** You may feel fidgety because you have nothing to hold in your hand or put in your mouth. If this is a problem for you, get some sugar-free candies, gum, or mints. Hold a straw or toothpick in your fingers or mouth.
- 5. Cut back on caffeine.** After you quit smoking, your body retains (keeps) more caffeine. The extra caffeine in your body may make you feel tense or nervous. Try cutting back on caffeine at the same time you quit. Coffee, tea, and many brands of soda are available without caffeine.
- 6. Ask your doctor about medications.** If you have severe nicotine withdrawal symptoms, talk with your nurse or doctor. There are medications that might help with the withdrawal symptoms.
- 7. Make a plan to remain a nonsmoker if you quit smoking while in the hospital.** Many patients who stop smoking while in the hospital are able to quit forever.

What Community Health Workers Can Do to Help Community Members Who Are at Risk for Heart Failure (with Program Support)

Support people in their health care needs:

- Help community members understand the importance of taking their medications regularly (for heart, high blood pressure, high cholesterol, diabetes, etc.) in order to prevent heart failure.
- Teach community members the signs of heart failure.
- Teach family members to call their doctor right away to report heart failure signs.

Help people make better lifestyle choices:

- Teach people to follow a low salt, low sodium eating plan. They need to reduce their salt and sodium intake to 2,000 milligrams or less each day or the amount their doctor advises.
- Teach people to get regular, mild physical activity, stop smoking, lose weight (if they are overweight), and drink very little alcohol, if any.

What Community Health Workers Can Do to Help Community Members Who Already Have Heart Failure (with Program Support)

All of the suggestions for people at risk for heart failure apply to those who have heart failure, plus the following:

- Help community members with heart failure understand what they need to do to stay as healthy as possible and to avoid going to the hospital.
- Help community members get follow-up rehabilitation for heart failure, if the doctor advises it.
- Remind community members to take heart medicines exactly as the doctor advises; tell them not to skip taking the medicine and to take care not to run out of the medicine.
- Help community members understand the importance of taking other medicines regularly (for diabetes, high blood pressure, high cholesterol, etc.), as the doctor advises, in order to reduce the chance of sudden worsening of heart failure.
- Help people learn how to keep track of the medicines they are taking.
- Help community members find affordable medicines.
- Help people get a scale so that they can weigh themselves each day at the same time.
- Encourage community members with heart failure to check and record their weight daily and to call the doctor's office as recommended.
- Remind community members to follow their doctor's advice on how much fluid they should drink.
- Teach community members to keep salt and sodium intake to 2,000 milligrams or less per day, or the amount their doctor advises.
- Support caregivers by giving them information, helping them find caregiver resources, and helping them talk with members of the healthcare team.
- Learn and teach exercises on ways to relax and cope.
- Encourage community members with heart failure and the people who take care of them to get help in managing stress and depression.

Caring for Your Own Health and Your Heart

What is meant by heart failure? Remember, having heart failure means your heart does not pump blood as well as it should. If fluid builds up in your lungs, the condition is called congestive heart failure. Having heart failure can make it more difficult for you to do things now that may have been easier for you in the past.

What can be done to treat heart failure? Keep regular visits with your doctor. In most cases, heart failure will not go away. But you and your doctor can work together to help make your life more comfortable. Your doctor will give you medications that will lower the strain on your heart. Your heart should work easier, and your symptoms should get better.

What else can I do to feel better?

- Take your medicine as prescribed by your doctor.
- Watch what you eat and drink. Eating foods with less salt and sodium can help you get rid of extra fluid. Ask your doctor about the amount of fluid you should drink.
- Do not smoke. Smoking harms the blood vessels in your heart and other parts of your body. Smoking lowers the amount of oxygen in your heart and makes your heart beat faster. Ask your doctor for help to stop smoking.
- Lose weight if you are overweight. Being overweight can put a strain on your heart. Talk with your doctor about how to lose weight so that you can take some strain off your heart. You will be told if you must lose weight and the amount and types of food to eat.
- Be as active as possible. Your doctor will suggest the types of activities you can do, such as walking.
- Get enough sleep, rest, and activity. Try to get eight hours of sleep each night. Tell your doctor if you are not sleeping well. Learn to balance rest with activity.
- Weigh yourself daily and call your doctor if your weight increases by 3–5 pounds over several days, or 2 pounds overnight.

How can I keep track of my progress? Keep a health notebook. Write down when you walk or do other activities that your doctor suggests and when you take your medicines. Weigh yourself each day and write it down. Weigh yourself at the same time each morning and with the same amount of clothes.

Your weight will go up if fluid builds up in your body. Extra fluid makes your heart work harder. Call your doctor if you gain three pounds or more in three days or less.

Keep regular visits with your doctor. Show the doctor your notebook where you write your weight, medication, and exercise. Tell the doctor how you are feeling and if you have any new or increasing symptoms. The doctor will change your medicines, diet, fluid, and exercise if needed.

When should I call the doctor? You should call your doctor if you start to feel worse or if you have new feelings that are uncomfortable.

Call your doctor if:

- You find it harder to breathe at rest or with activity.
- You are getting tired faster or getting weaker.
- You start coughing at night or have a dry, hacking cough.
- You wake up gasping for breath.
- You are unable to sleep while lying down, or you need to use extra pillows to make your breathing easier.
- You gain three pounds or more in three days or two pounds or more overnight.
- You feel dizzy or faint.
- You have tightness or pain in your chest.
- You do not pass the usual amount of urine after taking your fluid pill.
- Your feet, ankles, or abdomen swell more than usual.
- Your heart skips, jumps, flutters, or “runs away.”

CALL 9-1-1 IF YOU HAVE SERIOUS TROUBLE BREATHING OR HAVE NEW OR WORSE CHEST PAIN.

Objectives

By the end of this session, community health workers will be able to—

- Describe atrial fibrillation (AF).
 - Name the risk factors for atrial fibrillation.
 - Describe the signs of atrial fibrillation.
 - Discuss stroke as a consequence of atrial fibrillation.
 - Discuss treatments for atrial fibrillation, including medicines that might be prescribed.
-

Materials and Supplies

Flipchart, markers, tape, blackboard, chalk, and eraser.

Handouts:

- 5–1: How the Heart Works
 - 5–2: What Is Atrial Fibrillation?
 - 5–3: What Community Health Workers Can Do to Help Community Members Who Are at Risk for Atrial Fibrillation or Who Have Atrial Fibrillation
-

Chapter Outline

1. Overview

2. Lesson

- A. What Is Atrial Fibrillation (AF)?
- B. What Causes AF?
- C. What Are the Risk Factors for AF?
- D. What Are the Signs of AF?
- E. Atrial Fibrillation and Stroke
- F. What Is the Treatment for AF?
- G. What Is the Treatment for Preventing Blood Clots and What Should You Do?
- H. What Is the Treatment for Slowing a Rapid Heart Rate?
- I. What Is the Treatment for Restoring Normal Heart Rhythm?

4. Summary

Resources

Living with Atrial Fibrillation: Our Guide to Managing a Key Stroke Risk Factor. American Heart Association/ American Stroke Association. www.americanheart.org

Overview

► **Say:**

In this chapter, we'll talk about a serious heart condition that you may not have heard about.

It's called atrial fibrillation, or AF. (Write AF on the flipchart.)

Before we begin talking about AF, let's do a quick review of how the heart works.

Lesson

A. What Is Atrial Fibrillation (AF)?

► **Say:**

Atrial fibrillation is a problem with the heart's rhythm.



Handout 5–1: How the Heart Works

Use the explanation below to review the handout with the CHWs and to explain how atrial fibrillation affects the heart.

► **Say:**

Normally, the heart contracts and relaxes in regular, evenly timed beats. It keeps a steady rhythm—about 60 to 100 beats per minute. The regular beating makes the heart pump the right amount of blood with enough force to send it to all parts of the body.

For several different reasons, the heart sometimes begins beating irregularly, and it may beat too fast or too slowly. The condition in which the heart is not beating in its regular, rhythmic way is called arrhythmia. The most common type of arrhythmia is atrial fibrillation, or AF.

In AF, the heart's upper chambers, the atria, don't beat in coordination with its lower chambers, the ventricles, and the result is an irregular beat and usually a fast heart rate. At that time, the heart is not pumping the blood well. AF can take place on and off, or the heart can have this irregular rhythm all the time.

AF can lead to such problems as tiredness. Even worse, it can lead to heart failure or stroke.

AF causes about 2 out of 10 strokes. That's why if your doctor tells you that you have AF, you should work with him or her to treat it right away.



Handout 5–2: What Is Atrial Fibrillation?

Review the American Heart Association handout (Handout 5-2) with the CHWs. Talk about how they can use this handout to explain AF to their community members.

Note to Trainer: Taking your pulse helps you monitor your heart rhythm. CHWs should be trained in how to take a pulse. Patients should ask their doctors these three questions: What should my pulse be? How do I take my pulse? What should I do if my pulse is too high or too low?

B. What Causes AF?

► Say:

Doctors don't know why many people develop atrial fibrillation. The most common cause is heart valves that are not working properly.

C. What Are the Risk Factors for AF?

► Say:

Your risk of developing atrial fibrillation increases if you have, or have had, other heart problems; such as,

- Heart failure.
- Heart attack.
- Coronary artery disease (blockage of blood vessels in the heart).
- Inflammation (swelling) of the heart.
- Heart problems at birth.

Older people are more likely to have AF than younger people. AF also often develops in people who have lung disease. High blood pressure and diabetes are also major risk factors.

Heavy drinking of alcohol may cause AF and put a person, who has heart disease, at risk for heart attack. Many people who have AF don't know if they have heart disease, so a person who feels an abnormal heart rhythm should get medical help right away.

Smoking affects how the body uses medicines and increases the risk of blood clotting. Smoking makes blood stickier, damages the lining of the blood vessels, and it increases the chance of a heart attack. If you smoke, quit.

Other things can trigger atrial fibrillation; such as,

- Use of illegal drugs, such as cocaine and methamphetamines.
- Too much caffeine (found in coffee, tea, chocolate, and some sodas).
- Decongestant medicine (such as cold and sinus medicine).

D. What Are the Signs of AF?

► Say:

Some people have no warning signs of AF. Others may have one or more of the following signs:

- A racing or irregular heartbeat.
- Discomfort, pain, or a “flopping” sensation in the chest.
- Dizziness or lightheadedness.
- Shortness of breath.

Some people who have AF don't feel anything out of the ordinary. Others notice an irregular heartbeat immediately. People may also have dizziness, sweating, or chest pain or pressure, particularly when the heart is beating very fast.

When AF is left untreated and the heart keeps beating at a fast rate, the heart becomes enlarged and can't pump as much blood. This can lead to heart failure.

Heart failure can cause shortness of breath, a feeling of overall weakness, inability to be active, and swelling of the legs and feet.

E. Atrial Fibrillation and Stroke

► **Say:**

In AF, the heart doesn't work well and beats irregularly or too fast, and the blood tends to form clots. If a clot that forms in the heart breaks loose and enters the bloodstream, it can travel to a blood vessel in the brain, block the vessel, and cause a stroke.

Although not everyone with AF will have a stroke, a person with AF has a much higher risk of stroke than someone without AF.

Treating AF correctly is the best way to reduce your risk for stroke.

F. What Is the Treatment for AF?

► **Say:**

AF is treated with medicine, a medical device, surgery, or a combination of the three.

All treatment plans for AF should include three goals:

- Preventing blood clots from forming.
- Slowing the heart rate.
- Restoring the heart's normal rhythm.

G. What Is the Treatment for Preventing Blood Clots and What Should You Do?

► **Say:**

To prevent blood clots from forming, your doctor will probably prescribe a blood thinning medicine.

Blood thinning medicine is used because during AF, the heart is not pumping the blood as well as it should, and blood clots are more likely to form.

Warfarin, an anticoagulant, is the most common blood thinner prescribed. An anticoagulant reduces the blood's ability to clot. Taking blood thinners can prevent stroke in most patients with AF.

The use of this medicine must be carefully watched. Too much warfarin can cause abnormal bleeding, and too little won't protect against the blood forming clots.

Tell Your Doctor:

- People taking a blood thinner should tell their doctor right away if they have any unusual bleeding or bruising.
- Persons who take blood thinning medicine need to have their blood clotting time tested regularly to make sure they're getting the right amount of medicine. It's very important to have these blood tests as often as the doctor recommends.
- If people forget to take a dose of blood thinning medicine, they should not take an extra dose to "catch up." Instead, they should call their doctor, explain that they missed their regular dose, and then follow their doctor's advice.
- People taking blood thinning medicine should tell all the doctors they are seeing that they take this medicine. The doctor who monitors the blood thinning medicine should know about all other medicines you take.
- It is very important to tell the doctor before starting any new medicine or having any medical treatment that can cause bleeding, such as having surgery or having a tooth pulled.

Tell Your Dentist:

- Those who take blood thinners should always tell their dentist before having dental work because blood thinners can increase bleeding of the gums.
- Also, the dentist may have to give medicine for pain or to prevent infection. Some pain medicines and antibiotics (infection-fighting medicines) can cause a bad reaction when taken along with blood thinners. The dentist may need to contact a person's doctor before doing dental work or giving medicines.

Watch What You Eat and Drink:

- Vitamin K, which is found in some foods, can block warfarin's effect. That's why it's important to carefully follow the doctor's advice about what you eat when taking this medicine.
- People taking warfarin should eat a balanced diet and should not suddenly increase the amount of green vegetables they eat.
- These vegetables, which include broccoli, raw spinach, cabbage, lettuce, and spinach, turnip greens, and collard greens are high in vitamin K.
- Some dressings and oils are high in vitamin K. They include mayonnaise and canola and soybean oil.

- Eating too much of these foods at one meal or in one day can interfere with the medicine’s ability to prevent clots.
- People on blood thinners should tell their pharmacist if they are taking a multivitamin or any herbal products. The pharmacist can help find a multivitamin or supplement without vitamin K. Also, some herbal products may increase (such as, chamomile and Ginkgo Biloba) or decrease (such as, green tea and St. John’s Wart) the effect of blood thinning medicine.
- Another medicine the doctor may prescribe to prevent blood clots is aspirin. Aspirin is less likely than warfarin to cause abnormal bleeding, but it is not as effective in preventing strokes caused by blood clots.

H. What Is the Treatment for Slowing a Rapid Heart Rate?

► Say:

To slow the heart rate, the doctor may prescribe a medicine that slows the rate at which the heart contracts. Slowing the heart rate in this way—

- Gives a normal heart rate.
- Decreases the heart’s workload.
- Reduces discomfort.
- Prevents congestive heart failure. (AF can lead to congestive heart failure because the extra workload on the heart causes the ventricles to enlarge, or dilate, and the heart muscle to become weaker.)

I. What Is the Treatment for Restoring Normal Heart Rhythm?

► Say:

To restore normal rhythm to the heart, AF must be stopped. The doctor may recommend medicine to do this.

Another method of stopping AF is to apply an electrical shock to the chest after the person has been given a short-acting medicine to put him or her to sleep for a few minutes. Sometimes both rhythm-restoring medicine and electric shock are used.

For people whose AF is hard to control, other methods may be needed. One method is to use a pacemaker, and another is surgery.

A pacemaker is a small device that helps regulate the heartbeat. It is placed under the skin near the collarbone.

Sometimes heart surgery is necessary.

3. Summary

► **Ask:**

What are some ways you could support people in the community who have atrial fibrillation?



Handout 5–3: What Community Health Workers Can Do to Help Community Members Who Are at Risk for Atrial Fibrillation or Who Have Atrial Fibrillation

Review the handout with the CHWs. Ask them to suggest ways to help people remember to regularly check their blood pressure and pulse and to keep medical appointments. CHWs should also encourage people with atrial fibrillation to know what emergency numbers to call and to have a plan in place in case of a medical emergency.

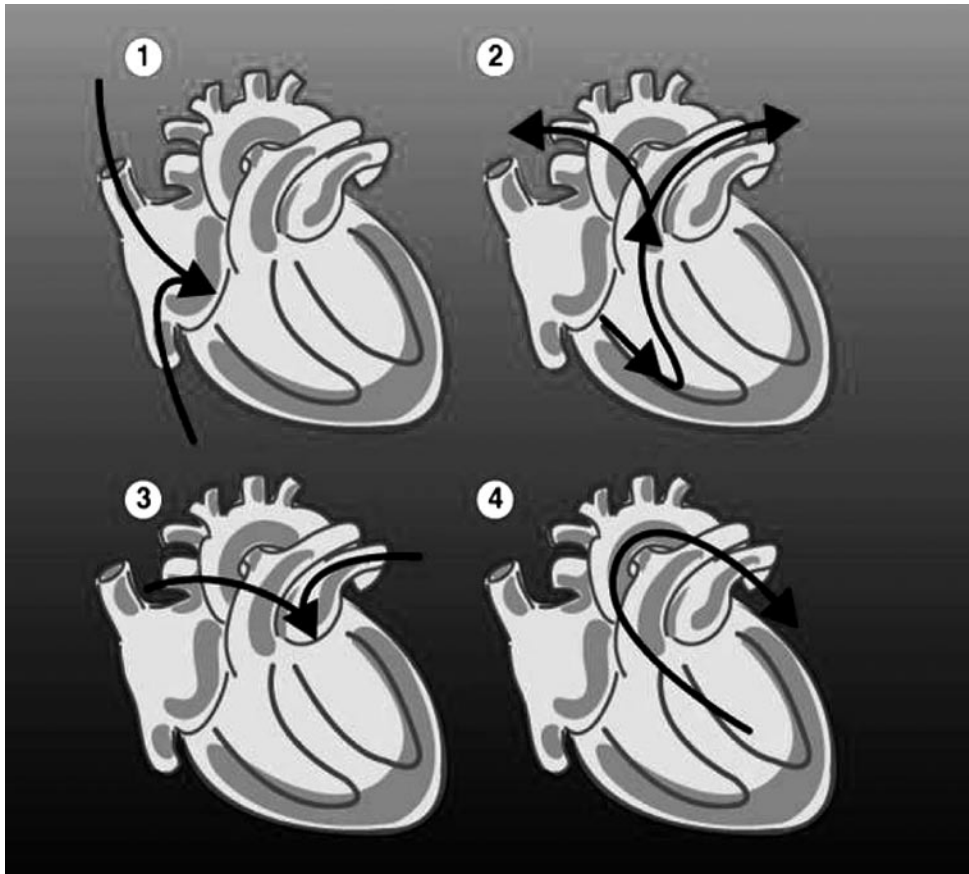
Tell the CHWs that if they are working with people who take blood thinners, they should remind them about several important points:

- These people should always take the amount of medicine the doctor prescribes. If they forget a dose, they shouldn't take an extra dose to "catch up." Instead, they should call the doctor and follow his or her advice.
- They should tell their doctor if they have unusual bleeding or bruising.
- Before they have dental work, they should tell their dentist that they take blood thinners. They should also tell their other doctors and anyone who prescribes medicine for them.
- They should always let their doctors know about any other medicines (even over-the-counter medicines) they are taking or might take. They should talk to their doctor before taking vitamins or any other kind of supplement.

► **Ask:**

- What is atrial fibrillation?
- What are the risk factors for atrial fibrillation?
- What are the warning signs of atrial fibrillation?
- What are the treatments for atrial fibrillation?
- What medicines might be prescribed to treat atrial fibrillation?

How the Heart Works



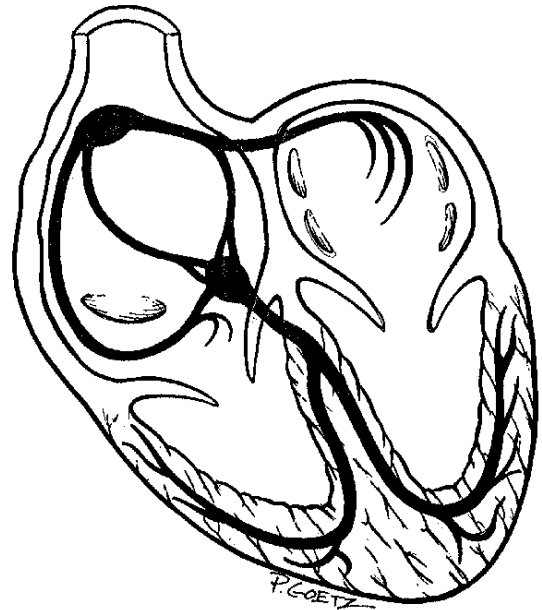
1. Blood (with little oxygen) enters the right top chamber of the heart.
2. Blood then flows down to the right lower chamber so it can be pumped out to the lungs.
 - a. In the lungs, waste such as carbon dioxide is taken from the blood.
 - b. The blood then gathers more oxygen.
3. The blood, made rich with oxygen in the lungs, returns to the heart and enters the upper left chamber.
4. The blood then flows down to the lower left chamber and is pumped to all of the body organs and tissues and even to the heart muscle itself.



What Is Atrial Fibrillation?

Normally, your heart contracts and relaxes to a regular beat. Certain cells in your heart make electric signals that cause the heart to contract and pump blood. These electrical signals show up on an electrocardiogram, or ECG recording. Your doctor can read your ECG to find out if the electric signals are normal.

In atrial fibrillation, the two small upper chambers or atria of the heart don't beat the way they should. Instead of beating in a regular, normal pattern, the atria beat irregularly and too fast. It's important for the heart to pump properly, because that's how your body gets the oxygen and food it needs. You can live with atrial fibrillation, but it can lead to other rhythm problems, chronic fatigue, heart failure and — worst of all — stroke. You'll need a doctor to help you control the problem.



Your heart has a natural pacemaker, called the “sinus node,” that makes electrical signals. These signals cause the heart to contract and pump blood.

How do I know I have atrial fibrillation?

Here are some of the symptoms you may experience:

- Irregular and rapid heartbeat
- Heart palpitations or rapid thumping inside the chest
- Dizziness, sweating and chest pain or pressure
- Shortness of breath, anxiety
- Tiring more easily when exercising
- Fainting (syncope)

What can correct it?

Sometimes atrial fibrillation can be corrected with an electric shock. This shock may change the beat of your heart back to normal.

- You may take medicines, such as beta blockers or antiarrhythmics, to help return your heart rate to a normal rhythm; or digitalis, calcium channel blockers or amiodarone to help slow your heart rate.
- You may need surgery, a pacemaker or other procedures. It depends on the underlying cause and your level of disability.

How can I lower my risk of stroke?

Your doctor may prescribe drugs to prevent blood clots from forming. Two examples are anticoagulants and antiplatelets such as aspirin and warfarin.

- Always tell your doctor, dentist and pharmacist that you take aspirin or warfarin.
- If you have any unusual bleeding or bruising or other problems, tell your doctor right away.

How can I learn more?

1. Talk to your doctor, nurse or other health-care professionals. If you have heart disease or have had a stroke, members of your family also may be at higher risk. It's very important for them to make changes now to lower their risk.
2. Call 1-800-AHA-USA1 (1-800-242-8721) or visit americanheart.org to learn more about heart disease.

3. For information on stroke, call 1-888-4-STROKE (1-888-478-7653) or visit StrokeAssociation.org.

We have many other fact sheets and educational booklets to help you make healthier choices to reduce your risk, manage disease or care for a loved one.

Knowledge is power, so *Learn and Live!*

What are the warning signs of heart attack and stroke?

Warning Signs of Heart Attack

Some heart attacks are sudden and intense, but most of them start slowly with mild pain or discomfort with one or more of these symptoms:

- **Chest discomfort**
- **Discomfort in other areas of the upper body**
- **Shortness of breath with or without chest discomfort**
- **Other signs including breaking out in a cold sweat, nausea or lightheadedness**

Warning Signs of Stroke

- **Sudden weakness or numbness of the face, arm or leg, especially on one side of the body**
- **Sudden confusion, trouble speaking or understanding**
- **Sudden trouble seeing in one or both eyes**
- **Sudden trouble walking, dizziness, loss of balance or coordination**
- **Sudden, severe headache with no known cause**

Learn to recognize a stroke. Time lost is brain lost.

Call 9-1-1 ... Get to a hospital immediately if you experience signs of a heart attack or stroke!

Do you have questions or comments for your doctor?

Take a few minutes to write your own questions for the next time you see your healthcare provider. For example:

What should my pulse be?

How do I take my pulse?



What CHWs Can Do to Help Community Members Who Are at Risk for Atrial Fibrillation (with Program Support)

Supporting People in Their Health Care Needs:

- Teach community members the signs of atrial fibrillation remind them to be aware when they have any signs and to call their doctor right away.
- Help community members understand the importance of taking their medications regularly (for heart, high blood pressure, high cholesterol, diabetes, etc.).
- Teach patients to check with their pharmacist before buying herbal products and multivitamins.
- Teach community members how to take their pulse.
- Remind them to take it regularly.

Helping People Make Better Lifestyle Choices:

- Teach people to get regular physical activity, eat healthy low-salt foods, stop smoking, lose weight (if they are overweight), and drink very little alcohol, if any.

What CHWs Can Do to Help Community Members Who Have Atrial Fibrillation (with Program Support)

All of the suggestions for people at-risk for atrial fibrillation apply (see the page before this) plus:

- Help people understand that they need to take heart and blood thinner medicines exactly as their doctor advises.
- Tell them that if they take blood thinners and miss taking a dose they need to call the doctor or nurse to find out what to do next.
- Teach them that if they take blood thinners they should not suddenly increase the amount of green vegetables they are eating (such as broccoli, cabbage, lettuce, and spinach, which are high in vitamin K). Eating too much of these vegetables at one meal or in one day can keep their blood thinning medicine from working to prevent blood clots.
- Support caregivers by giving them information, helping them find caregiver resources, and helping them talk with members of the health care team.
- Learn and teach exercises on ways to relax and cope.
- Encourage community members with heart failure and the people that take care of them to get help for managing stress and depression.
- Help community members understand that because they have atrial fibrillation they are at great risk for having a stroke and really need to take care of themselves.

Objectives

By the end of this session, community health workers will be able to—

- Define stress and depression.
- Discuss how stress and depression are treated.
- Identify the two main treatments for depression.
- Discuss the relationship of depression and stress to heart disease and stroke.

Materials and Supplies

Flipchart, markers, tape, blackboard, chalk, and eraser.

Handouts:

- 6–1: Signs of Depression
- 6–2: Four Steps to Understand and Get Help for Depression
- 6–3: Managing Stress
- 6–4: How Can I Manage Stress

Chapter Outline

1. Overview
2. Lesson
 - A. What Is Stress?
 - B. Can Stress Be Diagnosed and Treated?
 - C. What Is Depression?
 - D. What Causes Depression?
 - E. How Is Depression Diagnosed?
 - F. How Is Depression Treated?
 - G. What Do Depression and Stress Have to Do with Heart Disease and Stroke?
 - H. How Can I Manage Stress?
3. Summary

Resources

American Heart Association. www.americanheart.org

Depression. National Institute of Mental Health, National Institutes of Health, U. S. Department of Health and Human Services. www.nimh.nih.gov/health/publications/depression/summary.shtml

The Healthy Heart Handbook for Women. National Heart, Lung, Blood Institute. www.nhlbi.nih.gov/health/public/heart/other/hhw/hdbk_wmn.pdf

Stories of Depression. National Institute of Mental Health, National Institutes of Health, U.S. Department of Health and Human Services. www.nimh.nih.gov/health/topics/depression/men-and-depression/real-stories-of-depression/index.shtml

1. Overview

► **Say:**

We've talked about several risk factors for heart disease and stroke—physical conditions, such as high blood pressure, high levels of blood cholesterol, and diabetes; and personal behaviors, such as smoking, bad eating habits, and lack of physical activity.

But the title of this session is about different types of risk—depression and stress. You may be wondering what these two things have to do with heart disease and stroke.

Some recent studies suggest that there is a connection between heart health and stress or depression.

Some common ways that people cope with stress, such as overeating, heavy drinking, and smoking are bad for the heart.

If you have stress over a long period of time it can harm the heart.

The most common “trigger” for a heart attack is a stressful event, especially one involving anger.

After a heart attack or stroke, people with higher levels of stress and anxiety tend to have more trouble getting well.

Depression over a long time can also harm the heart.

Depression is common among people who have had a heart attack, heart surgery, and a stroke.

► **Ask:**

If you sometimes feel depressed or have a lot of stress in your life, are you at a higher risk for heart disease?

► **Say:**

Not necessarily, but if you manage your stress and get help for your depression your overall health will improve and your risk for heart attack goes down.

Exactly what does it mean to be suffering from depression or to be “stressed out?”

2. Lesson

A. What Is Stress?

► **Say:**

Stress can mean many different things, but for our purposes, we'll define stress as "mental tension," or feeling tense, anxious, or worried for long periods of time.

All people feel stress, but they feel it in different amounts and react to it in different ways.

B. Can Stress Be Diagnosed and Treated?

► **Say:**

Stress is difficult to measure. Because it's not considered an illness, it's not something that a doctor can diagnose using medical tests.

Stress can be as harmful to your health as some illnesses. Although we usually don't talk about treating stress medically, it's important to manage the stress in your life. Occasional stress is OK, but constant stress can be deadly.

(Note to Trainer: you want to define diagnose, which means to identify or find the cause of an illness or disorder in a patient through a physical exam, an interview, and medical tests.)

C. What Is Depression?

► **Say:**

Unlike stress, depression is an illness. It affects the way you eat and sleep, the way you feel about yourself, and your ability to function in everyday life.

Depression is not a sign of personal weakness, and it's not something that can be wished away. Without treatment, depression can last for weeks, months, or even years.

D. What Causes Depression?

► Say:

Depression sometimes runs in families. This means that if you have depression, others in your family; such as, a grandparent, parent, aunt, uncle, cousin, sister, or brother may also have it.

Sometimes painful events or losses, such as a death in the family, can lead to depression.

Sometimes the cause of depression is not clear.

Medical problems such as a stroke, a heart attack, or cancer can cause a person to become depressed. As the result of depression the sick person may be unwilling to care for himself or herself.

Depression is about twice as common in women as in men. Changes in the level of hormones in a woman's body may play a part in increasing the amount of depression.

Although men are less likely than women to suffer from depression, 3 to 4 million men in the United States do suffer from depression. Men are less likely than women to admit to being depressed, and doctors are less likely to suspect depression in men.

Depression may show up differently in men and women. Women with depression usually feel hopeless and helpless. Men with depression may feel irritable, angry, and discouraged. Because of this difference, doctors may have a hard time diagnosing depression in men.

E. How Is Depression Diagnosed?

► Say:

The first step in getting treated for depression is a physical examination (exam) by a doctor. Certain medicines and some illnesses, such as a viral infection, can cause the same signs as depression.

A doctor can rule out other possibilities with a complete exam and lab tests.

Once the doctor has ruled out any other illness, the next step is usually a psychological (relates to the mind or emotions) evaluation. The doctor may do this evaluation, but more likely he or she will have the patient see a psychiatrist or psychologist. A psychiatrist is a doctor with

a medical degree and can prescribe medicine. A psychologist has a degree in psychology from a college or university and cannot prescribe medicine.

A good evaluation will include a complete history of signs of depression. The doctor usually asks the patient: When did the signs start, How long do they last, and How bad are they? Have you had them before? If so, were they treated? How were they treated?

The doctor will ask about alcohol and medicine taken and whether the patient has thoughts about death or suicide.

The doctor will also ask questions about family history: Have other family members have had depression? Were they treated? If so, what worked for them?

F. How Is Depression Treated?

► Say:

There are two common types of treatment for depression:

- Medicine.
- “Talk” therapy.

Patients should ask the doctor which type is best for them. Some people need both treatments to feel better.

Medicines for depression are called “antidepressants.” Your regular doctor or a psychiatrist (a medical doctor trained in helping people with depression) can prescribe them for you. Antidepressants may take a few weeks to work. Be sure to tell the doctor how you are feeling during that time. If you are not feeling better after a few weeks, your doctor may have you try different medicines to find out what works best for you.

Medicines sometimes cause unwanted temporary “side effects.” You may have dry mouth, blurred vision, feel jittery or sleepy, or sick to your stomach. Tell the doctor if you have these or any other side effects. Some medicines must be stopped slowly to give the body time to adjust. Never stop taking an antidepressant without talking to the doctor about how to do it safely. You should not use alcohol or street drugs because they may cause the antidepressants not to work as well.

“Talk” therapy involves talking to a health care professional, such as a psychologist, a social worker, or a counselor. This therapy helps you learn to change the way depression makes you think, feel, and act. Ask your doctor or psychiatrist which professional you should go to for talk therapy.

Depression can make a person feel very tired, worthless, helpless, and hopeless. Such negative thoughts and feelings make some people feel like giving up. It is important to realize that these negative views are part of the depression. In the meantime there are things a person with depression can do:

- Set realistic goals and take a reasonable amount of responsibility.
- Break large tasks into small ones, do what is most important, and do what you can as you can.
- Try to be with other people and to confide in someone; it is usually better than being alone.
- Take part in activities that may make you feel better.
- Mild exercise, going to a movie, a ballgame, or participating in religious, social, or other activities may help.
- Expect your mood to improve gradually, not immediately. Feeling better takes time.
- People rarely "snap out of" a depression. But they can feel a little better day-by-day.
- Remember, positive thinking will replace the negative thinking that is part of the depression and will disappear as your depression responds to treatment.
- Let your family and friends help you.

The most important thing anyone can do for the depressed person is to help him or her get a proper diagnosis and treatment. If the person does not have a family doctor CHWs can help by telling him or her about community mental health centers, family services, social agencies, or clergy that can help. You can encourage the person to stay with treatment until he or she feels better (it may take several weeks), or to talk to his or her doctor about a different treatment.

Sometimes you might need to make an appointment and go with the depressed person to the doctor. It may also mean checking on whether or not the depressed person is taking medication. You should encourage the depressed person to follow the doctor's advice about the use of alcohol while on medicine.

The second most important thing is to offer emotional support. This involves understanding, patience, affection, and encouragement. Don't ignore remarks about suicide. Report them to the depressed person's doctor. Invite the person for walks, outings, to the movies, and other activities that they used to enjoy. But don't push the depressed person to undertake too much too soon.

Do not accuse the depressed person of faking illness or of laziness, or expect him or her "to snap out of it." Eventually, with treatment, most people do get better. Keep that in mind, and keep telling the depressed person that, with time and help, he or she will feel better.

G. What Do Depression and Stress Have to Do with Heart Disease and Stroke?

► Say:

First, let's talk about depression. Depression can happen to anyone. But, we know from research that people with heart disease are more likely than healthy people to suffer from depression. We know, too, that people with depression have a greater risk for developing heart disease.

Also, people with heart disease who are depressed have a greater risk of dying after a heart attack and stroke than those who are not depressed.

► Ask:

Why do you think this is true?

► Say:

Remember, depression can make it hard to function in everyday life. Depression makes it hard to care about taking medicine or to remember to take medicine. Making lifestyle changes such as increasing physical activity, eating healthy foods, and quitting smoking can seem impossible to someone suffering from depression.

Depression may affect heart rhythm, increase blood pressure, and affect the blood's clotting ability. Depression can also lead to higher

blood sugar and blood cholesterol levels. These risk factors, together with being overweight, often predict heart disease.

Despite research showing a link between depression and heart disease, depression often is not diagnosed and is left untreated. Persons with heart disease or stroke, their families and friends, and sometimes even their doctors may not see the signs of depression, or may mistake them for the usual feelings that are a part of heart disease or stroke. Many signs of depression are like those of heart disease and other illnesses. Doctors trained to see the signs of depression know the right questions to diagnose depression and can treat the person for it.

Many people who have had a stroke become depressed. Some of the depression may be due to changes in the brain. but most people who survive a stroke become depressed because of the changes in their lives. For example, they may not be able to talk well or to take care of themselves. Caregivers and CHWs can encourage these stroke survivors to spend time with family and friends, do things they used to enjoy, and take part in stroke rehab and treatment for depression because the more people recover the better they will feel.



Handout 6–1: Signs of Depression

CHWs can watch for signs of depression in people with heart disease or those who have had a stroke and can encourage them to get treatment. If a CHW is helping a patient and suspects depression, he or she should let the patient’s nurse or doctor know.



Handout 6–2: Four Steps to Understanding Depression and Getting Help for Depression

CHWs can give this checklist to people with heart disease to help them identify depression in themselves and others and to see that there is help for depression.

► **Say:**

Remember, we defined stress as “mental tension.” But studies have shown that when people have mental stress or tension, blood flow to the heart can decrease.

People who have reduced blood flow to the heart during mental stress are more likely to have reduced blood flow to the heart during everyday activities. They are also more likely to have heart problems, such as angina and repeat heart attacks. They might even need heart surgery.

(Note to Trainer: You may need to do a quick review of angina. See Chapter 3: Heart Attack.)

There is good news. People do get better when they get help in reducing their stress.

H. How Can I Manage Stress?

► Say:

You can reduce the stress in your life by making changes in your lifestyle. Here are some tips:

Keep up a positive attitude. Focus on the positive things that happen in your everyday life. Take time to have fun and to enjoy the simple things that make you happy. Take a walk on a sunny day and enjoy the birds, trees, and flowers. Watch a funny TV show.

Accept that stress is a part of life. Make a list of the things in life that cause you stress and then think about how serious each of them really is. Pick out the things that are not under your control, such as the weather. When you feel stressed, think about the cause. Is it something minor, or is it something you cannot control? Think about whether the stress is actually causing you more harm than the problem itself. Thinking about it may help reduce your stress.

Clearly balance home and work responsibilities. To have a balanced life means spending the most time and energy possible on what is most important to you. There is no set formula for living a balanced life. For example, some people like working a 60-hour work week, while others want to spend less time at work and more time with family or friends.

Manage time. Don't try to squeeze more work into a day than you can actually do. Also, leave room for unplanned things that come up. Take a mid-morning and afternoon break. You'll get more done.

Set goals you can reach. When you think about setting goals, make sure that they are within your reach. Think about your schedule and other personal issues. Many people forget to think about these important things and, as a result, they set goals they can't reach.

Learn to relax. Practice doing certain things slowly (for example, eating or folding laundry). Sit back in a chair and concentrate on relaxing your muscles. If you find this task hard, try tensing and relaxing your muscles in turn, until you can tell the difference between having tense muscles and relaxed ones.

Eat nutritious meals and snacks and be physically active each day. People who are hungry become “stressed out” more easily. Caffeine (found in coffee, tea, soft drinks, and some medicines) can cause nervousness and tension. Physical activity reduces stress and helps the heart, lungs, and blood vessels stay healthier. It also makes you feel better.



Activity and Handout 6–3: Managing Stress

No one can control all of life's challenges, but there are ways to cope with them. Ask the CHWs how they deal with stress, and ask them for their suggestions for helping community members reduce stress. Write their responses on the flipchart. Review the 12 suggestions for reducing stress listed on the handout.

Ask the CHWs what they think of each suggestion. Would carrying out these ideas help people in their community? If not, what would be better? Ask CHWs to state two things that a person could do to regain balance in his or her life.



Handout 6–4: How Can I Manage Stress?

This handout from the American Heart Association can be given to people in the community to help them understand stress and how to handle it.

3. Summary

► Ask:

- What is stress?
- What is depression?
- What causes depression?
- Why is it important for people with heart disease and those who have had strokes be screened for depression?
- What are some methods for managing stress?

Signs of Depression

- Constant sad, anxious, or “empty” mood
- Feelings of hopelessness or negativity
- Feelings of guilt, worthlessness, or helplessness
- Loss of interest or pleasure in hobbies and activities that you once enjoyed
- Less energy, very tired, or feeling “slowed down”
- Hard time concentrating, remembering, or making decisions
- Trouble falling asleep, waking up too early in the morning, or oversleeping
- Changes in appetite or weight
- Restlessness or irritability
- Continuing headaches, pain, or digestive problems that don’t get better with treatment
- Thoughts of death or suicide, or suicide attempts (person should get immediate medical help)



If you have five or more of these symptoms every day for at least two weeks, and if they get in the way of your regular daily activities, such as work, self-care, childcare, or social life, ask to be checked for depression.

Suicide

Sometimes depression can cause people to feel like killing themselves. **If you are thinking about killing yourself or know someone who is talking about it, get help:**

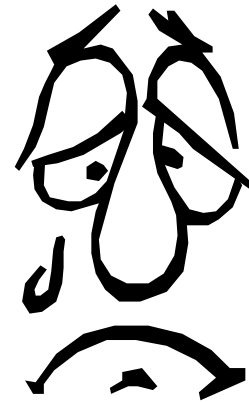
- Call 9-1-1.
- Go to the emergency room of the nearest hospital.
- Call and talk to your doctor now.
- Ask a friend or family member to take you to the hospital or call your doctor.

Four Steps to Understand and Get Help for Depression

STEP 1: Look for signs of depression

Read through the following list. Put a checkmark by each one that sounds like you:

- I am really sad most of the time.
- I don't enjoy doing the things I've always enjoyed doing.
- I don't sleep well at night and am very restless.
- I am always tired. I find it hard to get out of bed.
- I don't feel like eating much.
- I feel like eating all the time.
- I have lots of aches and pains that don't go away.
- I have little or no sexual energy.
- I find it hard to focus and am very forgetful.
- I am mad at everybody and everything.
- I feel upset and fearful, but can't figure out why.
- I don't feel like talking to people.
- I feel as if there isn't much point to living. Nothing good is going to happen to me.
- I don't like myself very much. I feel bad most of the time.
- I think about death a lot. I even think about how I might kill myself.



If you checked several boxes, call your doctor. Take the list to show the doctor. You may need to get a checkup and find out if you have depression.

Suicide

Sometimes depression can cause people to feel like killing themselves. **If you are thinking about killing yourself or know someone who is talking about it, get help:**

- Call 9-1-1.
- Go to the emergency room of the nearest hospital.
- Call and talk to your doctor now.
- Ask a friend or family member to take you to the hospital or call your doctor.

STEP 2: Understand that depression is a real illness

Depression is a serious medical illness that involves the brain. Depression is not something that you have “made up in your head.” It’s more than just feeling “down in the dumps” or “blue” for a few days. It is feeling “down” and “low” and “hopeless” for weeks at a time.

It can happen to anyone, no matter what age you are or where you come from. Depression can make it very hard for you to care for yourself, your family, or even hold down a job. **But there is hope. Depression can be treated and you can feel better.**

STEP 3: See your doctor

- Don't wait. Talk to your doctor about how you are feeling.
- Ask if you need to see someone who can evaluate and treat depression.
- If you don't have a doctor, check your local phone book. Go to the government services pages (they may be blue in color) and look for "health clinics" or "community health centers." Call one near you and ask for help.

STEP 4: Get treatment for your depression

- You **can** feel better.
- Your doctor will work with you to treat your depression. You may need a medicine called an “antidepressant” or you may need to talk to a professional who will help you learn to change how depression makes you think, feel, and act. Some people need both treatments to feel better.

How to Help Someone Who May Have Depression

If you know someone who seems depressed and may need help, here are some things you can do:

- Tell the person that you are concerned about him or her.
- Talk to the person about seeing a doctor.
- Take the person to see the doctor.
- If the doctor offers the name and phone number of another professional for the person to talk to, call the number and help the person make an appointment.
- Take the person to the appointment. "Be there" for the person after he or she starts treatment.



Managing Stress

- Talk with family, friends, clergy or other trusted advisers about your concerns and stresses and ask for their support.
- Take 15 to 20 minutes a day to sit quietly, breathe deeply and think of a peaceful scene.
- Learn to accept things you can't change. You don't have to solve all of life's problems.
- Count to 10 before answering or responding when you feel angry.
- Don't use smoking, drinking, overeating, drugs or caffeine to cope with stress. These make things worse.
- Look for the good in situations instead of the bad.
- Exercise regularly. Do something you enjoy, like walking, swimming, jogging, walking a pet, tai chi, or cycling. Check with your doctor to determine what activity level is right for you.
- Think ahead about what may upset you and try to avoid it. For example, spend less time with people who bother you. If you're still working or volunteering, cut back on your hours and adjust your schedule to avoid driving in rush-hour traffic.
- Plan useful solutions to problems. For example, talk with your neighbor if the dog next door bothers you, and set clear limits on how much you'll do for family members.
- Learn to say no. Don't promise too much. Give yourself enough time to get things done.
- Join a support group...maybe for people with heart disease, for women, for men, for retired persons, or some other group with which you identify.
- Look for a mental health professional or counselor if you feel you need help coping. Ask your doctor, family or friends for recommendations. If they can't help, ask your spiritual leader or a hospital social worker for some names.





How Can I Manage Stress?

You can have a healthier heart when you make changes in your lifestyle. Managing your emotions better may help, because some people respond to certain situations in ways that can cause health problems for them. For

instance, someone feeling pressured by a difficult situation might start smoking or smoke more, overeat and gain weight. Finding more satisfactory ways to respond to pressure will help protect your health.

What is stress?

Stress is your body's response to change. It's a very individual thing. A situation that one person finds stressful may not bother someone else. For example, one person may become tense when driving; another person may find driving a source of relaxation and joy. Something that causes fear in some people, such as rock climbing, may be fun for others.

There's no way to say that one thing is "bad" or "stressful" because everyone's different. Not all stress is bad, either. Speaking to a group or watching a close football game can be stressful, but they can be fun, too. Life would be dull without some stress. The key is to manage stress properly, because unhealthy responses to it may lead to health problems in some people.



Exercise helps you let go of stress! It makes you feel stronger and healthier. It helps control your weight and makes your heart pump better.

How does stress make you feel?

- It can make you feel angry, afraid, excited or helpless.
- It can make it hard to sleep.
- It can give you aches in your head, neck, jaw and back.
- It can lead to habits like smoking, drinking, overeating or drug abuse.
- You may not even feel it at all, even though your body suffers from it.

How can I cope with it?

Outside events (like problems with your boss, preparing to move or worrying about a child's wedding) can be upsetting. But remember that it's not the outside force, but how you react to it inside that's important. You can't control all the outside events in your life, but you can change how you handle them emotionally and psychologically. Here are some good ways to cope:

- Take 15 to 20 minutes a day to sit quietly, breathe deeply and think of a peaceful picture.
- Try to learn to accept things you can't change.

You don't have to solve all of life's problems. Talk out your troubles and look for the good instead of the bad in situations.

- Engage in physical activity regularly. Do what you enjoy — walk, swim, ride a bike or jog to get your big muscles going. Letting go of the tension in your body will help you feel better.
- Limit alcohol, don't overeat and don't smoke.

How can I live a more relaxed life?

- Think ahead about what may upset you. Some things you can avoid. For example, spend less time with people who bother you or avoid driving in rush-hour traffic.
- Think about problems and try to solve them. You could talk to your boss about difficulties at work, talk with your neighbor if his dog bothers you, or get help when you have too much to do.

- Change how you respond to difficult situations. Be positive, not negative.
- Learn to say "no." Don't promise too much.
- Give yourself enough time to get things done.

How can I learn more?

1. Talk to your doctor, nurse or other health-care professionals. If you have heart disease or have had a stroke, members of your family also may be at higher risk. It's very important for them to make changes now to lower their risk.
2. Call 1-800-AHA-USA1 (1-800-242-8721) or visit americanheart.org to learn more about heart disease.

3. For information on stroke, call 1-888-4-STROKE (1-888-478-7653) or visit StrokeAssociation.org.

We have many other fact sheets and educational booklets to help you make healthier choices to reduce your risk, manage disease or care for a loved one.

Knowledge is power, so *Learn and Live!*

Do you have questions or comments for your doctor?

Take a few minutes to write your own questions for the next time you see your doctor. For example:

How can family and friends help?

Your contribution to the American Heart Association supports research that helps make publications like this possible.

The statistics in this sheet were up to date at publication. For the latest statistics, see the *Heart Disease and Stroke Statistics Update at americanheart.org/statistics.*

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American Heart Association | American Stroke Association

Learn and Live.

Objectives

By the end of this session, community health workers will be able to—

- Explain what is high blood pressure.
- Describe what causes high blood pressure.
- Describe how it is measured.
- Describe ways to treat and control high blood pressure.
- Describe medicines that might be prescribed for high blood pressure.

Materials and Supplies

Flipchart, markers, tape, blackboard, chalk, eraser, and one or more home blood pressure monitors

Extra copies of Handout 7-3, What Do Blood Pressure Numbers Mean? (one extra copy for each participant).

(Note to trainer: If CHWs are to be trained to measure blood pressure, the American Heart Association procedure, outlined in the following publication, should be followed:

Pickering TG, Hall JE, Appel LJ, et al. Recommendations for blood pressure measurement in humans: an AHA scientific statement from the Council on High Blood Pressure Research Professional and Public Education Subcommittee. *J Clin Hypertens* (Greenwich) 2005;7(2):102–109.)

Handouts:

- 7–1: Prevent and Control High Blood Pressure: Mission Possible
- 7–2: How Is Blood Pressure Measured?
- 7–3: What Do Blood Pressure Numbers Mean?
- 7–4: Take Steps—Healthy Habits to Lower High Blood Pressure
- 7–5: Tips for Taking Medicine for High Blood Pressure
- 7–6: What Community Health Workers Can Do to Help People Who Are at Risk for High Blood Pressure or Who Have High Blood Pressure
- 7–7: Heart Health Wallet Card

Chapter Outline

1. Overview
2. Lesson
 - A. What Causes High Blood Pressure?
 - B. How Is High Blood Pressure Diagnosed?
 - C. How Is Blood Pressure Measured?
 - D. What Do the Blood Pressure Numbers Mean?
 - E. What Are the Warning Signs of High Blood Pressure?
 - F. Why Is High Blood Pressure Harmful?
 - G. Where Can You Get Your Blood Pressure Checked?
 - H. How Is High Blood Pressure Prevented, Treated, and Controlled?
 - I. Taking Blood Pressure Medicine
3. Summary

Resources

Facts About the DASH Eating Plan. NIH Publication No. 03-4082. Reprinted 2003. Available from the NHLBI Health Information Center at 301-592-8573 or at the Web site: www.nhlbi.nih.gov. The booklet can be downloaded at the Web site: www.nhlbi.nih.gov/health/public/heart/hbp/dash/index.htm

Heart and Stroke Fact Sheet. AHA/ASA Web site: www.americanheart.org

Honoring the Gift of Heart Health: A Heart Health Educator's Manual for American Indians and Alaska Natives. National Heart, Lung, and Blood Institute and Indian Health Service; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov/health/heart/other/aian_manual/index.htm

Prevent and Control America's High Blood Pressure: Mission Possible. <http://hin.nhlbi.nih.gov/mission>

Protect Your Heart! Prevent High Blood Pressure. National Heart, Lung, and Blood Institute; National Institutes of Health; U.S. Department of Health and Human Services; Public Health Service. NIH Publication No. 97-4060. September 1997. www.nhlbi.nih.gov/health/public/heart/other/chdblack/protect1.htm

Spice Up Your Life! Eat Less Salt and Sodium. National Heart, Lung, and Blood Institute; National Institutes of Health; U.S. Department of Health and Human Services; Public Health Service. NIH Publication No. 97-4062. September 1997. www.nhlbi.nih.gov/hbp/prevent/sodium/spice.htm

Your Guide to Lowering Blood Pressure. National Heart, Lung, and Blood Institute. NIH Publication No. 03-5232. Reprinted 2003. www.nhlbi.nih.gov/hbp/index.html

Your Heart, Your Life: A Lay Educator's Manual. National Heart, Lung, and Blood Institute; National Institutes of Health. www.nhlbi.nih.gov/health/heart/latino/latin_pg.htm

What Is Blood Pressure?

► **Say:**

Blood pressure is the force of blood against artery walls as it is pumped through the body. Blood pressure helps blood get to all parts of the body.

What Is High Blood Pressure?

► **Say:**

High blood pressure means that the heart has to pump harder than normal for blood to get to all parts of the body. Blood pressure is too strong or too high when the heart works too hard or the arteries are too narrow. A heart that has to work harder than normal for a long time gets larger and weaker. Then it has an even harder time doing a good enough job pumping blood.



**Handout 7–1: Prevent and Control High Blood Pressure:
Mission Possible**

Distribute and review the handout. Let the CHWs know that this handout is available from the National Heart, Lung, and Blood Institute Web site: http://hin.nhlbi.nih.gov/mission/partner/should_know.pdf.

► **Say:**

High blood pressure is also called hypertension.

High blood pressure, or hypertension, increases a person's risk of heart-related problems, including heart attack and stroke, because of the strain on the heart and arteries.

1. Lesson

A. What Causes High Blood Pressure?

► **Say:**

A number of conditions and behaviors can lead to high blood pressure. Sometimes high blood pressure is caused by another medical condition, such as kidney disease or lung disease.

Factors that contribute to high blood pressure are—

- Salt in the diet. Most Americans take in more salt than their bodies need. Too much salt can increase blood pressure in some people. Your daily intake of salt should not be more than 2,300 milligrams (mg), or about 1 teaspoon.
- Being overweight or obese. People who are overweight are more likely to have high blood pressure than those who are at a normal weight.
- Lack of physical activity. People who are not very active tend to become overweight. A person should have at least 30 minutes of moderate to vigorous physical activity on most days.
- Heavy alcohol consumption. If you drink alcohol, drink moderately. For men that means 2 drinks a day at most, and for women, 1 drink a day at most.
- Race. Blacks develop high blood pressure more often than whites, and it tends to happen at an earlier age and be more severe.
- Age. In general, the older you get, the greater your chance of developing high blood pressure. It occurs most often in people over age 35.
- Gender. Men seem to develop high blood pressure most often between age 35 and 55. Women are more likely to develop it after menopause. After age 55, high blood pressure is much more common in women than in men.
- Smoking. Smoking damages the blood vessels and may lead to a build-up of plaque in the arteries.
- Diabetes and kidney disease. People who have these diseases tend to have a higher rate of high blood pressure than those who don't have them.
- Family history. If your parents or other close relatives have high blood pressure, you are more likely to develop it.

B. How Is High Blood Pressure Diagnosed?

► Say:

Blood pressure is measured as part of a regular physical exam and also during most visits with a doctor. Your blood pressure may be measured at a health fair, when you donate blood, or as part of another type of medical screening.

If your blood pressure is high, your doctor will ask additional questions. For example, your doctor will ask whether high blood pressure runs in your family and what your eating habits are. It is especially important to be aware of how much salt is in your diet and to talk about your salt intake with your doctor. Let your doctor know if you add salt to foods at the table; cook with salt; or eat a lot of canned foods, frozen dinners, or highly salted foods, such as peanuts or chips.

C. How Is Blood Pressure Measured?



Handout 7–2: How Is Blood Pressure Measured?

Ask all those in the session who have had their blood pressure taken to raise their hands. Ask if the items pictured on Handout 7-2 look familiar. Review the handout by following the script below this box (allow for questions afterwards).

► Say:

Blood pressure measurement is quick and painless and doesn't require any blood to be taken.

We measure blood pressure with an instrument called a blood pressure monitor. It typically has three parts: the cuff, a pump attached to the cuff by a tube, and a dial or screen that is also attached to the cuff by a tube.

The cuff, which is like a wide strap, wraps snugly around your arm above the elbow. Arms of different sizes require different-sized cuffs. For example, a person with a small arm needs a small cuff, and someone with a very large arm needs an extra-large cuff.

The person who measures your blood pressure squeezes the pump rapidly to fill the cuff with air until the pressure of the cuff against your arm temporarily closes off the blood flow in the main artery of your arm. (Some blood pressure monitors have an automatic pump.)

This person then places a stethoscope on the inner crease of your elbow over the artery in order to hear your heartbeat when the blood begins moving through your artery again. (Some monitors have a built-in stethoscope.)

He or she slowly lets the air out of the cuff, reducing pressure on the arm and allowing the blood to flow again.

The blood pressure reading shows up on the pressure registering device attached to the cuff (either a screen or a numbered dial with a pointer). Each blood pressure reading has a pair of numbers showing the highest and lowest pressure during each heart cycle. The higher number is called the systolic pressure, and the lower number is called the diastolic pressure. Blood pressure is measured in millimeters of mercury (mm Hg).

Normal blood pressure is a systolic pressure of less than 120 millimeters of mercury and a diastolic pressure of less than 80. In other words, your blood pressure should be 119/79 (“119 over 79”) or less.

It is possible to have blood pressure that is too low. Low blood pressure usually results in such symptoms as dizziness or fainting.

If your blood pressure is between 120/80 and 139/89, you have prehypertension. This means that you don't have high blood pressure now but are likely to develop it in the future. You should take steps to prevent high blood pressure by choosing a healthy lifestyle.

Remember, normal blood pressure is less than 120/80.

High blood pressure is a reading higher than 139/89. A systolic reading of 140 to 159 and a diastolic reading of 90 to 99 is called stage 1 hypertension.

A systolic reading of 160 or above and a diastolic reading of 100 or above is called stage 2 hypertension.

A person with stage 2 hypertension usually needs a stronger dose of blood pressure medicine than a person with stage 1 hypertension or may need more than one medicine.

D. What Do the Blood Pressure Numbers Mean?



Handout 7–3: What Do Blood Pressure Numbers Mean?

Ask the CHWs to look at the handout. Review the handout by saying the following: A blood pressure reading has a pair of numbers, for example 120/80 (“120 over 80”).

The first number (120) is the pressure of the blood in the vessels when the heart beats (systolic pressure).

The second number (80) is the pressure of the blood in the vessel when the heart relaxes (diastolic pressure).

It is important to know and remember your blood pressure numbers. You should know your numbers as well as you know your shoe size!

Be sure to ask what your blood pressure reading is each time someone checks it. Also, keep a record of each reading.



Activity: What Are Your Numbers?

If you are holding your session in a health care setting, you may choose to train CHWs on your professional monitors. Also, bring one or more home blood pressure monitors to class. Train the CHWs on how to use the monitors; show them what cuff sizes they should use and how to read and record the systolic and diastolic blood pressure numbers. Allow the CHWs to help each other put on the cuff and measure each other’s blood pressure. Have each CHW record his or her numbers on a copy of Handout 7–3.

Also, train CHWs on how to take a pulse.

E. What Are the Signs of High Blood Pressure?

► **Say:**

A person can be calm and relaxed and still have high blood pressure.

Many people have high blood pressure for years without knowing it. That's why it's called "the silent killer." These people's blood pressure numbers are often their only warning.

However, high blood pressure in some people will cause one or more of the following signs (especially if it is very high for a while):

- Tiredness.
- Confusion.
- Nausea or upset stomach.
- Vision problems or trouble seeing.
- Nosebleeds.
- More than normal sweating.
- Skin that is flushed or red, or skin that is pale or white.
- Anxiety or nervousness.
- Palpitations (strong, fast, or obviously irregular heartbeat).
- Ringing or buzzing in ears.
- Impotence.
- Headache.
- Dizziness.

You should check your blood pressure as often as your doctor advises.

F. Why Is High Blood Pressure Harmful?

► **Say:**

High blood pressure causes the heart to work harder than it normally would. High blood pressure increases the risk of heart attacks, strokes, kidney damage, eye damage, heart failure, and atherosclerosis.

If high blood pressure isn't treated, the heart may have to work harder than it should to pump enough blood and oxygen to the body's organs and tissues.

A heart that is forced to work harder than normal for a long time tends to enlarge and weaken. A slightly enlarged heart may work just fine, but one that's greatly enlarged has a hard time doing its job.

G. Where Can You Get Your Blood Pressure Checked?

► **Say:**

You can get your blood pressure checked, or you can check it yourself, at many places in your community other than the doctor's office. Some examples are—

- Grocery store or drugstore (you can use a blood pressure monitoring machine to check your blood pressure yourself).
- Health fair (nurses or other medical staff will be available to check your blood pressure).
- Health clinic (nurses or other medical staff will be on hand to check it).
- Fire department (a medically-trained person is usually available to check it).
- Blood drive or donation center (if you donate blood during a blood drive, the staff will check your blood pressure).

One way to monitor your blood pressure is to get a monitor and use it at home. You can buy easy-to-use monitors in drugstores and in the pharmacy section of large discount stores. Ask the pharmacist about options if you need help paying for the monitor. Your community may have resources to help you cover the cost.

(Note to trainer: Please identify places in your community that offer free or low-cost blood pressure screenings and monitors and let the CHWs know about these locations.)

H. How Is High Blood Pressure Prevented, Treated, and Controlled?

► **Say:**

High blood pressure increases your chances of developing heart disease or of having a heart attack, a stroke, heart failure, or kidney failure.

The good news is that high blood pressure can be prevented and controlled. You can do many things in your daily life to reduce your chances of having high blood pressure and developing these problems.

Treating high blood pressure can save your life. It can reduce your chances of having a heart attack, a stroke, and heart failure.

You can take steps to prevent high blood pressure or to control or lower your blood pressure if it is too high.



Activity: Ways to Prevent or Control High Blood Pressure

Say to the CHWs: Let's talk about some of the most important ways you can prevent high blood pressure or keep your blood pressure under control if it's high.

Ask CHWs for some suggestions on how to lead a healthy life. Say: Here's a hint: Remember the risk factors for high blood pressure?

(Have someone write the CHWs' responses on the flipchart.)

Answers should include—

- Use less salt and sodium (about 1 teaspoon, or 2,300 mg, daily).
- Aim for a healthy weight.
- Eat a low-fat diet that includes fruits and vegetables.
- Be active at least 30 minutes most days.
- Limit the amount of alcohol you drink (no more than one drink each day for women and two for men).
- Quit smoking.
- Keep your blood sugar under control if you have diabetes or kidney disease.
- Take your prescription medicines as recommended by your doctor.
- Check your blood pressure as often as your doctor advises.

**Handout 7-4: Take Steps—Healthy Habits to Lower High Blood Pressure**

Ask CHWs to look at Handout 7–4 as you review and explain the suggestions they have given for keeping blood pressure under control.

(As you review the list of suggestions on the flipchart, use the script below this box to add an explanation for each suggestion. Also use the information below to introduce and explain any steps for lowering blood pressure that are not listed on the flipchart.)

► Say:

Use less salt. Don't add salt at the table to food that has been cooked. Buy foods that are marked "sodium-free," or "low-sodium." Use herbs and spices for flavor instead of salt when cooking food. Avoid fast foods that are high in salt and sodium. Read food labels to choose canned, processed, and convenience foods that are lower in sodium. Choose low-sodium or unsalted snacks. Try to eat no more than about one teaspoon (2,300 mg) of sodium each day. (We'll talk more about this point in the Healthy Eating and Weight Control session.)

Aim for a healthy weight. If you are overweight, lose weight. You can do this by being more active and by making changes in your diet. Limit portion sizes, especially of high-calorie foods. Being physically active will help you decrease your weight or keep you from gaining more weight.

Eat a low-fat diet. Eat a diet rich in fruits, vegetables, whole grain breads and cereals, and low-fat dairy products that have low amounts of saturated, trans fat, and total fat. Be sure to eat several servings of these foods every day, and include a variety of fruits and vegetables. Go to www.fruitsandveggiesmatter.gov to find the best number of servings for you.

Eat foods that are high in potassium, calcium, and magnesium to protect against high blood pressure. Foods high in potassium are—

- Dried fruits, such as raisins, prunes, apricots, and dates.
- Fresh fruits, such as bananas, strawberries, watermelon, cantaloupe, and oranges.
- Fresh vegetables, such as beets, greens, spinach, peas, tomatoes, and mushrooms.

Foods high in calcium are—

- Dairy foods, such as low-fat milk, yogurt, and cheese.
- Fresh vegetables, such as spinach, turnip greens, kale, and broccoli.

Foods high in magnesium are—

- Brown rice, fish and seafood, bananas, tofu, blackstrap molasses, and avocados.

Be active. Be active everyday; for example, walk briskly at least 30 minutes per day on most days of the week. Walk instead of drive to a friend's home or to stores that are close to your home. Use the stairs instead of the elevator. Play sports or do some other physical activity you enjoy.

Cut back on alcohol. Women should have no more than one drink each day. If they are pregnant, they should not drink alcohol at all. Men should have no more than two drinks each day (1 drink = 12 ounces of beer, 5 ounces of wine, or 1 ounce of hard liquor).

Quit smoking. Smoking increases your chances of having a stroke and heart disease.

Take prescription medicine as advised by your doctor. If your doctor gives you a prescription for medicine to reduce your blood pressure, be sure to take the medicine as directed. If you don't understand the directions for taking the medicine, if you have questions, or if you have any problems after taking the medicine, talk to your doctor, nurse, or pharmacist right away.

Check your blood pressure as often as your doctor advises. You can purchase a home blood pressure monitor, you can use the ones available at some drugstores and grocery stores, or you can have someone check your blood pressure for you at a health clinic or a fire department.

Avoid taking over-the-counter (OTC) medications, especially decongestants and anti-inflammatory medicines. Some medicines can raise blood pressure and interfere with blood pressure medicines. People with high blood pressure should tell their doctor, nurse, and pharmacist about all of the prescribed and over-the-counter medicines they are taking. These medicines include those that reduce inflammation or swelling (such as ibuprofen), decongestants and other cold remedies, diet pills, and herbs. Be sure to ask if these other medicines are safe to take with blood pressure medications.

I. Taking Blood Pressure Medicine

Handout 7–5: Tips for Taking Medicine for High Blood Pressure

Review the questions at the bottom of Handout 7–5. Ask CHWs why it's important for people to know when to take their medicine, what to eat or drink with it, and if it's OK to take other medicines at the same time (including medicines they can buy without a doctor's prescription).

3. Summary

Handout 7–6: What Community Health Workers Can Do to Help People Who Are at Risk for High Blood Pressure or Who Have High Blood Pressure

Ask CHWs for suggestions and give cues to help them remember the importance of teaching and reminding people to keep their blood pressure under control, to check their blood pressure regularly, to keep their medical appointments, and to keep taking their blood pressure-lowering medicines as their doctor advises.

Review Handout 7–6 with the CHWs.

► Ask:

- What is high blood pressure?
- What causes high blood pressure?
- How is blood pressure measured?
- What numbers indicate normal blood pressure?
- What numbers indicate high blood pressure?
- How can high blood pressure be controlled?
- Why must people with high blood pressure take medicine regularly?

Handout 7–7: Heart Health Wallet Card

As an optional exercise, have the CHWs look at Handout 7–7. Review the information on the wallet card and let them know they can cut these wallet cards out and give them to others in the community.

Source: Honoring the Gift of Heart Health: A Heart Health Educator's Manual for American Indians and Alaska Natives. National Heart, Lung, and Blood Institute and Indian Health Service; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov/health/prof/heart/other/aian_manual/index.htm.

Prevent and Control High Blood Pressure: Mission Possible



» What you should know about preventing and controlling high blood pressure



High blood pressure: A force to be reckoned with

High blood pressure (also called hypertension) increases your chances of having a heart attack, heart failure, stroke, kidney disease, and other life-threatening illnesses. Anyone can get it, and as you get older, the likelihood of your developing high blood pressure increases. If you are overweight or obese or if you have diabetes, the odds are even higher.

Know your numbers

High blood pressure is called “the silent killer” because there often are no symptoms. Your numbers are your only warning.

Normal blood pressure

the pressure of blood in the vessels when the heart beats: **systolic pressure**

less than
120/80 mmHg

millimeters of mercury

the pressure between beats when the heart relaxes: **diastolic pressure**



High blood pressure

140/90 mmHg or higher

Prehypertension

between 120-39 and/or 80-89 mmHg

Normal blood pressure

less than 120/80 mmHg

Enlist in this vital mission for a healthier you



U.S. Department of Health and Human Services



8 things you can do to prevent and control high blood pressure

- 1. Talk with your health care professional.** Ask what your blood pressure numbers are and ask what they mean.
- 2. Take medication as prescribed.** If you need medication, make sure you understand what it's for and how and when to take it, then take it as your doctor recommends.
- 3. Lose weight if you are overweight and maintain a healthy weight.** Limit portion sizes, especially of high calorie foods, and try to eat only as many calories as you burn each day—or less if you want to lose weight.
- 4. Eat heart healthfully.** Follow an eating plan that emphasizes fruits, vegetables, and lowfat dairy products and is moderate in total fat and low in saturated fat and cholesterol.
- 5. Reduce salt and sodium intake.** Read food labels to choose canned, processed, and convenience foods that are lower in sodium. Limit sodium intake to no more than 2,400 mg, or about 1 teaspoon's worth, of salt each day. Avoid fast foods that are high in salt and sodium.
- 6. If you drink alcoholic beverages, do so in moderation.** For men, that means a maximum of 2 drinks a day, for women, a maximum of 1.
- 7. Become more physically active.** Work up to at least 30 minutes of a moderate-level activity, such as brisk walking or bicycling, each day. If you don't have 30 minutes, try to find two 15-minute periods or even three 10-minute periods for physical activity.
- 8. Quit smoking.** Smoking increases your chances of developing a stroke, heart disease, peripheral arterial disease, and several forms of cancer.



National High Blood Pressure
Education Program

Resources to help you stay healthy

Your Guide to Lowering High Blood Pressure includes information on how to detect, prevent, and treat high blood pressure. Features the DASH eating plan, which has been shown to prevent and lower high blood pressure, and information specifically for women.

<http://www.nhlbi.nih.gov/hbp/index.html>

Aim for a Healthy Weight includes a BMI calculator, tips for shopping and preparing food, and a menu planner that is designed to guide daily food and meal choices based on one day's calorie allowance.

http://www.nhlbi.nih.gov/health/public/heart/obesity/lose_wt/index.htm

Live Healthier, Live Longer includes interactive materials for people with heart disease and those who want to prevent it.

<http://www.nhlbi.nih.gov/chd/index.htm>

NHLBI Health Information Center

General information and publications.

P.O. Box 30105,

Bethesda, MD 20824-0105

Tel 301-592-8573 Fax 301-592-8563

(Monday - Friday, 9 a.m. to 5 p.m.

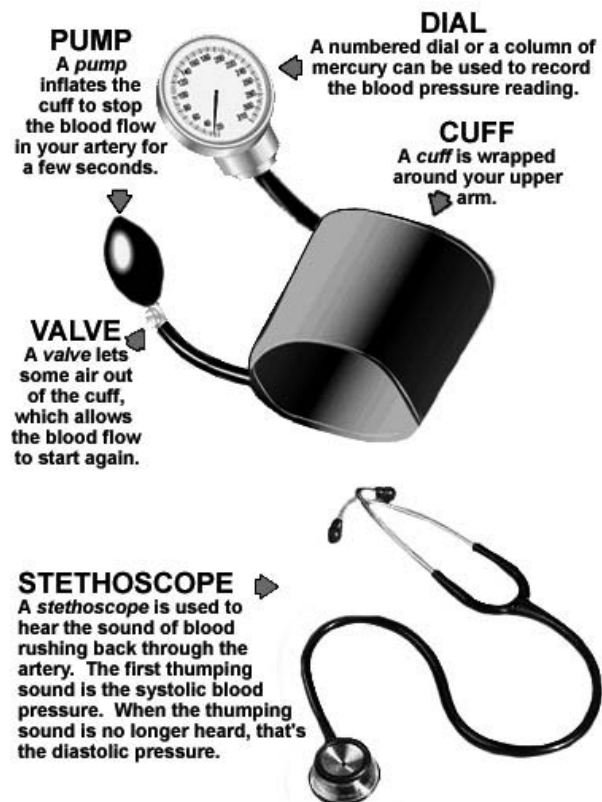
eastern time) TTY 240-629-3255

<http://www.nhlbi.nih.gov/health/infoctr/>



How Is Blood Pressure Measured?

- Blood pressure is measured with an instrument called a blood pressure monitor.
- The cuff of the monitor, which is like a wide strap, wraps around the arm above the elbow.
- A tube attaches the cuff to a pump.
- A second tube attaches the cuff to a pressure registering device, such as a numbered dial or a screen.
- The cuff is pumped full of air until the blood flow in the main artery in the arm is temporarily stopped.
- A stethoscope placed on the inner crease of the elbow over the artery allows the person measuring the blood pressure to hear the blood moving through the artery.
- The valve below the pump slowly lets some air out of the cuff, loosening the cuff's grip on the arm and allowing the blood to flow again.
- No blood has to be taken to measure blood pressure. The measurement is quick and painless.



What Do Blood Pressure Numbers Mean?

What Your Blood Pressure Numbers Mean (adults ages 18 and older)		
First Number	Second Number	Results
Less than 120	Less than 80	Good for you!
Less than 140	Less than 90	Make some changes: reduce salt intake, lose weight, increase physical activity, reduce alcohol consumption.
140–159	90–99	You have high blood pressure. See your doctor if you are not already being treated. If you are, take your medicine as advised and make lifestyle changes (see above). Tell your doctor if your blood pressure is often at this level when you check it.
More than 159	More than 99	Tell your doctor immediately if your blood pressure is often at this level when you check it.

What are your numbers?

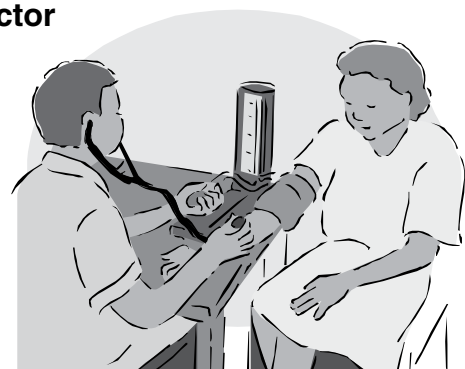
First number (systolic pressure): _____

Second number (diastolic pressure): _____

What should your target numbers be? Ask your doctor

First number: _____

Second number: _____



Other Questions to Ask Your Doctor

Do you know what cuff size you should have on a home blood pressure monitor?

Has someone shown you how to check your blood pressure with your own monitor?

Has someone shown you how to record your numbers after you have checked your blood pressure?

How often does the doctor say you should check your blood pressure?

How many blood pressure readings does your doctor advise taking at one time? Should you take just one reading, or should you take 3 readings and average them?

When should you call or e-mail your doctor or nurse about your blood pressure numbers?

When should you make an appointment to see your doctor about your blood pressure numbers?

Take Steps— Healthy Habits to Lower High Blood Pressure!

To **PREVENT** high blood pressure:

1. **Aim for a healthy weight.**

Try not to gain extra weight. Lose weight if you are overweight. Try losing weight slowly, about half a pound to 1 pound each week until you reach a healthy weight.



2. **Be active every day.**

You can walk, dance, use the stairs, play sports, or do any activity you enjoy.

3. **Use less salt and sodium in cooking.**

Buy foods marked “sodium free,” “low sodium,” or “reduced sodium.” Take the salt shaker off the table.

4. **Eat more fruits and vegetables, whole grain breads and cereals, and lowfat dairy products.**



5. **Cut back on alcohol.**

Men who drink should have no more than one or two drinks each day. Women who drink should have no more than one drink a day. Pregnant women should not drink any alcohol.

To **LOWER** high blood pressure:

1. **Practice these steps:**

- Maintain a healthy weight.
- Be active every day.
- Eat fewer foods high in salt and sodium.
- Eat more fruits and vegetables, whole grain breads and cereals, and lowfat dairy products.
- If you drink alcoholic beverages, do so in moderation.

2. **Take your medicine the way your doctor tells you.**

3. **Have your blood pressure checked often.**



Tips for Taking Medicine for High Blood Pressure

- Make sure you take your medicine every day, not only on the days when you don't feel well.
- Tell your doctor the names of all other medicines, herbs, or supplements you take. Bring everything with you when you visit your doctor.
- Tell the doctor or health aide right away if your medicine makes you feel strange or sick. Ask your doctor about changing the dosage or switching to another type of medicine.
- Refill your medicine before you run out.
- Have your blood pressure checked often to see if the medicine is working for you.
- Don't stop taking your medicine if your blood pressure is okay. Having normal blood pressure means the medicine is working.

Questions to Ask the Doctor

When the doctor gives you medicine for high blood pressure, ask:

Name of medicine(s): _____

Amount of medicine to take: _____

When to take it: _____

What to eat or drink with it: _____

What other medicine is OK to take at the same time: _____

Other: _____

If problems occur, call this number immediately: _____

What Community Health Workers Can Do to Help Community Members Who Are at Risk for High Blood Pressure (with Program Support)

Ways to Support People in Their Health Care Needs:

- Teach community members that they need to get screened for high blood pressure because most of the time people with high blood pressure do not feel sick and are not aware they have it.
- Teach community members to ask for and know their blood pressure numbers.
- Encourage them to ask their doctor what their target blood pressure should be.
- Teach them how important it is to control blood pressure.
- Teach community members that uncontrolled high blood pressure will damage their eyes, kidneys, heart, and brain.
- Teach community members that high blood pressure will put them at high risk for heart attack, heart failure, and stroke.
- Help those who have diabetes understand the importance of controlling their diabetes and regularly taking their diabetes medications.
- Introduce community members to social workers who can help them apply for Medicaid or other programs that can help pay for health care.

Ways to Help People Make Better Lifestyle Choices

- Help community members learn how to reduce their intake of salt and sodium (to no more than 1 teaspoon a day).
- Work with community members to find ways to make low-cost fruits and vegetables and low-salt and low-fat foods available in the community, in schools, and at work sites.
- Teach people to get regular physical activity, stop smoking, lose weight (if they are overweight), and drink no more than one alcoholic drink a day for women and no more than two for men. One drink is 1 oz. of hard liquor, or 4 oz. of wine, or 12 oz. of beer.

What Community Health Workers Can Do to Help Community Members Who Already Have High Blood Pressure (with Program Support)

All of the suggestions for helping people at risk for high blood pressure (see previous page) apply to those who already have high blood pressure, plus the following:

- Help those with high blood pressure understand what they need to do to take care of themselves.
- Help community members understand the importance of regularly taking their blood pressure medicines.
- Tell community members to call their doctor if they have questions about their medicines.
- Remind them that they should not stop taking their medicines without talking to their doctor, even if they feel better.
- Help those with high blood pressure understand the importance of regularly checking their blood pressure.
- Remind them to ask their doctor how often they should check their blood pressure.
- Encourage those with high blood pressure to ask their doctor what numbers indicate blood pressure that is dangerously high and what they should do if their numbers get that high.
- Help people to use blood pressure monitors correctly and to write down their numbers correctly.
- Help people learn how to keep track of the medicines they are taking.
- Learn and teach relaxation exercises.
- Encourage people to get help for managing stress and depression.

Heart Health Wallet Card

Cut along dotted lines, paste back to back, and fold in half to make your own personal wallet card.

Try these tips for a healthy heart!

- More**
+ fruits, vegetables, and lowfat dairy products
+ physical activity
- Lower**
- saturated and trans fat, cholesterol, and sodium
- BMI, waist circumference
- None**
0 cigarettes

= Heart Health



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health
National Heart, Lung, and Blood Institute

Front

Know Your Number! It may save your life.

Blood Pressure	Blood Cholesterol
It is best to have a reading less than 120/80. A reading of 140/90 or more is high blood pressure.	It is best to have a level less than 200. A level of 240 or higher may lead to a heart attack.

If your blood pressure and blood cholesterol levels are at a desirable level, check your blood pressure once a year and your blood cholesterol once every 5 years.

Back

Health for Your Heart

Prevent heart disease.

Get your blood pressure and blood cholesterol checked.

Name _____

(fold)

Your Personal Record FOR BLOOD PRESSURE AND CHOLESTEROL

DATE	BLOOD PRESSURE	CHOLESTEROL
	/	
	/	
	/	
	/	
	/	
	/	
	/	
	/	
	/	
	/	

Objectives

By the end of this session, community health workers will be able to—

- Describe the different types of blood cholesterol.
- Describe the causes of high blood cholesterol.
- Discuss at least two types of medicine for lowering cholesterol.
- Explain lifestyle changes that can affect cholesterol levels.

Materials and Supplies

Flipchart, markers, tape, blackboard, chalk, and eraser.

Handouts:

- 8–1: What Are High Blood Cholesterol and Triglycerides?
- 8–2: What Do Cholesterol Numbers Mean?
- 8–3: What Is Cholesterol-Lowering Medicine?
- 8–4: How Can I Lower High Cholesterol?
- 8–5: Tips for Lowering Cholesterol
- 8–6: What Community Health Workers Can Do to Help Community Members Control High Blood Cholesterol Levels

Chapter Outline

1. Overview
2. Lesson
 - A. What Is High Blood Cholesterol?
 - B. What Causes High Blood Cholesterol?
 - C. How Is High Blood Cholesterol Diagnosed?
 - D. How Is High Blood Cholesterol Treated?
 - E. What Changes Should You Make in Your Diet and Lifestyle?
3. Summary

Resources

American Heart Association. www.americanheart.org

Empower Yourself: Learn Your Cholesterol Numbers. National Heart, Lung, and Blood Institute; National Institutes of Health; Public Health Service. NIH Publication No. 97-4063. September 1997. www.nhlbi.nih.gov/health/public/heart/other/chdblack/empower.pdf

Honoring the Gift of Heart Health: A Heart Health Educator's Manual for American Indians and Alaska Natives. National Heart, Lung, and Blood Institute and Indian Health Service; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov/health/prof/heart/other/aian_manual/index.htm

National Heart, Lung, and Blood Institute; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov

1. Overview

► **Say:**

A high level of cholesterol in the blood is a leading risk factor for heart disease and stroke. About 100 million people in the United States have cholesterol levels high enough to pose a serious risk to their health.

2. Lesson

A. What Is High Blood Cholesterol?

► **Say:**

Cholesterol is a fatty substance found in the bloodstream and in all of your body's cells. It's made by the liver and is needed for the body to function normally.

The body is generally able to make all the cholesterol it needs to keep healthy.

Cholesterol is often used as a general term that includes cholesterol and other types of fat and proteins in the bloodstream. These fats and proteins work together to make hormones, vitamin D, and substances that help digest foods.

One type of cholesterol (the “good” cholesterol) is good for you, but another type (the “bad” cholesterol) is not.

A high level of bad cholesterol in the blood contributes to the build-up of plaque along the walls of the blood vessels. Plaque is a thick, hard layer of cholesterol that can narrow the blood vessels and clog arteries. A build-up of plaque in the arteries causes a condition called atherosclerosis, or “hardening of the arteries.”

The “good” cholesterol is known as **HDL, or high density lipoprotein cholesterol**, but it's not important to remember that name. Almost everyone, including doctors, uses the term *good cholesterol* for HDL.

It might help you to remember that HDL is the good cholesterol if you think of the *H* in HDL as meaning “healthy.” HDL is considered good because it removes cholesterol from the arteries and prevents plaque from building up along the walls of the blood vessels.

LDL, or low density lipoprotein cholesterol, is the “bad” cholesterol. Thinking of the *L* in LDL as meaning “lousy” might help you remember that LDL is the bad cholesterol. If the LDL level is high and the HDL level is low, cholesterol and fat can begin to build up into plaque.

As arteries become more clogged, less blood flows to the heart and brain. When one or more arteries that supply blood to the brain or heart becomes severely blocked, a blood clot may form and block the artery, causing a heart attack or stroke.

Triglyceride, another type of fat in the blood, also adds to your overall cholesterol level. Your liver makes triglycerides and changes some into cholesterol. When you take in too many calories or eat a diet too high in carbs and trans fats, your body makes more triglycerides. Smoking and drinking alcohol raise triglycerides and lower HDL. But just as with LDL cholesterol, too much triglyceride in the blood is NOT a good thing and puts you at risk for heart disease and stroke.

People with high triglyceride levels often have low HDL cholesterol levels. People with diabetes often have high triglycerides and low HDL.



Handout 8–1: What Are High Blood Cholesterol and Triglycerides?

Ask the CHWs to take a quick look at this handout. Tell them that they can share it with others in the community, but because you haven't yet covered all the information in the handout, you'll talk about it later.

B. What Causes High Blood Cholesterol?

► Say:

High levels of LDL (bad) cholesterol can be caused by such things as family history and age, but certain behaviors or conditions can also be part of the cause of high LDL levels. Risk factors include the following:

- **Inactivity.** Lack of activity can contribute to high LDL levels. Regular physical activity can help lower LDL (bad) cholesterol levels and raise HDL (good) cholesterol levels. It also helps you lose weight or keep a healthy weight. You should try to be physically active for 30 minutes or more on most, if not all, days.

- **Obesity.** Being overweight is a risk factor for heart disease. It also tends to increase your bad cholesterol level. Losing weight can help lower your LDL (bad) and total cholesterol levels and your triglyceride level. It can also help raise your HDL (good) cholesterol level.
- **Diet.** Saturated fat, trans fat, and cholesterol in the food you eat make your blood cholesterol level go up. Saturated fat is the main problem, but cholesterol in foods can also add to the problem. Reducing the amount of saturated fat and cholesterol in your diet helps lower your blood cholesterol level. We'll talk more about fats and cholesterol in foods in the session on Healthy Eating and Weight Control (Chapter 12).
- **Age.** As you get older, cholesterol levels rise.
- **Family history.** High blood cholesterol can run in families.

If you have a high cholesterol level, **smoking and high blood pressure** add to your risk of developing heart disease or having a stroke. Cigarette smoke and high blood pressure damage blood vessel walls. The damage makes it more likely that cholesterol will collect along the walls and cause them to harden and narrow.

Type 2 diabetes (the type that usually develops in adulthood) can also cause blood vessels to narrow, making high levels of cholesterol in the blood even more dangerous to your health.

C. How Is High Blood Cholesterol Diagnosed?

► Say:

High blood cholesterol itself causes no symptoms, and many people have it without knowing about it. It's important to get your cholesterol tested so that if it's high, you can talk to your doctor about treating it and can make some lifestyle changes.

Healthy adults aged 20 years and older should have their blood cholesterol checked at least once every five years.

If a person has high cholesterol levels or other risk factors for heart disease, such as diabetes, he or she should be tested as often as advised by his or her doctor.

There are two types of tests for checking cholesterol. One is a **finger prick test** that gives a general reading of the blood cholesterol level. The other is a **lipid profile test**, which gives more detailed and accurate information.

The finger prick test is most often done at health fairs and health screenings at shopping malls. Blood is taken from a prick in the finger. The test provides a reading of the total cholesterol level only.

The cholesterol in your blood is measured in milligrams per deciliter of blood (mg/dl). Your total blood cholesterol number (the sum of all the cholesterol in your blood) should be **less than 200 mg/dl**, but the lower the better. A total cholesterol level of—

- **200 to 239 is borderline high.** Depending on your other risk factors, you may be at higher risk for heart disease.
- **240 or more is high.** You are at risk for clogged arteries and a heart attack.

If you have a finger prick test and your total cholesterol number is close to or higher than 200, it is a very good idea to see your doctor. You should know your numbers for HDL cholesterol, LDL cholesterol, and triglycerides as well as for total cholesterol.

The **lipid profile test** that your doctor will order provides a reading for all four blood cholesterol levels.

This test is also more accurate than the finger prick test and is also the better test because you get a more complete picture of your blood cholesterol.

Your doctor or nurse will ask you to fast (not to eat food) for 12 hours before a lipid profile test.

This type of test involves drawing blood from the arm and testing it in a lab.

If your levels are within the normal range, your lipid profile test results will be—

- More than 40 for HDL (healthy, good) cholesterol. The higher the better.
- Less than 130 for LDL (lousy, or bad) cholesterol. Keep it low! If you have heart disease and diabetes, keep this number at less than 100.
- Less than 150 for triglycerides. Keep it low!

As with the finger prick test, your total cholesterol reading should be less than 200.



Handout 8–2: What Do Cholesterol Numbers Mean?

Review with the CHWs the four cholesterol numbers and what they mean. How might they help people in the community understand the importance of having normal cholesterol levels?

► **Say:**

You should have a lipid profile test at regular check-ups with your doctor or at least once every five years.

If you have high cholesterol levels or other risk factors for heart disease and stroke, you should get this test as often as your doctor advises.

Your doctor will talk to you about treating and lowering your high cholesterol.

D. How Is High Blood Cholesterol Treated?

► **Say:**

The first step in treating high blood cholesterol is to make lifestyle changes, including eating foods low in saturated fat, trans fat, and cholesterol; increasing your physical activity; and managing your weight. Try not to eat foods that have trans fat in them.

The most important change you can make in your diet is to limit the amount of saturated fat that you eat. Saturated fat, found mainly in foods that come from animals, has the greatest effect on raising blood cholesterol.

Generally, your LDL (bad) cholesterol level will begin to drop a few weeks after you begin eating healthy meals and snacks that are low in saturated fats and increasing your level of physical activity. However, if your cholesterol level does not fall enough from making lifestyle changes, a doctor may prescribe medicine.

In that case, the second step is taking cholesterol-lowering medicines prescribed by your doctor.

Trans fat is vegetable oil that is used to keep baked goods fresher in the store and for cooking food in restaurants and fast food places. Trans fat raises the level of triglycerides in the blood.

Handout 8–3: What Is Cholesterol-Lowering Medicine?

Let CHWs know that this handout is a good one to share with people in the community. Discuss the questions on the second page of the handout with the CHWs. Ask them how they will help people in the community answer the questions.

► Say:

The main goal in treating high blood cholesterol is to lower your LDL number to a level that lowers your risk of developing heart disease or having a stroke.

Reducing cholesterol levels can slow or even reverse the build-up of cholesterol in the walls of the arteries.

E. What Changes Should You Make in Your Diet and Lifestyle?**► Say:**

As community health workers, you can help people in your community lower their cholesterol levels—often without medicine. Here are some helpful tips:

- Keep a healthy weight. If you are overweight, try to lose weight.
- Eat more fruits and vegetables.
- Eat smaller amounts of foods that are high in fat and calories.
- Eat healthy snacks.
- Exercise for at least 30 minutes on most days of the week.

By taking these steps to lower your cholesterol, you can lead a life that is heart healthy.

(Note to trainer: For more information, see Chapter 12: Healthy Eating and Weight Control and Chapter 13: Physical Activity.)

**Handout 8–4: How Can I Lower High Cholesterol?**

Tell the CHWs that this handout contains more good information for the community members they are helping. Discuss the questions on the second page with the CHWs.

► **Say:**

We already know that your diet should be low in saturated fats and other kinds of fat.



Activity: Saturated Fats in Foods

► **Ask:**

What are some examples of food that are high in saturated fats? Remember, foods that come from animals are often high in saturated fats, but other foods, such as french fries, which are fried in fat, can also be high in saturated fats and trans fat. (Have someone write the CHWs' responses on the flipchart.)

Possible responses are—

- Whole milk, butter, cream, and high-fat cheeses.
- Lard, pork fat, shortening, and oils such as coconut and palm.
- Fatty meat, such as ribs, hot dogs, sausage, pork rinds, liver, and lunch meats such as bologna and salami.
- Tacos and fried foods from fast-food restaurants.
- Pastries, donuts, cakes, pies, chips, and other snack food.

► **Ask:**

What kinds of foods do you think are lower in saturated fats or have no saturated fats?

Possible responses are—

- Fish, or chicken and turkey without skin.
- Beans and brown rice.
- Fruits and vegetables.
- Fat-free and low-fat milk.
- Fat-free cheese, cottage cheese, and yogurt.
- Some oils (canola, olive, peanut, soybean, safflower, corn, sunflower, flaxseed).

► **Say:**

In the chapter on healthy eating, we will talk about different kinds of fat and how to read food labels to pick healthier products when you shop.



Handout 8–5: Tips for Lowering Cholesterol

Review the tips in this handout and discuss with the CHWs how they can encourage people in their community to adopt healthier lifestyles.

► **Say:**

Here are some other important things to remember about eating a healthy diet:

- Stick margarine is not a healthy substitute for butter.
- Limit your salt intake.
- Limit your portion size.
- Limit your daily calorie intake.

Keep a healthy weight. If you are overweight, try to lose weight. Here are some ways to lose weight:

- Eat more fruits and vegetables.
- Eat smaller amounts of foods that are high in fat and calories.
- Eat healthy snacks.
- Exercise for at least 30 minutes on most days of the week.

Increase your physical activity. Pick activities that you enjoy doing with your friends or family. You might play sports, walk, dance, or garden. You might take the stairs, park your car further away from shops to do more walking, and play active outdoor games with children.

By taking these steps to lower your cholesterol, you can lead a life that is heart healthy.

(Note to trainer: For more information see Chapter 12: Healthy Eating and Weight Control and Chapter 13: Physical Activity.)

3. Summary



Handout 8–6: What Community Health Workers Can Do to Help Community Members Control High Blood Cholesterol Levels

CHWs can help their community members by reminding them to get a cholesterol screening; eat foods low in saturated fat, and cholesterol and very limited trans fat, maintain a healthy weight; and stay active. They can help people understand why it's important to take medicine for their high cholesterol, as prescribed by their doctor.

► Ask:

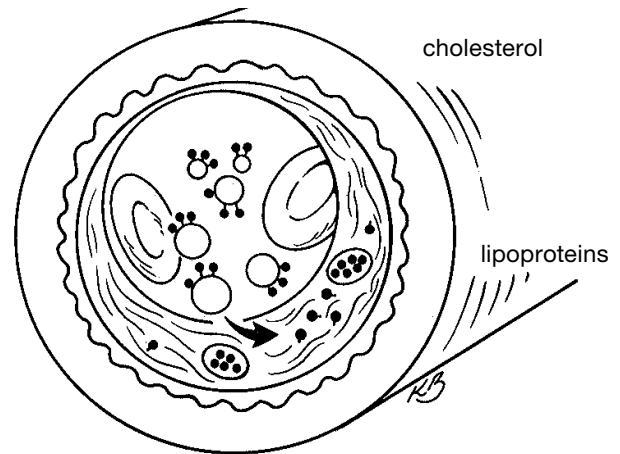
- What are the four different types of blood cholesterol numbers you get with a lipid profile test?
- What are the causes of high blood cholesterol?
- What lifestyle changes can affect cholesterol levels?

What Are High Blood Cholesterol and Triglycerides?

What is high blood cholesterol?

Cholesterol is a soft, fat-like substance found in the bloodstream and in all your body's cells. Your body makes all the cholesterol it needs.

The saturated fats, trans fats and cholesterol you eat may raise your blood cholesterol level. Having too much cholesterol in your blood may lead to increased risk for heart disease and stroke. About half of American adults have levels that are too high (200 mg/dL or higher) and about 1 in 5 has a level in the high-risk zone (240 mg/dL or higher). The good news is that you can take steps to control your cholesterol.



Cholesterol travels to the body's cells through the bloodstream by way of lipoproteins.

What's so bad about it?

Cholesterol and other fats can't dissolve in your blood. To travel to your cells, they use special carriers called lipoproteins. Low-density lipoprotein (LDL) cholesterol is often called "the bad kind." When you have too much LDL cholesterol in your blood, it can join with fats and other substances to build up in the inner walls of your arteries. The arteries can become clogged and narrow, and blood flow is reduced. If this buildup of plaque ruptures, a blood clot may form at this location or a piece may break off and travel

in the bloodstream. If a blood clot blocks the blood flow to your heart, it causes a heart attack. If a blood clot blocks an artery leading to or in the brain, a stroke results.

A "good kind" of cholesterol, on the other hand, is called high-density lipoprotein (HDL). It carries harmful cholesterol away from the arteries and helps protect you from heart attack and stroke. It's better to have a lot of HDL cholesterol in your blood.

How can I lower the bad cholesterol in my blood?

- Cut down on foods high in saturated fat and cholesterol. These include fatty meats, butter, cheese, whole-milk dairy products, egg yolks, shellfish, other fish, organ meats, poultry and solid fats (foods from animals).
- Do physical activities at least 30 minutes on most or all days of the week.
- Eat more foods low in saturated fat and cholesterol, and high in fiber. These include fruits and vegetables, whole grains and grain products, beans and peas, fat-free and low-fat milk products, lean meats and poultry without skin, fatty fish, and nuts and seeds in limited amounts.
- Lose weight if you need to.
- Ask your doctor about medicines that can reduce cholesterol (not recommended for all patients).

What are triglycerides?

Triglycerides are the most common type of fat in your body. They're also a major energy source. They come from food, and your body also makes

them. High levels of blood triglycerides are often found in people who have high cholesterol levels, heart problems, are overweight or have diabetes.

What about fats?

There are different kinds of fats in the foods we eat. Saturated fat is the kind that raises blood cholesterol, so it's not good for you. Avoid animal fats like lard and meat fat, and some plant fats like coconut oil, palm oil and palm kernel oil.

Trans fat comes from adding hydrogen to vegetable oils and tends to raise blood cholesterol. It's used in commercial baked goods and for cooking in most restaurants and fast-food chains. It's also in milk and beef.

Polyunsaturated fats are found in vegetable oils and fish oils. These tend to lower blood cholesterol when consumed in moderation and used to replace saturated or trans fats in the diet.

Monounsaturated fats are found in olive, canola, peanut, sunflower and safflower oils. In a low-saturated-fat diet, they may lower blood cholesterol.

How can I learn more?

1. Talk to your doctor, nurse or other health-care professionals. If you have heart disease or have had a stroke, members of your family also may be at higher risk. It's very important for them to make changes now to lower their risk.
2. Call 1-800-AHA-USA1 (1-800-242-8721) or visit americanheart.org to learn more about heart disease.

3. For information on stroke, call 1-888-4-STROKE (1-888-478-7653) or visit StrokeAssociation.org.

We have many other fact sheets and educational booklets to help you make healthier choices to reduce your risk, manage disease or care for a loved one.

Knowledge is power, so *Learn and Live!*

Do you have questions or comments for your doctor?

Take a few minutes to write your own questions for the next time you see your healthcare provider. For example:

Will I need cholesterol-lowering medicine?

How does exercise affect my levels?

What Do Cholesterol Numbers Mean?

HDL (healthy, happy, good) Cholesterol Numbers

If your number is:	Then your HDL (good) cholesterol is:
60 or more	High
Below 40	Low

LDL (lousy, bad) Cholesterol Numbers

If your number is:	Then your cholesterol is:
Less than 100	Optimal
100–129	Near optimal/above optimal
130–159	Borderline high
160–189	High
190 or more	Very high

Triglyceride Numbers

If your number is:	Then your cholesterol is:
Less than 150	Normal
150–199	Borderline high
200–499	High
500 or more	Very high

Total or Overall Cholesterol Numbers

If your number is:	Then your cholesterol is:
Less than 200	Normal
200–239	Borderline high
240 or more	High





What Is Cholesterol-Lowering Medicine?

If your doctor has decided that you need to take medicine to reduce high cholesterol, it's because you're at high risk for heart disease or stroke. Usually the treatment combines diet and medicine.

Most heart disease and many strokes are caused by a buildup of fat, cholesterol and other substances called plaque in the inner walls of your arteries. The arteries can become clogged and narrow, and blood flow is reduced. If a blood clot forms and blocks blood flow to your heart, it causes a heart attack. If a blood clot blocks an artery leading to or in the brain, a stroke results.

By following your doctor's advice, you can help prevent these diseases.



What should I know about the medicine?

Your doctor will decide which medicine is best for you. Often you'll be asked to take more than one. Always follow your doctor's orders carefully, and let the doctor know if you have any side effects. Never stop taking your medicine on your own!

Bile acid binders (resins) help rid the body of cholesterol. Some names are cholestyramine, cholestipol and colesevelam.

- These often come in a powder that you mix with water or juice. They are not absorbed from the gastrointestinal tract where they bind cholesterol.
- Side effects may include constipation, bloating, nausea and gas. To reduce these effects, eat more fiber and drink more fluids.

Nicotinic acid or niacin is a B vitamin. Take this only if your doctor has prescribed it.

- It can lower total cholesterol, LDL "bad" cholesterol and triglyceride (blood fat) levels. It can also raise HDL "good" cholesterol levels.

- It may cause flushing and itching. It could also upset your stomach and cause other side effects your doctor can describe.

HMG-CoA reductase inhibitors (statins) stimulate the body to process and remove cholesterol from the body. Their major effect is to lower LDL cholesterol. Some names are lovastatin, pravastatin, simvastatin, fluvastatin and atorvastatin.

- Possible side effects include constipation, stomach pain or cramps, and gas.
- A few patients experience muscle pain, weakness or brown urine.

Fibric acids are especially good for lowering triglyceride (blood fat) levels and, to a lesser extent, raising HDL cholesterol levels. Some names are gemfibrozil, clofibrate and fenofibrate.

- A few patients have stomach problems when they take this.
- Fibric acids can increase the effect of medications that thin the blood. This should be monitored closely.

How do I remember to take my medicine?

Sometimes it's hard to keep track of your medicine. To be safe, you must take it properly.

- Take your medicine at the same time each day along with meals or other daily events, like brushing your teeth.
- Use a weekly pill box with separate compartments for each day or time of day.

- Computerized pill boxes can alert you when it's time to take a pill or order refills.
- Ask family and friends to help remind you.
- Use a pill calendar or drug reminder chart.
- Leave notes to remind yourself.
- Try an e-mail reminder or beeper service.
- Wear a wristwatch with an alarm.

How do I know if it's working?

Your doctor will test your blood cholesterol level when needed. Together with your doctor, set a goal and ask how long it may take to reach that

goal. Follow up with your doctor after reaching your goal. Don't stop medication unless your doctor tells you to.

How can I learn more?

1. Talk to your doctor, nurse or other health-care professionals. If you have heart disease or have had a stroke, members of your family also may be at higher risk. It's very important for them to make changes now to lower their risk.
2. Call 1-800-AHA-USA1 (1-800-242-8721) or visit americanheart.org to learn more about heart disease.

3. For information on stroke, call 1-888-4-STROKE (1-888-478-7653) or visit StrokeAssociation.org.

We have many other fact sheets and educational booklets to help you make healthier choices to reduce your risk, manage disease or care for a loved one.

Knowledge is power, so *Learn and Live!*

Do you have questions or comments for your doctor?

Take a few minutes to write your own questions for the next time you see your healthcare provider. For example:

What if I forgot a dose?

Should I avoid any foods or other medicines?

How long will it take me to reach my cholesterol goals?

Your contribution to the American Heart Association supports research that helps make publications like this possible.

The statistics in this sheet were up to date at publication. For the latest statistics, see the *Heart Disease and Stroke Statistics Update* at americanheart.org/statistics.

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Learn and Live.

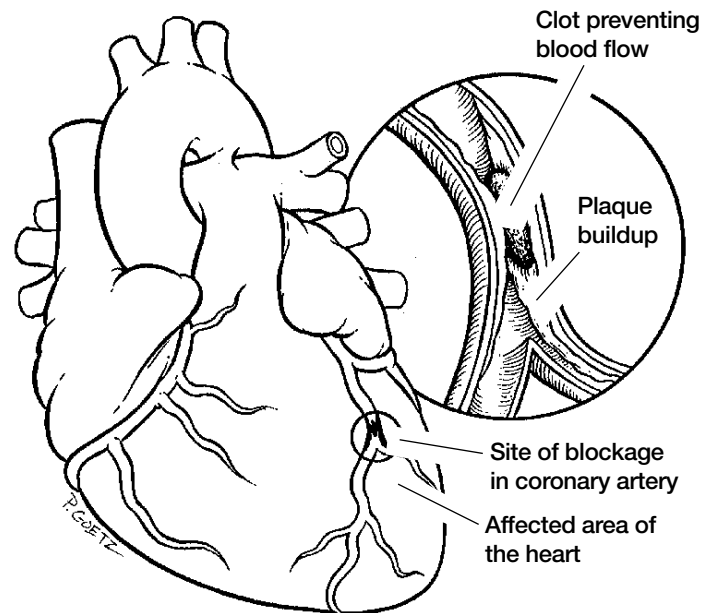


How Can I Lower High Cholesterol?

Too much cholesterol in the blood can lead to heart disease and stroke — America's No. 1 and No. 3 killers. Even though there's much you can do to lower your cholesterol levels and protect yourself, half of American adults still have levels that are too high (over 200 mg/dL).

You can reduce cholesterol in your blood by eating healthful foods, losing weight if you need to and being physically active. Some people also need to take medicine because changing their diet isn't enough. Your doctor and nurses will help you set up a plan for reducing your cholesterol — and keeping yourself healthy!

Most heart and blood vessel disease is caused by a buildup of cholesterol, plaque and other fatty deposits in artery walls. The arteries that feed the heart can become so clogged that the blood flow is reduced, causing chest pain. If a blood clot forms and blocks the artery, a heart attack can occur. Similarly, if a blood clot blocks an artery leading to or in the brain, a stroke results.



What should I eat?

Focus on low-saturated-fat, *trans* fat-free, low-cholesterol foods such as these:

- A variety of fruits and vegetables (choose 8 to 10 servings per day)
- A variety of grain products like bread, cereal, rice and pasta, including whole grains (choose 6 or more servings per day)
- Fat-free and low-fat milk products (2 to 3 servings per day)
- Lean meats and poultry without skin (choose up to 5 to 6 total ounces per day)
- Fatty fish (enjoy at least 2 servings baked or grilled each week)
- Beans and peas
- Nuts and seeds in limited amounts (4 to 5 servings per week)
- Unsaturated vegetable oils like canola, corn, olive, safflower and soybean oils (but a limited amount of margarines and spreads made from them)

What should I limit?

- Whole milk, cream and ice cream
- Butter, egg yolks and cheese — and foods made with them
- Organ meats like liver, sweetbreads, kidney and brain
- High-fat processed meats like sausage, bologna, salami and hot dogs

- Fatty meats that aren't trimmed
- Duck and goose meat (raised for market)
- Bakery goods made with egg yolks and saturated fats
- Saturated oils like coconut oil, palm oil and palm kernel oil
- Solid fats like shortening, partially hydrogenated margarine and lard
- Fried foods

What are some cooking tips?

- Use a rack to drain off fat when you broil, roast or bake.
- Don't baste with drippings; use wine, fruit juice or marinade.
- Broil or grill instead of pan-frying.
- Cut off all visible fat from meat before cooking, and take all the skin off poultry pieces. (If you're roasting a whole chicken or turkey, remove the skin after cooking.)
- Use a vegetable oil spray to brown or sauté foods.
- Serve smaller portions of higher-fat dishes, and serve bigger portions of lower-fat dishes like pasta, rice, beans and vegetables.
- Make recipes or egg dishes with egg whites or egg substitutes, not yolks.
- Instead of regular cheese, use low-fat cottage cheese, part-skim milk mozzarella and other fat-free or low-fat cheeses.

How can I learn more?

1. Talk to your doctor, nurse or other health-care professionals. If you have heart disease or have had a stroke, members of your family also may be at higher risk. It's very important for them to make changes now to lower their risk.
2. Call 1-800-AHA-USA1 (1-800-242-8721) or visit americanheart.org to learn more about heart disease.
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Do you have questions or comments for your doctor?

Take a few minutes to write your own questions for the next time you see your doctor. For example:

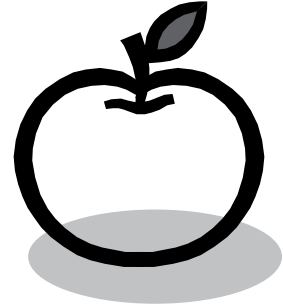
What about eating out?

Why are weight control and physical activity important?

Tips for Lowering Cholesterol

You can protect your heart health by keeping your blood cholesterol levels low. By developing following healthy habits, you can reduce your risk of high cholesterol. Here are some important healthy habits:

1. **Eat a healthy diet.** Eating a healthy diet that is low in fat and cholesterol may help to lower high blood cholesterol. The most important change you can make in your diet is to reduce the amount of saturated fat that you eat. Saturated fat, which is found mainly in foods that come from animals, raises blood cholesterol more than anything else you eat. The following are examples of foods that are high in saturated fat and high in cholesterol:



- Whole milk, butter, cream, high-fat cheeses, stick margarine.
- Lard, pork fat, shortening.
- Fatty meat such as ribs, hot dogs, sausage, pork rinds.
- Some vegetable oils, such as coconut, palm, and palm kernel oils. These oils are often found in cookies and cakes.

It is best to eat foods from the following groups:

- Fruits and vegetables.
- Low-fat dairy products.
- Fish or chicken without skin.
- Cereals, pasta, lentils, and beans.

Here are some other important things to remember about eating a healthy diet:

- Stick margarine is not a healthy substitute for butter.
- Limit your salt intake.*
- Limit the size of the portions you eat.*
- Limit your daily calorie intake.*

*Follow the DASH eating Plan. *The Dash Diet*. www.nhlbi.nih.gov/health/public/heart/hbp/dash/index.htm

2. **Keep a healthy weight.** If you are overweight, try to lose weight. Here are some ways to lose weight:

- Eat more fruits and vegetables.
- Eat smaller amounts of foods that are high in fat and calories.
- Eat healthy snacks.
- Exercise for at least 30 minutes most days of the week.



3. **Increase your physical activity.** Try to be physically active every day. Choose activities that you enjoy doing with your friends or family. Play sports, walk, take the stairs, dance, do aerobics, swim, or garden.

By taking these steps to lower your cholesterol, you can lead a life that is heart healthy.



What Community Health Workers Can Do to Help Community Members Control High Blood Cholesterol Levels (with Program Support)

What Community Health Workers Can Do to Help People Who Are at Risk for High Blood Cholesterol

Ways to Support People in Their Health Care Needs:

- Teach community members to get screened for high blood cholesterol.
- Screening is important because people with this condition do not feel sick.
- Teach community members that it is important to control high blood cholesterol.
- Teach them that uncontrolled high blood cholesterol will damage their heart, blood vessels, and brain.
- Teach community members that if left untreated, high blood cholesterol will put them at high risk for heart disease, heart attack, and stroke.
- Remind community members to ask to have their blood cholesterol checked when they go to the clinic or the doctor's office.

Help People Make Better Lifestyle Choices:

- Encourage people to take part in regular physical activity, stop smoking, lose weight (if they are overweight), and drink no more than one alcoholic drink a day for women and no more than two for men. One drink is 1 oz. of hard liquor, or 4 oz. of wine, or 12 oz. of beer.
- Help people choose a diet low in fat, saturated fat, trans fat, and cholesterol.
- Encourage people to eat less fatty foods and to decrease the amount of food they fry.

What Community Health Workers Can Do to Help People Who Have High Blood Cholesterol

All of the suggestions for people at risk for high blood cholesterol apply, plus the following:

- Help those who have high blood cholesterol and diabetes understand the importance of controlling their diabetes and regularly taking their diabetes medications.
- Help those with high blood cholesterol understand what they need to do to take care of themselves.
- Help community members understand the importance of regularly taking their cholesterol-lowering medicines. They should not stop taking their medicines, even if they feel better.
- Help people learn how to keep track of the medicines they are taking.

Objectives

By the end of this session, community health workers will be able to—

- Describe the risk factors for diabetes.
- Describe the signs of diabetes.
- Describe two tests for diagnosing diabetes.
- Explain the importance of balancing food, physical activity, and medicine.
- Describe the long-term complications associated with diabetes.

Materials and Supplies

Flipchart, markers, tape, blackboard, chalk, and eraser.

Handouts:

- 9–1: What Is Diabetes and How Can I Control It?
- 9–2: Carbohydrates and Carbohydrate Counting
- 9–3: Tips to Help You Feel Better and Stay Healthy
- 9–4: Checking Your Blood Sugar
- 9–5: Daily Blood Sugar Log
- 9–6: Roadblocks to Checking Blood Sugar
- 9–7: Managing Your Diabetes at Work, School, and During Travel
- 9–8: Taking Care of Yourself When You Are Sick
- 9–9: Low Blood Sugar
- 9–10: High Blood Sugar
- 9–11: Taking Care of Yourself and Preventing Complications of Diabetes
- 9–12: What Community Health Workers Can Do for People Who Are at Risk for Diabetes or Who Have Diabetes
- 9–13: My Goals

Chapter Outline

1. Overview
2. Lesson
 - A. What Is Diabetes?
 - B. Types of Diabetes
 - C. What Are the Signs of Diabetes?
 - D. How Is Diabetes Diagnosed?
 - E. What Is Pre-diabetes?
 - F. How Is Diabetes Controlled and Treated?
 - G. How Does a Person with Diabetes Control His or Her Blood Sugar?
 - H. Why Is It Important to Manage Blood Sugar Levels?
 - I. Goal Setting
3. Summary

Resources

American Diabetes Association. www.diabetes.org

American Heart Association. www.americanheart.org

Centers for Disease Control and Prevention, Diabetes Public Health Resource. www.cdc.gov/diabetes

Choose to Live: Your Diabetes Survival Guide. American Diabetes Association and American College of Cardiology. 1515-51 11/04. www.diabetes.org

Diabetes Resources. 1-800-DIABETES.

The Heart of Diabetes. American Heart Association. 2008. www.s2mw.com/heartofdiabetes/index.html

MedLine Plus. National Institutes of Health; Department of Health and Human Services. www.nlm.nih.gov/medlineplus/ency/article/002469.htm

Movimiento Por Su Vida. A music CD created to help everyone incorporate more movement into their lives. National Diabetes Education Program. www.cdc.gov/diabetes/ndep/movimiento.htm

National Heart, Lung, and Blood Institute; National Institutes of Health; Department of Health and Human Services. www.nhlbi.nih.gov

National Diabetes Education Program. www.ndep.nih.gov

New Beginnings: A Discussion Guide for Living Well with Diabetes. National Diabetes Education Program. [http://ndep.nih.gov/diabetes/pubs/New Beginnings_2005.pdf](http://ndep.nih.gov/diabetes/pubs/New_Beginnings_2005.pdf)

The Road to Health. El Camino Hacia la Buena Salud Toolkit. www.ndep.nih.gov

Take Charge of Your Diabetes. 3rd edition. Atlanta (GA): U.S. Centers for Disease Control and Prevention. Department of Health and Human Services, 2003. www.cdc.gov/diabetes/pubs/tcyd/index.htm

The Eagle Books: Stories about growing strong and preventing diabetes www.cdc.gov/diabetes/pubs/eagle.htm

Your Game Plan for Preventing Type 2 Diabetes: Health Care Provider's Toolkit. National Diabetes Education Program, National Institutes of Health and Centers for Disease Control and Prevention, U. S. Department of Health and Human Services. NIH Publication No. 03-5334. February 2003 http://ndep.nih.gov/diabetes/pubs/GP_Toolkit.pdf

1. Overview

► **Say:**

Diabetes is a growing health problem. More than 20 million people in the United States have diabetes. Diabetes is also called high blood sugar.

If diabetes is not controlled, it can cause other serious health problems. Here are some examples:

- Adults with diabetes are two to four times more likely to die from heart disease and stroke than are those without diabetes.
- The risk for stroke is two to four times higher for people with diabetes.
- Diabetic eye disease, or retinopathy, is a leading cause of blindness in people aged 20 to 74 years.
- In the United States each year, diabetes causes more than 82,000 persons to lose a limb, especially a foot.
- Diabetes is the most common cause of kidney failure. Even when diabetes is controlled, it can lead to kidney disease and failure.
- High blood sugar helps germs grow in the mouth, leading to gum disease and loss of teeth.
- Diabetes can damage nerves throughout the body. This damage can lead to numbness and sometimes pain and weakness in the hands, arms, feet, and legs.

But there's good news for people with diabetes, too. Studies show that keeping blood glucose (blood sugar) levels close to normal helps prevent, or at least delay, some complications (problems) of diabetes, including blindness, kidney disease, nerve damage, and serious foot problems.

Much of this lesson is designed to help you learn more about how to help the people in your community prevent problems related to diabetes. The support and helpful information you give to community members will be very important to them.

2. Lesson

A. What Is Diabetes?

► **Say:**

Diabetes is—simply said—too much glucose, or sugar, in the blood.

Most of the food we eat is turned into **glucose** for our bodies to use for energy. Sometimes glucose is referred to as *blood sugar*, or just *sugar*.

Blood supplies food and nutrients to all the cells in our bodies, and glucose is one of these nutrients. In fact, it is the body's main source of fuel.

As important as glucose is, it can't enter and feed the cells without the help of insulin. Insulin is a hormone made by the pancreas to help glucose get into our body cells. The pancreas is an organ near the stomach.

When a person has diabetes, his or her body either doesn't make enough insulin or can't use its own insulin very well. This problem keeps glucose from getting into the cells, and causes glucose to build up in the blood.

B. Types of Diabetes

► **Say:**

Diabetes of any type is simply having too much glucose in the blood. There are three main types of diabetes.

The first is **type 1 diabetes**. The pancreas of a person with type 1 diabetes produces little or no insulin. Although type 1 diabetes can happen at any age, people with type 1 usually find out they have diabetes when they are children or young adults. Type 1 diabetes used to be called juvenile diabetes. People with type 1 diabetes must use insulin every day to stay alive.

The second type, which most people with diabetes—9 out of 10—have, is **type 2 diabetes**. In a person with type 2 diabetes, the pancreas still makes insulin, but either it doesn't make enough or the body isn't able to use it very well, or both.

Most people with type 2 find out they have diabetes after age 30 or 40. Type 2 is known as adult-onset diabetes, but it can happen even in younger people—some as young as teenagers. Type 2 diabetes has become more common in recent years in people in their 30s and their 40s.

► **Ask:**

Do you have ideas about why this might be? (Wait for answers about lack of physical activity, unhealthful eating, and being overweight.)

► **Say:**

That's right, people don't walk and move around as much. We spend more time sitting in front of the TV, we get into our cars to go places instead of walking, and we eat more high-calorie and fast foods. As a result, more of us are becoming overweight and obese.

The third type of diabetes, called **gestational diabetes**, is a type some women have when they're pregnant. Pregnant women with gestational diabetes need to keep their glucose levels as close to normal as they can, with the help of their health care team. It is important for women who have had gestational diabetes to check again for diabetes 6 weeks or more after their baby is born and regularly for the rest of their lives.

No matter what type of diabetes a person has, glucose control is the key to managing the condition. The lessons we'll cover will help you support people in controlling their diabetes and help them prevent problems.

You may wonder who is most likely to get type 2 diabetes. Certain risk factors make people more likely to get this type of diabetes. Some of these risk factors are—

- A family history of diabetes.
- Lack of physical activity.
- Being overweight by 20 pounds or more.
- Being of African American, American Indian, Alaska Native, Hispanic/Latino, or Asian/Pacific Islander heritage.
- Being a women who had gestational diabetes or who delivered a baby weighing more than nine pounds.

People who have these risk factors may also have high blood pressure and abnormal cholesterol levels.

► **Ask:**

Which risk factors can you control with lifestyle changes? (Wait for answers.)

► **Say:**

That's right, diet, lack of physical activity, and weight.

Keeping a healthy weight and staying physically active throughout life can help to prevent diabetes—and also heart disease. Diabetes and heart disease can go hand-in-hand. So the steps a person takes to prevent diabetes—and heart disease—are worth the effort. And it's worth our time and care, as community health workers, to help support people in their efforts! Taking these steps can mean a world of difference for a person and his or her family—for years to come.



Handout 9–1: What Is Diabetes and How Can I Control It?

Review the handout with the CHWs. Ask how they might use the handout in talking with community members.

C. What Are the Signs of Diabetes?

► **Say:**

The warning signs of diabetes are—

- Being very thirsty.
- Urinating a lot—often at night.
- Having blurry vision from time to time.
- Feeling very tired much of the time.
- Losing weight without really trying.
- Having very dry skin.
- Having sores that are slow to heal.
- Getting more infections than usual.
- Losing feeling or getting a tingling feeling in the feet.
- Vomiting.

A person who has one or more of these signs should see a doctor very soon.

D. How Is Diabetes Diagnosed?

► **Say:**

Diagnosing diabetes only takes a simple blood test called a fasting plasma glucose (FPG) test. This test is sometimes called a fasting blood glucose (FBG) test. A person should have the test in the morning before he or she has anything to eat or drink (no food or water for at least eight hours before the blood test).

Blood for the test is taken from a vein in the arm. Test results are given as a number representing an amount of glucose in a sample of blood. If the glucose level is high—more than 126 milligrams per deciliter (mg/dl)—the person’s doctor may order extra blood tests that will show if he or she has diabetes.

If the fasting glucose level is—

- Less than 100 (mg/dl), the blood sugar level is normal.
- 100 to 125, a person has pre-diabetes.
- 126 or more, on two different days, a person has diabetes.

E. What Is Pre-diabetes?

► **Say:**

Before people develop type 2 diabetes, they often have pre-diabetes—blood sugar levels that are higher than normal but not yet high enough to be diagnosed as diabetes.

Remember, pre-diabetes is having a fasting blood glucose level from 100 to 125 (milligrams per deciliter).

In the past, doctors did not prescribe treatment for people in the pre-diabetes range, but recent research shows that some long-term damage to the body, especially to the heart and the blood vessels, may take place when a person has pre-diabetes.

Studies suggest that in people with pre-diabetes losing weight and increasing physical activity can prevent or delay diabetes and may return blood sugar levels to normal.

F. How Is Diabetes Controlled and Treated?

► **Say:**

To control their diabetes, people need to keep a balance among three things:

- The amount and type of food they eat.
- Physical activity.
- Medicine, if prescribed.

Let's talk about food first.

► **Ask:**

What is it that people with diabetes or high blood sugar should eat very little of? (Allow time for answers. The correct answer is sugar, or carbohydrates.)

► **Say:**

That's right—sugar, or carbohydrates. It's not enough for people with diabetes to just stay away from sweets. They need to keep track of the amounts of carbohydrates they eat. They can ask their doctor to have a diabetes educator help them. A diabetes educator is a trained person who can help people with diabetes develop a food plan. They will learn about carbohydrate serving sizes and how many carbohydrates they can eat each day.

► **Ask:**

What are carbohydrates? You may hear people call them "carbs." (Listen to the CHWs' answers.)

► **Say:**

Carbohydrates are one of the three main types of food that provide calories and energy. (Protein and fat are the others.) Carbohydrates are mainly sugars (simple carbohydrates) and starches (complex carbohydrates). They are turned into sugar by our bodies during digestion and are a main source of our bodies' energy.

Carbohydrates are necessary for good health, but people with diabetes need to limit the amount and type of carbohydrates they eat because these foods most quickly raise blood sugar levels.

Simple carbohydrates that contain vitamins and minerals are in—

- Fruits.
- Milk and milk products.
- Vegetables.

Simple carbohydrates are also found in foods that have refined sugars or are in processed food such as—

- Candy.
- Table sugar.
- Syrups (not including natural syrups such as maple).
- Cake, cookies, donuts, and other pastries.
- Regular (non-diet) drinks, such as soda, and flavored water.

These kinds of food and drinks provide calories, but do not have vitamins, minerals, and fiber. These foods are often called "empty calories" and can lead to weight gain.

Also, many processed foods, such as white flour, have their fiber and nutrients removed. It is healthiest to get carbohydrates, vitamins, and other nutrients in as natural a form as possible—for example, from fruit instead of table sugar.

Complex carbohydrates include—

- Whole grain breads and cereals.
- Starchy vegetables like potatoes and corn.
- Peas and beans.

It is best to eat foods that have more complex carbohydrates because they have more nutrients and fiber; they will not raise your blood sugar as quickly as processed, sugary foods.

- Eat more fruits and vegetables.
- Eat more whole grain, rice, breads, and cereals.
- Eat more legumes (beans, lentils, and dried peas).

Try to stay with your food and activity plan as closely as you can. Ask your doctor to send you to a diabetes educator who can help you work out a food plan. You will learn about carbohydrate serving sizes and how many carbohydrate servings you should eat a day. For many people, having 3 or 4 servings of carbs at each meal and 1 or 2 servings for snacks works well.

You can make a big difference in controlling your blood sugar level by watching what and how much you eat.

When you check your blood sugar levels, you can tell when and where changes in your food plan might be needed. If your blood glucose levels are too high, you may need to eat fewer carbohydrate servings, be more physically active, or work with your health care team to add or make changes in diabetes medicines.

You can get books that list carb counts for many foods and most packaged foods are required to list their carb counts right on the label. We will talk about reading food labels in our session on Health Eating and Weight Control.



Handout 9–2.1-9–2.3: Part 1: Carbohydrates and Carbohydrate Counting and Part 2: Health Eating Tips

Look over the examples of starches given near the beginning of the handout. Ask how many CHWs know that it's important for people with diabetes to limit the amount of carbohydrates or "carbs" they eat. Talk about the carbohydrates listed in the handout and the serving sizes for common carbohydrates.

► **Say:**

Healthy eating is important for people with diabetes. What are some healthy eating tips you can offer to people in your community? (Write answers on the flipchart. If the following tips are not mentioned, add them to the flipchart, refer to Part 2 of the handout, and discuss them with the CHWs):

- Eat regular meals.
- Eat less fat. Stay away from fried foods. Foods that are baked, broiled, grilled, boiled, or steamed are healthier. When you eat dairy products (such as cheese, milk, or yogurt), choose the ones that have little or no fat or cream.
- Eat less sugar. Eat more high-fiber foods, like vegetables, dried beans, fruit, and oatmeal. Drink water and other drinks that have no added sugar.
- Eat fewer foods that have extra sugar, such as cookies, cakes, pastries, candy, brownies, and sugared breakfast cereals.

- Eat less salt. Eating less salt may help control blood pressure. Use less salt when you prepare foods. Use herbs and spices instead of salt to flavor your food.
- Cut down on processed foods, such as foods you buy in cans, boxes, and jars, pickled foods, lunch meats (cold cuts), and snack foods, such as chips.
- Set carbohydrate goals for your snacks and meals with your diabetes educator and aim to meet your target goals.
- Write down the number of carbohydrates you eat or drink each day. You may need to use measuring cups.

Just one more tip that's important for everyone, but especially for people with diabetes:

Drinks containing alcohol may not be a good idea. Alcohol adds calories and doesn't give your body any nutrition. Drinking alcohol may cause dangerous reactions with diabetes medicines. Your blood sugar can go down too low if you drink beer, wine, or liquor on an empty stomach. If you want to have a drink once in a while, ask your doctor or nutritionist for advice.

Now let's talk about **physical activity**.

Regular physical activity (30 to 60 minutes on most days) is especially good for people with diabetes because it can—

- Lower your blood sugar, blood pressure, and cholesterol.
- Lower your risk for heart disease and stroke.
- Increase energy and relieve stress.
- Help insulin work better and reduce the need for insulin.
- Strengthen your heart, muscles, and bones.
- Improve your blood circulation and tone your muscles.
- Protect against heart disease and stroke.
- Aid in weight management.
- Keep your body and your joints flexible.
- Improve how you look and feel.

Making physical activity part of the daily routine is hard for many people. They may be in their 40s or 50s when they first find out they have diabetes and may not have thought much about how important it is to stay physically active.

► **Ask:**

How do you think you can help people become more physically active? (Allow time for answers. If the CHWs are having a hard time coming up with answers, offer the following tips.)

- Start with a little activity. Walking, working in the yard, riding a bike, swimming and dancing are good ways to start. As you get stronger, you can add a few extra minutes to your routine. Talk to your doctor about what is best for you.
- Try to do something physically active every day—even if it's only for 10 or 20 minutes at a time. Plan to get at least 30 minutes of physical activity on most days of the week.
- Pick an activity you enjoy. The more fun it is, the more likely you will do it each day. It's good to be active with a family member or friend.

► **Say:**

Sometimes people can control their diabetes by changing what they eat, being more active, and losing weight. If that is not enough, the third part of your diabetes control is **medicine**. There are many different types of diabetes medicine, and they control diabetes in different ways.

Your doctor will work with you to find the best medicine for your diabetes, and will advise you when to take it and how much to take.

The most important thing people who take medicine for diabetes must remember is *to take their medicine!*

If you have type 1 diabetes, your doctor will most likely have you take insulin.

If you need to inject insulin (give yourself a shot), your doctor or someone on your health care team will teach you—

- How to give yourself injections.
- When you need to change your insulin dose.
- How to safely dispose of needles.

Medicine does not take the place of healthy eating and physical activity, but is part of the balance of three things needed to control diabetes. These three things are food, physical activity, and medicines.

People with diabetes also need to make sure their cholesterol levels and their blood pressure are kept in check. Good levels of blood cholesterol and blood pressure are different for people with diabetes than for others because they have a greater risk of heart disease.

People with diabetes should follow these guidelines for cholesterol levels:

HDL (good cholesterol):	More than 50 for women More than 40 for men
LDL (bad cholesterol):	Less than 100 for men and women
Triglycerides:	Less than 150 for men and women
Total cholesterol:	Less than 135 if over 40 years of age; for people of all ages, the lower your cholesterol level is, the better

Your doctor may prescribe medicine to help bring down blood pressure and to improve cholesterol levels in people with diabetes.

And last but not least, **quit smoking!** People with diabetes who smoke are more likely to have nerve damage and kidney disease than those who don't smoke.



Handout 9–3: Tips to Help You Feel Better and Stay Healthy

Review the handout with the CHWs. Read the three questions to ask your doctor:

1. What are my blood glucose, blood pressure, and cholesterol numbers?
2. What should they be?
3. What actions should I take to reach these goals?

Ask the CHWs how they can help people with diabetes in their community with the third question.

G. How Does a Person with Diabetes Control His or Her Blood Sugar?

► Say:

It is very important to control your blood sugar levels if you have diabetes.

By keeping your blood sugar level close to normal, you can prevent or delay health problems caused by diabetes, such as eye disease, kidney disease, and nerve damage. One thing that can help you control your blood sugar level is to keep track of it. You can do this in two ways:

- Testing your blood sugar a number of times each day (self-monitoring your blood sugar). Many people with diabetes test their blood sugar two to four times a day.
- Getting an A1C test from your doctor or health clinic about every three months. The A1C test—short for hemoglobin A-1-C—is a simple blood test that measures your average blood sugar over the last three months.

These tests tell you if you are keeping your blood sugar levels within normal limits.

You can do a test anytime to find out your blood sugar (blood glucose) level.

Your doctor, nurse, or other health care provider can show you how to do the test yourself using a self-monitoring device called a glucose meter.

Glucose meters usually require a drop of blood that you get by pricking your finger or a place on your arm. You place the drop of blood on a small coated strip and insert it in the monitoring device. The device then gives you a reading of your blood sugar level.



Handout 9–4: Checking Your Blood Sugar

Review the steps for checking blood sugar with a self-monitoring device. Ask the CHWs if they are comfortable helping someone check his or her blood sugar, and ask what questions they may have about monitoring blood sugar.

► **Say:**

Blood sugar testing can help you understand how food, physical activity, and diabetes medicine affect your glucose levels. Testing can help you make choices every day about how to balance these three things. It can also tell you when your glucose is either too low or too high so that you can treat the problem.

Ask your doctor to tell you the range of blood sugar levels that is considered normal for you. Each time you check your blood sugar level, write down the number and record the time of day in a logbook or on a record sheet. If you need a daily logbook, ask your doctor or diabetes educator for one.



Handout 9–5: Daily Blood Sugar Log

Review the handout. Discuss with the CHWs why someone with diabetes should keep a log of his or her blood sugar readings.

► **Say:**

Be sure to write down each blood sugar reading and the date and time you took it. When you look over your records, you will see a pattern of your recent blood sugar control. Keeping track of your blood sugar every day is one of the best ways you can take charge of your diabetes.



Handout 9–6: Roadblocks to Checking Blood Sugar

Many people with diabetes do not check their blood sugar regularly. But you can't be sure your diabetes is under control if you don't check your blood sugar levels. According to the American Diabetes Association, your blood sugar reading should be between 90 and 130 in the morning before eating breakfast. It should be below 180 two hours after the start of a meal.

Review this handout and discuss other ways CHWs can help people with diabetes overcome roadblocks to checking their blood sugar regularly.

► **Say:**

Taking care of yourself and managing your diabetes is something you must do every day, no matter where you are. The next two handouts give some hints for managing diabetes when you're away from home or when you're sick.

**Handout 9–7: Managing Your Diabetes at Work, School, and During Travel**

People who have recently been diagnosed with diabetes may find self-care overwhelming at first, but with a little practice self-care becomes a part of daily life. Discuss with the CHWs the hints on the handout for managing diabetes away from home.

**Handout 9–8: Taking Care of Yourself When You Are Sick**

Being sick can cause extra problems for people who have diabetes. Review the handout with the CHWs and emphasize that it is very important that people with diabetes continue to check their blood sugar and eat properly even when they are sick.

H. Why Is It Important to Manage Blood Sugar Levels?

► **Say:**

It is very important for everyone with diabetes to keep blood sugar levels under control. Diabetes is a serious disease that, over time, damages organs and other parts of the body. Diabetes can damage the—

- Eyes.
- Kidneys.
- Nerves.
- Heart and blood vessels.
- Feet.
- Teeth and gums.

Short-term complications (problems) of diabetes are a result of blood sugar levels that are either too high or too low. These problems happen when a person with diabetes loses control over his or her blood sugar level. To work best with people in your community who have diabetes, you should know and recognize the signs of high and low blood sugar.

Remember, the goal of controlling diabetes is to keep blood sugar levels at a stable, healthy level. People with diabetes are in the best health when they have blood sugar levels that are controlled. A person is generally able to control his or her diabetes through diet, exercise and, if needed, medicine. But there may be times when control is lost. This can happen when a person—

- Skips a meal or eats too much.
- Exercises more than usual.
- Has an infection or is sick.
- Takes more insulin than usual or forgets to take insulin.

If you are taking insulin to control your diabetes, it is very, very important to maintain control of your blood sugar levels. If you haven't eaten enough or if you take too much insulin, your blood sugar levels can go too low. This condition is known as **hypoglycemia**. Some medicines you may take for other health problems can also cause hypoglycemia if you don't carefully monitor your meals, your physical activity, and your medicine.

The usual signs of low blood sugar levels include increased pulse rate, sweating, lightheadedness, dizziness, and hunger. **Once these symptoms set in** a person may become confused and cranky. If the blood sugar level stays too low, the person may pass out. Passing out for too long can cause brain damage. Hypoglycemia is a serious condition that must be treated right away.

If you feel as if your blood sugar is getting too low but you can't test it right then, play it safe: go ahead and treat it. Eat 10 to 15 grams of carbohydrate right away. Examples of foods that provide 10 to 15 grams of carbohydrate are listed on Handout 9–9.



Handout 9–9: Low Blood Sugar

Blood sugar levels should stay within a certain range. Blood sugar levels that are too low can cause serious problems for a person with diabetes.

► **Say:**

Hyperglycemia is a condition that happens if your blood sugar level goes too high.

It can be caused by—

- Too much food.
- Too little insulin.
- Less exercise or physical activity than usual.
- Infection or illness.
- Medicine for another health problem.
- Stress.

The usual signs of high blood sugar include extreme hunger or thirst, dry or itchy skin, frequent urination, blurry vision, and drowsiness.

In people with non-insulin-dependent diabetes, or most people with type 2 diabetes, hyperglycemia is a sign that they need to follow a self-care plan for diabetes more carefully.

But for people with insulin-dependent diabetes, or most people with type 1 diabetes, hyperglycemia can be life-threatening and may bring on a coma.

Treatment of hyperglycemia includes—

- Light exercise if the person with diabetes is not sick.
- Taking in fluids without sugar if the person with diabetes is conscious.
- Someone calling 9-1-1 immediately if the person with diabetes is unconscious.

If hyperglycemia is not treated, a person can go into a diabetic coma. It's possible to avoid a coma if the blood sugar level is brought under control as soon as signs of high blood sugar begin.



Handout 9–10: High Blood Sugar

High blood sugar levels can be very dangerous. If the blood sugar is too high, a person can slip into a coma and die. CHWs need to make sure that the people with diabetes with whom they work understand the signs of high blood sugar.

► **Say:**

Diabetes can cause a number of long-term health problems. Remember, we talked about problems that can affect the eyes, kidneys, nerves, and blood vessels. Controlling blood sugar is the best way to reduce the risk of long-term problems, but even with the best controlled diabetes can still carry some risk.

The health problems are usually caused by changes in the nerves and blood vessels. These problems develop over a long period of time and are long-lasting.

The health problems related to diabetes include damage to the heart and blood vessels, the eyes, the kidneys, the nerves, and the teeth and gums. Let's look at each of these problems.

Heart and blood vessels. Damage to the heart and blood vessels is the biggest problem for a person with diabetes. The walls of the blood vessels become thick and hard and can become clogged with plaque. As this happens, the person's risk for heart attack, high blood pressure, and stroke increases.

To reduce the risk of damage to blood vessels, you should take care of your diabetes by keeping your blood sugar levels under control and by—

- Being physically active.
- Keeping a healthy weight.
- Eating a diet low in fat and salt, and limiting carbohydrates by following your food plan.
- Not smoking.

Eyes. Diabetes is the main cause of blindness in adults. High blood sugar levels can cause the blood vessels in the eye to bleed. This condition can result in blurry vision and can eventually lead to blindness.

To protect vision and eye health, you should—

- Have an eye exam at least once a year.
- Report any blurring of vision or spots to your doctor.
- Keep your blood sugar under control.

Kidneys. The kidneys filter waste products from the blood and help to keep the right balance of fluid and salt in the body. High levels of blood sugar make the job harder for the kidneys. Over a period of time, the high blood sugar can cause the kidneys to stop working.

To prevent kidney problems, you should—

- Have your urine tested once a year to look for kidney damage.
- Ask the doctor or dietitian for diet recommendations.
- See the doctor right away if urine is cloudy or bloody, or if urination is painful.
- Keep your blood sugar under control.

Nerves. Nerve damage is common among people with diabetes. The damage is a result of high blood sugar levels. Nerves that are damaged do not send proper signals. Damaged nerves can cause—

- Loss of feeling in the feet.
- Pain in the legs, feet, arms, or hands.
- Problems with eating.
- Problems with urinating.
- Problems with having sex.

Nerve damage to the feet is a big risk. It is the main cause of amputations in people with diabetes. A person with diabetes may not feel an injury on the foot. If blood circulation is poor because blood vessels are damaged, the injured foot will have hard time healing and may become infected. If the infection is not treated, the foot may need to be amputated. If the infection spreads, the leg may need to be amputated.

Teeth and gums. Diabetes can cause infections of the gums because of the problems with blood flow. If you don't take good care of your teeth, you can develop painful gum disease. If you don't get treatment, your teeth may fall out.

To protect against gum infections, you should—

- Keep your blood sugar under control.
- Brush and floss your teeth twice a day.
- See the dentist twice a year.

To protect against the problems nerve damage can cause, a person with diabetes should—

- Keep blood sugar under control.
- Have an annual exam by a health care provider to check for damaged nerves.
- Tell the health care provider about any problems with hands, arms, feet, or legs.

- Tell the health care provider about any problems having sex.
- Tell the health care provider about any problems with eating.
- Not smoke.

Get routine care to avoid health problems. See your health care team at least twice a year to find and treat problems early.

At each visit, get a—

- Blood pressure check (if your blood pressure reading is higher than 130/80, ask what steps you should take to reach your goal).
- Weight check.
- Foot check.

Two times each year, you should get—

- An A1C check (check it more often if the number is over 7).
- Dental exams to prevent gum disease and loss of teeth (tell your dentist that you have diabetes).

Once each year, get—

- A cholesterol check (if LDL is over 100, ask what steps to take to reach your goal).
- An eye exam with eyes dilated to check for eye problems.
- A complete foot exam to check on foot health.
- Urine and blood tests to check for kidney problems.
- A flu shot.

Also get a pneumonia shot (you only need to get this shot once).



Handout 9–11.1–9–11.6: Taking Care of Yourself and Preventing Complications of Diabetes

People with diabetes must take an active role in caring for themselves. This handout provides tips on the care that people with diabetes should take to avoid complications (health problems).



Handout 9–12: What Community Health Workers Can Do for People at Risk for Diabetes or Who Have Diabetes

Review the handout with the CHWs. Ask if they can think of other ways CHWs can help people in their community who have diabetes or who are at risk for diabetes.

I. Goal Setting

► Say:

As you've already learned, diabetes is a serious disease that can lead to other serious health problems, such as kidney failure, blindness, and leg amputations. To keep your blood sugar within good limits and to avoid future problems, you must manage and control your diabetes.

Setting goals for yourself is a good place to start. Putting your goal (something you want to reach) in writing can help you stay focused on the end result and stay motivated.

Your goals for managing your diabetes should be specific. Instead of setting a very general goal, such as "I'll do a better job controlling my diabetes," set smaller, more specific goals, such as "I'll walk for 15 minutes every day," or "I'll check my blood sugar four times a day."

Be realistic when setting a goal. Make it something you can do. Take small steps. You'll feel better about yourself and will be more motivated when you are reaching your goals. Once you reach these goals, go ahead and set new goals.



Handout 9–13: My Goals

Review the handout with the CHWs. Discuss how they can use this handout to help people with diabetes in the community set goals to control their diabetes.

3. Summary

► Ask:

- What are the risk factors for diabetes?
- What are some of the signs of diabetes?
- Name two tests for diagnosing diabetes.
- Why is it important to balance food, physical activity, and medicine when treating diabetes?
- What are some of the long-term complications associated with diabetes?

What Is Diabetes and How Can I Control It?

When you have diabetes, your body either doesn't make enough insulin or can't use its own insulin as well as it should, or both. This causes sugars to build up too high in your blood. Most of the food you eat is turned into glucose, or sugar, for your body to use for energy. Insulin is a hormone needed to convert sugar and other food into energy and to help glucose get into your body's cells.



What types of diabetes are there?

This disease has two main forms: type 1 and type 2.

Type 2 is the most common. About 90 percent to 95 percent of Americans diagnosed with diabetes have type 2 diabetes. It most often develops in middle-aged and older adults. It's often linked with obesity and physical inactivity.

Type 2 diabetes develops when the body doesn't make enough insulin and doesn't efficiently use the insulin it makes (insulin resistance).

Type 1, or juvenile diabetes, usually starts early in life. It results from the body's failure to produce insulin. People with it must take insulin each day to regulate levels of blood glucose (sugar).

Am I at risk?

Diabetes is increasing. This is because more people are obese, don't get enough physical activity and are getting older. However, younger people are developing diabetes at an alarming rate. This is probably because obesity and lack of physical activity are increasing problems for this group, too.

People in several ethnic groups seem to be more likely to develop type 2 diabetes:

- Hispanics
- African Americans
- Native Americans
- Asians (especially South Asians)

How can I control my risk for heart disease and stroke?

Diabetes is a major risk factor for stroke and heart disease. That means it can be as serious as smoking, high blood cholesterol, high blood pressure, physical inactivity or obesity.

If you have diabetes, it's very important to have regular check-ups. Work closely with your healthcare provider to manage your diabetes and reduce any other risk factors:

- Control your weight and blood cholesterol with a low-saturated-fat, low-cholesterol diet.
- Be physically active for at least 30 minutes on most or all days of the week.
- If you drink alcohol, don't have more than one drink per day for women or two per day for men.

- Lower your blood pressure, if it's too high. People with diabetes should keep blood pressure under 130/80 mm Hg.
- Don't smoke, and avoid other people's tobacco smoke.
- Specific medicines may help you control your blood pressure, cholesterol and blood glucose.

Your doctor will advise you if one is right for you. If you take medicine, take it exactly as directed. If you have questions about the dosage or side effects, ask your doctor or pharmacist.

How can I learn more?

1. Talk to your doctor, nurse or other health-care professionals. If you have heart disease or have had a stroke, members of your family also may be at higher risk. It's very important for them to make changes now to lower their risk.
2. Call 1-800-AHA-USA1 (1-800-242-8721) or visit americanheart.org to learn more about heart disease.

3. For information on stroke, call 1-888-4-STROKE (1-888-478-7653) or visit StrokeAssociation.org.

We have many other fact sheets and educational booklets to help you make healthier choices to reduce your risk, manage disease or care for a loved one.

Knowledge is power, so *Learn and Live!*

What are the warning signs of heart attack and stroke?

Warning Signs of Heart Attack

Some heart attacks are sudden and intense, but most of them start slowly with mild pain or discomfort with one or more of these symptoms:

- **Chest discomfort**
- **Discomfort in other areas of the upper body**
- **Shortness of breath with or without chest discomfort**
- **Other signs including breaking out in a cold sweat, nausea or lightheadedness**

Warning Signs of Stroke

- **Sudden weakness or numbness of the face, arm or leg, especially on one side of the body**
- **Sudden confusion, trouble speaking or understanding**
- **Sudden trouble seeing in one or both eyes**
- **Sudden trouble walking, dizziness, loss of balance or coordination**
- **Sudden, severe headache with no known cause**

Learn to recognize a stroke. Time lost is brain lost.

Call 9-1-1 ... Get to a hospital immediately if you experience signs of a heart attack or stroke!

Do you have questions or comments for your doctor?

Take a few minutes to write your own questions for the next time you see your healthcare provider. For example:

Can diabetes be cured?

What type of diet would be most helpful?

Your contribution to the American Heart Association supports research that helps make publications like this possible.

The statistics in this sheet were up to date at publication. For the latest statistics, see the *Heart Disease and Stroke Statistics Update at americanheart.org/statistics.*

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American Heart Association | American Stroke Association

Learn and Live.

Carbohydrates and Carbohydrate Counting

Carbohydrates are one of the main types of food. Sometimes they are called “carbs.” There are two types of carbs:

Simple carbs that contain vitamins and minerals are in—

- Fruits.
- Milk and milk products.
- Vegetables.



Complex carbs, foods, include—

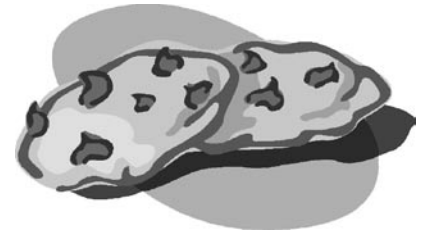
- Whole grain breads and cereals.
- Starchy vegetables like sweet potatoes.
- Lentils, peas, and beans.

Carbohydrate foods raise your blood sugar levels the most of any foods.

But complex carbohydrates will not raise your blood sugar as quickly as simple carbs.

Simple carbohydrates are also found in foods that have processed and refined sugars such as—

- Candy.
- Table sugar.
- Syrups (not including natural syrups such as maple).
- Cake, cookies, donuts, pies, and other pastries.
- Regular (non-diet) drinks, such as soda, flavored water.



These kinds of food and drinks provide calories, but do not have vitamins, minerals, and little or no fiber. These foods are often called “empty calories” and can lead to weight gain.

What about counting carbohydrates?

One carbohydrate serving equals 15 grams of carbohydrate. The following foods have about 15 grams:

- 1 small apple (4 ounces).
- 1 small banana (4 ounces).
- 1 slice of bread.
- 2 small cookies.
- 1 half cup of cooked cereal or 3/4 cup of ready-to-eat cereal.
- 1/2 cup of corn.
- 1/2 cup of light ice cream.

- 3 cups of plain popcorn.
- 1 cup of milk.
- 1/2 cup of orange juice.
- 1/3 cup of rice.
- 2 taco shells (6 inches long).
- 1 tortilla that is 6 inches wide.
- 1 tablespoon of sugar.
- 1 cup of milk.
- 1/2 cup of green grapes.

How do I learn about planning healthy meals that include carbohydrates?

Ask your doctor to send you to a diabetes educator who can help you develop a food plan. You will learn about carbohydrate serving sizes and how many carbohydrates are best for you to eat a day.

For many people, having 3 or 4 servings of carbs at each meal and 1 or 2 servings for snacks works well.

Try to stay with your food and activity plan as closely as you can. You can make a big difference in your blood sugar levels by checking your blood glucose levels, watching what you eat, how much you eat, and by being more active.

Healthy Ways to Eat

What are healthy ways to eat bread, potatoes, pasta, corn, rice, crackers, tortillas, beans, cereal, and yams (sweet potatoes)?

- Buy whole grain breads, crackers, and cereals.
- Eat fewer fried and high-fat starches, such as regular tortilla chips and potato chips, french fries, pastries, or biscuits. Instead, try low- or no-salt pretzels; fat-free, low-, or no-salt popcorn; baked tortilla or potato chips; baked sweet potatoes; or low-fat muffins.
- Use low-fat or fat-free yogurt or fat-free sour cream instead of regular sour cream.
- Use mustard instead of mayonnaise on a sandwich.
- Use the low-fat or fat-free substitutes, such as low-fat mayonnaise or light margarine, on whole grain bread, rolls, toast, or corn.
- Eat whole grain cereal with fat-free (skim) or low-fat (1%) milk.



Be careful about eating large amounts of fruits that are high in natural sugars.

Fruits lower in natural sugars:	Fruits higher in natural sugars:
Cherries	Kiwi
Plums	Bananas
Grapefruit	Fruit cocktail
Strawberries	Mango
Apples	Orange juice
Pears	Blueberries
Oranges	Cantaloupe
Grapes	Pineapple
Peaches	Dried fruit (raisins, dates)
Prunes	Watermelon

What are healthy ways to eat fruit?

- Eat fruits raw or cooked, drink juice with no sugar added, eat fruit canned in its own juice, or eat dried fruit.
- Buy smaller pieces of fruit.
- Eat pieces of fruit rather than drinking fruit juice. Pieces of fruit are more filling and have less sugar than juice.
- Drink fruit juice in small amounts.
- Save high-sugar and high-fat fruit desserts, such as peach cobbler or cherry pie, for special occasions.

What are healthy ways to have milk and yogurt?

- Drink fat-free (skim or nonfat) or low-fat (1%) milk.
- Eat low-fat or fat-free fruit yogurt sweetened with a low-calorie sweetener.
- Use low-fat plain yogurt as a substitute for sour cream.

How can I satisfy my “sweet tooth”?

It's okay to have sweets once in a while. Try having sugar-free popsicles, diet soda, fat-free ice cream or frozen yogurt, or sugar-free hot cocoa mix.

Other tips—

- Share desserts when dining in restaurants.
- Order small or child-size servings of ice cream or frozen yogurt.
- Divide homemade desserts into small servings and wrap each individually. Freeze extra servings.
- Don't keep dishes of candy in the house or at work.
- Remember, fat-free and low-sugar foods still have calories.



Control your diabetes. *For Life.*

Tips to Help You Feel Better and Stay Healthy

GOOD NEWS for People with Diabetes

There are many good reasons to take action now to manage your diabetes.

In the short run, you can:

- Feel better
- Stay healthy
- Have more energy

In the long run, you can:

- Reduce your risk for heart attack and stroke
- Reduce your risk for eye, kidney, or nerve disease
- Enjoy life more

Follow this three-part action plan that will help you live a long and healthy life.

1

Know your diabetes ABC numbers.



Manage your **A**1C (blood glucose), **B**lood pressure, and **C**holesterol. You will lower your chances of having a heart attack, a stroke, or other diabetes problems. Ask your health care team:

- What are my **A**1C (blood glucose), **B**lood pressure, and **C**holesterol numbers?
- What should my numbers be?



Here are the **ABC** goals for most people with diabetes.

A1C: 7 or less (A1C shows how your blood glucose has been over the last three months.)

Blood pressure: 130/80 or less

Cholesterol: LDL 100 or less

2

Reach your diabetes ABC goals.

Work with your health care team, friends, and family to reach your **ABC** goals.



- **Follow your diabetes food plan.** If you do not have one, ask your health care team.
- **Eat the right portions of healthy foods:** fruits and vegetables (5 to 9 servings a day), fish, lean meats, dry beans, whole grains, and low-fat milk and cheese.



- **Eat foods that have less salt and fat.**
- **Get 30 to 60 minutes of activity** on most days of the week.



- **Stay at a healthy weight**—by being active and eating the right amounts of healthy foods.

- **Stop smoking**—seek help to quit.
- **Take medicines** the way your doctor tells you. Ask if you need aspirin to prevent a heart attack or stroke.
- **Check your feet every day** for cuts, blisters, red spots, and swelling. Call your health care team right away about any sores that won't heal.
- **See your dentist** at least twice a year. Tell the dentist you have diabetes.
- **Check your blood glucose** the way your doctor tells you to.

3

Keep your diabetes ABCs under control.



Set goals you can reach and break a big goal into small steps.

Start with a 5- to 10-minute walk three times a week. Then, walk longer and more often.

Make changes that you can stick with for the rest of your life.

To lose weight and keep it off, eat smaller portions and be more active.



Create a plan to deal with diabetes. Use these tips to keep at it.

- Make a list of all your reasons to control your diabetes for life.
- Set goals you can reach and break a big goal into small steps.
- Make changes that you can stick with.
- Try to figure out what tempts you to slip up in reaching your goals. Decide now how you will handle these events next time.
- Reward yourself for staying in control. Spend time with a friend or go to a show.
- Ask for a little help from friends or family when you're down or need someone to talk to.
- Learn to manage setbacks. Admit that you've slipped and learn what you can from it and move on.
- Don't be too hard on yourself. Work towards a healthy future.

MY ACTION PLAN To Manage My Diabetes ABCs

Date _____

Write down your numbers: A1C _____ Blood pressure _____ Cholesterol _____

Write down your goals: A1C _____ Blood pressure _____ Cholesterol _____

Three reasons to control my diabetes for life:

1. _____ 2. _____ 3. _____

Three things I will work on over the next 3 months to reach my diabetes ABC goals:

1. _____ 2. _____ 3. _____

The people who can help me do these things (e.g., friend, co-worker, health care team):

Your action plan will change over time, so be ready to make a new one about every three months. Then, place your plan where you will see it often. **Do it today!**



Checking Your Blood Sugar

Checking your blood sugar is your most important tool in controlling diabetes. This check tells you your blood sugar level at any one time. Keep a log by writing down your blood sugar number and the time of day each time you check your blood sugar. Take the log with you when you visit your doctor or health clinic. The log provides a picture of your body's response to your diabetes care plan. Blood sugar checks let you see what works and what doesn't. Then you and your doctor or diabetes educator can make changes if the current plan isn't working.

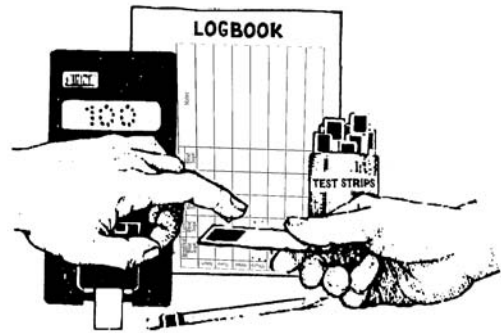


Your doctor will tell you what your blood sugar range should be. Most often the range is—

- **90–130** before eating, and
- Less than **180** two hours after eating.

How Blood Checks Work

You stick your finger with a special needle, called a lancet, to get a drop of blood to test in a blood glucose meter. With some meters, you can also use your forearm, thigh, or fleshy part of your hand. There are spring-loaded lancing devices that make sticking yourself less painful. Before using the lancing device, wash your hands or the site you choose with soap and water. If you use your fingertip, stick the side of your fingertip by your fingernail instead of the center to avoid having sore spots on the part of your finger you use the most.



Checking Blood Sugar with a Blood Glucose Meter



Blood glucose meters are small computerized machines that “read” your blood sugar level. In all types of meters, your blood sugar level shows up as a number on a screen (as on a pocket calculator). Be sure your doctor or nurse shows you the correct way to use your meter.

Daily Blood Sugar Log

My ideal blood sugar range is _____ to _____.

Test result: _____ Date: _____ Time: _____	Taken: <input type="checkbox"/> Before <input type="checkbox"/> 2 hours after <input type="checkbox"/> Breakfast <input type="checkbox"/> Lunch <input type="checkbox"/> Dinner	<input type="checkbox"/> Exercise. When _____ <input type="checkbox"/> Medicine. When _____
<input type="checkbox"/> In range <input type="checkbox"/> Above <input type="checkbox"/> Below	Comments: _____ _____ _____	
Test result: _____ Date: _____ Time: _____	Taken: <input type="checkbox"/> Before <input type="checkbox"/> 2 hours after <input type="checkbox"/> Breakfast <input type="checkbox"/> Lunch <input type="checkbox"/> Dinner	<input type="checkbox"/> Exercise. When _____ <input type="checkbox"/> Medicine. When _____
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<input type="checkbox"/> In range <input type="checkbox"/> Above <input type="checkbox"/> Below	Comments: _____ _____ _____	
Test result: _____ Date: _____ Time: _____	Taken: <input type="checkbox"/> Before <input type="checkbox"/> 2 hours after <input type="checkbox"/> Breakfast <input type="checkbox"/> Lunch <input type="checkbox"/> Dinner	<input type="checkbox"/> Exercise. When _____ <input type="checkbox"/> Medicine. When _____
<input type="checkbox"/> In range <input type="checkbox"/> Above <input type="checkbox"/> Below	Comments: _____ _____ _____	

Roadblocks to Checking Blood Sugar

I don't have time.	Plan the time by using a log that has reminders. Make checking your blood sugar an important habit.
I'm not comfortable checking my blood sugar. It makes me stressed.	One of the best ways to relieve stress is by knowing you are on track with controlling your blood sugar. Set goals for yourself for checking blood sugar and keep them. If you forget, start checking again as soon as you can.
I don't have my monitoring supplies on hand.	Keep your supplies with you when you leave the house, or keep extra supplies at work.
I forget to check it.	Write reminder notes. Keep your monitoring supplies and log with you. Ask family members to remind you.
I don't know why I'm supposed to check it. What difference does it make?	<p>It's important to check your blood sugar to find out if it's in the range that's normal for you or too high. Eating too much food, being less active than usual, or taking too little diabetes medicine are some reasons your blood sugar may be high when you check it. Your blood sugar can also go up when you're sick or under stress. Over time, high blood sugar can damage body organs. For this reason, it is very important to keep your blood sugar in control as much as you can.</p> <p>You can keep your blood sugar (blood glucose) at a healthy level if you—</p> <ul style="list-style-type: none"> • Eat about the same amount of food each day. • Eat at about the same times each day. • Take your medicines at the same times each day. • Exercise at the same times each day. • Every day, choose foods from a variety of vegetables, fruits, whole grains, low fat dairy products, meat or chicken, fish. How much of each depends on how many calories you need a day. • Limit the amounts of fats and sweets you eat each day.
I don't have a private place where I can check it.	If you feel you need a private place, you can check your blood sugar in your car before lunch or in the restroom; or you might find an empty room at work. Ask your manager for a private place at work to check your blood sugar.

<p>It hurts.</p>	<p>The American Diabetes Association offers these tips:</p> <ul style="list-style-type: none"> • Don't check using the same finger all the time. Choose a different finger every time you check. • Prick the side of the fingertip by the nail, not right on top. The side hurts less and is less likely to bruise. <p>Several companies offer blood glucose monitoring equipment that can be used on sites other than your fingers, such as forearms, sides of hands, and thighs. These sites may be less sensitive because they have fewer nerve endings. As long as you use the proper technique, you can have an accurate and less painful blood sugar check.</p>
<p>I can't afford the testing strips.</p>	<p>If you can't pay for your diabetes medicines or testing equipment, you should tell your health care provider. Your doctor may know of local programs that can help or even give you free samples.</p> <p>If you have Medicare, it will pay part of the cost of blood sugar testing equipment and diabetes-related services. To learn more about Medicare coverage of diabetes supplies and services, go to this Web site: www.medicare.gov/Publications/Pubs/pdf/11022.pdf.</p> <p>This information is also available in Spanish at www.medicare.gov/Publications/Pubs/pdf/11022_S.pdf.</p> <p>In addition, drug companies that sell insulin or diabetes medications usually have patient assistance programs. Such programs are available only through a physician.</p> <p>The Pharmaceutical Research and Manufacturers of America and its member companies sponsor an interactive Web site with information on drug assistance programs at www.pparx.org/Intro.php.</p>

Managing Your Diabetes at Work, School, and During Travel

Staying in charge of your diabetes takes planning ahead. You won't always have the same routine day after day, but no matter what your schedule is or where you are, you can continue your plan for managing your diabetes by following these suggestions:

Remember:

- Stay as close to your eating, activity, and medicine schedule as you can.
- If you take insulin—
 - Always wear or carry identification that says you have diabetes.
 - Always keep with you hard candy or something to treat low blood sugar.

At Work and School

- Show some people at work or school how to help you if you should ever have a problem that needs immediate attention, such as dizziness or confusion from having your blood sugar level fall too low.
- Give them written instructions on how to tell when your blood sugar has fallen too low and how to treat it. For example, if you suddenly feel very shaky or very hungry they should give you 2 to 3 glucose tablets or ½ cup of fruit juice.

During Travel

- Keep snacks with you that could be used to prevent, or treat, low blood sugar.
- Take blood sugar testing supplies with you.
- Take along all the diabetes medicine you'll need. Keep medicines in their original container with the printed label that clearly identifies the medicine.
- Test your blood sugar often, and keep track of your readings.
- Wear or carry identification that says you have diabetes.
- Let others know how they can help you if you have a problem with your blood sugar becoming too low or too high.

Taking Care of Yourself When You Are Sick

Do you remember the last time you were really sick?

What was it like?

Did you get some help from your doctor, clinic, or nurse?

When you have diabetes, you need to take special care of yourself when you're sick. You need to get in touch with a doctor or clinic to get advice that is right for you. These tips can help you know what to do in the meantime.

Keep taking your medicine.

Be sure to keep taking your diabetes pills or insulin. Don't stop taking them, even if you can't eat.

Keep eating.

- If you can, eat your regular diet.
- If you're having trouble eating, try to eat enough soft foods or drink enough liquids to take the place of the fruits and breads you usually eat.

Drink liquids.

- Drink extra liquids—without calories. Water, diet soda, and tea without sugar are good choices.
- Try to drink at least 1/2 cup (4 ounces) to 3/4 cup (6 ounces) of liquid every half-hour to an hour, even if you can only take small sips of the liquid.

Check for changes.

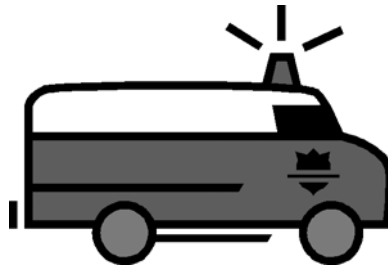
- If you take insulin, test your blood sugar at least once every four hours. If your blood sugar (blood glucose) is 240 mg/dl or higher, test your urine for ketones. You can buy urine ketone strips at the drugstore or have someone buy them for you.
- Weigh yourself every day. Losing weight without trying is a sign of high blood sugar.
- Check your temperature every morning and evening. A fever may be a sign of infection.
- Having trouble breathing, feeling more sleepy than usual, or not thinking clearly can be danger signs.

Call for help.

You should call the doctor, clinic, or go to the emergency department if any of these things happen:

- You feel too sick to eat normally, and for more than six hours you haven't been able to keep food or liquids down.
- You have severe diarrhea.
- You lose five pounds or more without trying.
- Your temperature is over 101° F.
- Your blood sugar level is lower than 60 mg/dl or is over 300 mg/dl.
- You have moderate or large amounts of ketones in your urine.
- You're having trouble breathing.
- You feel very sleepy or can't think clearly.

Call 9-1-1 immediately!



Low Blood Sugar

In general, a blood sugar reading lower than 70 mg/dl is too low. If you take insulin or diabetes pills, you can have low blood sugar (also called hypoglycemia). Low blood sugar is usually caused by eating less or later than usual, being more active than usual, or taking too much diabetes medicine. Drinking beer, wine, or liquor may also cause low blood sugar or make it worse.

Low blood sugar happens more often when you're trying to keep your level near normal. This is no reason to stop trying to control your diabetes. It just means you have to watch more carefully for low levels. Talk this situation over with your health care team.

Signs of Low Blood Sugar

Some possible signs of low blood sugar are feeling nervous, feeling shaky, or sweating. Sometimes people who have low blood sugar just feel tired.

The signs may be mild at first. But a low blood sugar level can quickly drop much lower if you don't treat it. When your blood sugar level is very low, you may get confused, pass out, or have seizures.

If you have any signs that your blood sugar (blood glucose) may be low, test it right away. If it's less than 60 mg/dl, you need to treat it right away. See below for ways to treat low blood sugar.

Treating Low Blood Sugar

If you feel as if your blood sugar is getting too low but you can't test it right then, play it safe—go ahead and treat it. Eat 10 to 15 grams of carbohydrate right away. See the box below for examples of foods and liquids that have this amount of carbohydrate.

Foods and Liquids for Treating Low Blood Sugar

(each item equals about 10 to 15 grams of carbohydrates)

Food Item	Amount
Sugar packets	2 to 3
Fruit juice	1/2 cup (4 ounces)
Soda pop (not diet)	1/2 cup (4 ounces)
Hard candy	3 to 5 pieces
Sugar or honey	3 teaspoons
Glucose tablets	2 to 3



Check your blood sugar again in 15 minutes. If your blood sugar is 70 mg/dl or below, eat another 10 to 15 grams of carbohydrate and test your blood 15 minutes later. Continue these two steps until your blood sugar is above 70 mg/dl.

Eating or drinking an item from the list in the box will keep your blood sugar up for only about 30 minutes. So if your next planned meal or snack is more than 30 minutes away, you should go ahead and eat something, such as crackers with a tablespoon of peanut butter or a slice of cheese.

In your blood sugar log, write down your blood sugar numbers and the times when levels are low. Think about what may be causing your levels to drop. If you think you know the reason, write it in the Comments section of the log. You may need to call your doctor to talk about changing your diet, activity, or diabetes medicine.

Tell family members, close friends, teachers, and people at work that you have diabetes. Tell them the signs of low blood sugar so that they will know if your blood sugar becomes low. Show them what to do if you can't treat yourself. Someone will need to give you fruit juice, soda pop (not diet), or sugar.

If you can't swallow, someone will need to give you a shot of glucagon and call 9-1-1. Glucagon is a prescription medicine that raises blood glucose levels and is injected like insulin. If you take insulin, you should have a glucagon kit handy at all times. Teach family members, roommates, coworkers, and friends when and how to use it to treat you.

Waiting to treat low blood sugar is not safe. You may be in danger of passing out. If you get confused, pass out, or have a seizure, you need emergency help. Don't try to drive yourself to get help. Be prepared for an emergency, and...

Call 9-1-1!

High Blood Sugar

For most people, blood sugar levels that stay higher than 140 mg/dl (before meals) are too high. Talk with your doctor about the blood sugar range that is best for you.

Eating too much food, being less active than usual, or taking too little diabetes medicine are some common reasons for high blood sugar (or hyperglycemia). Your blood sugar can also go up when you're sick or under stress.

Over time, high blood sugar can damage body organs. For this reason, many people with diabetes try to keep their blood sugar in control as much as they can.

If you have type 1 diabetes, ask your doctor about a condition called *diabetic ketoacidosis*. Some people with diabetes are in danger of developing diabetic ketoacidosis when their blood sugar level stays high. You can buy urine ketone strips at the drugstore. If you have ketones in your urine, call your doctor right away. The most common reason for diabetic ketoacidosis is not taking your insulin or being sick.

Check for Changes

- Test your blood glucose at least once every 4 hours. If your glucose is 240 mg/dL or higher, test your urine for **ketones**. Ketones are chemicals the liver makes when there's not enough insulin in the blood. It's easy to test for ketones. Buy urine ketone strips at the drug store. Urinate on the pad part of the strip. Compare the color that the strip becomes to the color example on the package. If the pad turns a purple color, call your health care provider right away.
- Weigh yourself every day. Losing weight without trying is a sign of high blood glucose.
- Check your temperature every morning and evening. A fever may be a sign of infection.
- Every 4 to 6 hours, check how you're breathing and decide how alert you feel. Having trouble breathing, feeling sleepier than usual, or not thinking clearly can be danger signs.

Your blood sugar is more likely to go up when you're sick—for example, when you have the flu or an infection. You'll need to take special care of yourself during these times.

Signs of High Blood Sugar

Some common signs of high blood sugar are having a dry mouth, being thirsty, and urinating often. Other signs include feeling tired, having blurred vision, and losing weight without trying. If your glucose is very high, you may have stomach pain, feel sick to your stomach, or even throw up.

If you have any signs that your blood sugar is high, test your blood sugar. On your log, write down your blood sugar reading and the time of the test. If your blood sugar level is high, think about what could have caused it to go up. If you think you know the reason, write next to the glucose reading in your log.

Preventing High Blood Sugar

- Keep a balance of food, activity, and medicine.
- Try to stay with your food and activity plan as much as you can. Ask your doctor to send you to a diabetes educator who can help you develop a food plan. You'll learn about carbohydrate serving sizes and how many carbohydrates you can eat a day. You can make a big difference in your blood sugar level by paying attention to what you eat and how much you eat.
- Drink water.
- Take your diabetes medicine at about the same time each day.
- Work with your health care team to set goals for weight, blood sugar level, and activity.
- Test your blood sugar level regularly. Keep track of your blood sugar readings and go over your records often to look for patterns. You'll learn how certain foods or activities affect your blood sugar.
- Show your blood sugar records to your doctor.
- Ask your doctor how you can change your food, activity, and medicine to avoid or treat high blood sugar. Ask when you should call for help.

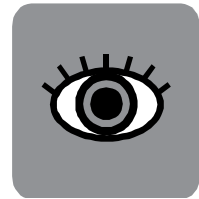


Taking Care of Yourself and Preventing Complications of Diabetes

Make it a priority to take good care of your body. The time you spend now on eye care, foot care, and oral health could delay or prevent the onset of dangerous diabetes complications later in life. In addition, one of the best things you can do for your body is to stop smoking.

Steps a Person with Diabetes Can Take to Protect Vision

There are several steps you can take to avoid eye problems:



1. Keep your blood sugar levels as close to normal as you can.
2. Bring your blood pressure under control. High blood pressure can make eye problems worse.
3. Quit smoking.
4. Get regular eye exams. See your eye doctor (optometrist or ophthalmologist) once a year for a dilated eye exam. This is very important because eye problems—caught early—can be treated to help save sight.
5. Also see your eye doctor if—
 - Your vision becomes blurry.
 - You have trouble reading signs or books.
 - You see double.
 - One or both of your eyes hurt.
 - Your eyes get red and stay that way.
 - You feel pressure in your eye.
 - You see spots or floaters.
 - Straight lines do not look straight.
 - You can't see things at the sides of your vision the way you used to.

Foot Care

Good foot care means inspecting your feet every day and seeking care early if you get a foot injury. It also means making sure your doctor checks your feet at least four times a year—more often if you have foot problems. Your doctor should also explain the “do’s” and “don’ts” of foot care and give you a list of steps to take to keep your feet healthy. Most people can prevent any serious foot problem by following some simple steps. So begin taking care of your feet today.



Because people with diabetes are more prone to foot problems, a foot doctor, called a podiatrist, may be on your diabetes health care team. Remember to take off your socks and shoes while you wait for your physical examination.

Don’t cut corns and calluses. Don’t use razor blades, corn plasters, or liquid corn or callus removers—they can damage your skin. If you have corns or calluses, your doctor or nurse can trim them for you. They can also trim your toenails if you can’t do so safely.

Check your bare feet every day. Look for red spots, cuts, swelling, and blisters. If you can’t see the bottoms of your feet, use a mirror or ask someone for help.

Call or see your health care provider if you have cuts or breaks in the skin of your feet, or if you have an ingrown toenail. Also, tell your doctor if your foot changes color or shape, or if it just feels different (for example, it becomes less sensitive or it hurts). Call your health care provider at once if you have a sore on your foot. Sores can get worse quickly.

Wash your feet every day. Dry them carefully, especially between the toes.

If you can see and reach your toenails, trim them when needed. Trim your toenails straight across, and file the edges with an emery board or nail file.

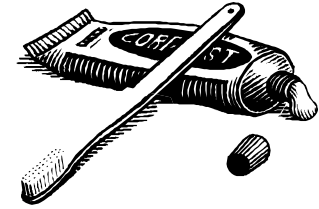
Wear shoes and socks at all times. Never walk barefoot. Wear comfortable shoes that fit well and protect your feet. Check inside your shoes before wearing them. Make sure the lining is smooth and there are no objects inside.

Protect your feet from hot and cold. Wear shoes at the beach or on hot pavement. Don’t put your feet into hot water. Test the water before putting your feet in it, just as you would before bathing a baby. Never use hot water bottles, heating pads, analgesic pads, or electric blankets. You can burn your feet without realizing it.

Keep the blood flowing to your feet. Put your feet up when sitting. Wiggle your toes and move your ankles up and down for five minutes, two or three times a day. Don’t cross your legs for long periods of time. Don’t smoke.

Care of Teeth and Gums

Because of high blood glucose, people with diabetes are more likely to have problems with their teeth and gums. There's a lot you can do to take charge and prevent these problems. Caring for your teeth and gums every day can help keep them healthy. Keeping your blood glucose under control is also important.



Regular, complete dental care helps prevent dental disease. Gum disease is often painless. You may not even know you have it until your gums have some serious damage. Regular visits to your dentist are your best weapon against gum disease.

Although gum disease may not hurt, there are other warning signs to watch for—

- Gums that bleed when you brush or floss. This bleeding is not normal. Even if your gums don't hurt, get them checked if they bleed.
- Red, swollen, or tender gums.
- Gums that have pulled away from the teeth. Part of the roots of your teeth may show, or your teeth may look longer.
- Pus between your teeth and gums (when you press on the gums).
- Bad breath.
- Permanent teeth that are loose or moving away from each other.
- Changes in the way your teeth fit together when you bite.
- Changes in the fit of partial dentures or bridges.

See your dentist right away if you have any of the above warning signs.

To prevent dental problems—

- Brush your teeth at least twice a day.
- Floss your teeth daily.

Get your teeth cleaned and checked at your dentist's office at least every 6 months. Give your dentist the name and telephone number of your diabetes health care provider. Each time you visit, remind your dentist that you have diabetes.

Tests and Goals for Each Year

Get routine care to avoid health problems with diabetes. See your health care team **at least twice a year** to find and treat problems early. Follow this plan—

At each visit get the following:

- Blood pressure check. If over 130/80, ask what steps to take to reach your goal.
- Weight check.
- Foot check.

Two times each year get these tests:

- A1C check. Check more often if over 7.
- Dental exams to prevent gum disease and loss of teeth. Tell your dentist you have diabetes.

Once each year get the following:

- Cholesterol check. If your LDL (“bad” cholesterol) level is over 100, ask what steps to take to reach your goal.
- Dilated eye exam to check for eye problems.
- Complete foot exam to check on foot health.
- Urine and blood tests to check for kidney problems.
- Flu shot.
- Get your bloods fats checked (total cholesterol, LDL, HDL, triglycerides).

Get a pneumonia shot at least once.

Talk to your health care team about the following:

- How well you can tell when you have low blood glucose.
- How you are treating high blood glucose.
- Tobacco use.
- Your feelings about having diabetes.
- Your plans for pregnancy (if you are a woman).
- Other: _____

Have your health care provider do these tests and other services for you. You and your doctor may want to set goals for these. Record the dates and results in the boxes below.

My Diabetes Care Record

Every Year

Tests and Other Services	Dates and Results				
Flu Shot					
Urine Protein or Microalbumin (mg)					
Urine Protein or Microalbumin (mg)					
Total Cholesterol (mg/dl)					
HDL Cholesterol (mg/dl)					
LDL Cholesterol (mg/dl)					
Triglycerides (mg/dl)					
Tobacco Use					
Eye Exam (dilated)					
Foot Exam					

Things to Do at Each Visit with Your Health Care Provider

- Bring your blood glucose logbook and go over the readings with your provider.
- Get an A1C test (about every 6 months if you don't take insulin, about every 3 months if you take insulin). Write down the result and set a target goal for your next test.
- Get your weight checked and write it down. You may want to set a goal for your next visit.
- Get your blood pressure checked and write it down. You may want to set a goal for your next visit.
- Get your feet checked at every visit as needed.
- Bring a list of questions or other things you want to talk about.
- Bring your reminder sheet about “Things to Do at Least Once a Year” to help keep track of these.

Have your health care provider do these tests and set goals with you. Record dates and the results in the boxes below.

Each Visit—SAMPLE

Tests and Goals	Dates and Results				
	<i>2/1/08</i>	<i>6/11/08</i>	<i>9/28/08</i>	<i>1/5/09</i>	<i>4/3/09</i>
Blood Glucose (mg/dl)	<i>145</i>	<i>118</i>	<i>180</i>	<i>105</i>	<i>110</i>
A1c	<i>9.0</i>	<i>8.9</i>	<i>8.4</i>	<i>not done</i>	<i>8.2</i>
Test/Goal (%)	<i>8.0</i>	<i>8.0</i>	<i>7.5</i>		<i>7.5</i>
Weight/Goal (pounds)	<i>180</i>	<i>175</i>	<i>172</i>	<i>170</i>	<i>165</i>
	<i>170</i>	<i>165</i>	<i>165</i>	<i>165</i>	<i>160</i>
Blood Pressure (goal: 120/80 mm Hg)	<i>140/90</i>	<i>140/86</i>	<i>138/84</i>	<i>136/82</i>	<i>124/80</i>
Foot Check	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>

Each Visit

Tests and Goals	Dates and Results				
Blood Glucose (mg/dl)					
A1c Test/Goal (%)					
Weight/Goal (pounds)					
Blood Pressure (goal: ___/___ mm Hg)					
Foot Check					

What Community Health Workers Can Do to Help People Who Are at Risk for Diabetes (with Program Support)

What Community Health Workers Can Do to Help People Who Are at Risk for Diabetes

Ways to Support People in Their Health Care Needs:

- Teach community members to get screened for high blood sugar.
- Teach community members that it is important to control high blood sugar.
- Teach them that uncontrolled high blood sugar will damage their heart, blood vessels, eyes, and kidneys.
- Teach community members that if left untreated, high blood sugar will put them at high risk for heart disease, heart attack, stroke, kidney disease, and other disabling diseases and conditions.

Ways to Help People Make Better Lifestyle Choices:

- Teach people to get 30 to 60 minutes of physical activity on most days, stop smoking, lose weight (if they are overweight), and check with their health care provider about having alcoholic drinks.

What Community Health Workers Can Do to Help People Who Already Have Diabetes

All of the suggestions for people at risk for high blood sugar apply, plus the following:

- Help people set goals to control their diabetes.
- Help those with diabetes understand what they need to do to take care of themselves.
- Help community members with diabetes understand the importance of regularly taking their diabetes and other medicines. They should not stop taking their medicines even if they feel better.
- Help people learn how to keep track of the medicines they are taking.
- Encourage people with diabetes to learn proper foot care.
- Encourage people with diabetes to have an eye exam each year.
- Encourage people with diabetes to see their dentists twice a year.
- Encourage people with diabetes to see their doctor regularly and take an A1C (blood glucose test) at least twice a year.

My Goals

Date: _____

My goal for healthy eating:

(For example: I will eat two servings [1/2 cup each] of fresh fruit and three servings of vegetables [1/2 cup each] on each of five days this week.)

My goal for physical activity:

(For example: I will walk in the park for 30 minutes each weekday, Monday through Friday, this week.)

My goal for checking my blood sugar:

(For example: I will check my blood sugar three times each day this week.)

How did I do? (Circle the answer that is most true.)

Not very well.

Need to do better.

Almost achieved goals.

Great! Met my goals.

Objectives

By the end of this session, community health workers will be able to—

- Talk about the patient’s role and responsibilities as a member of the health care team.
- Name three things a patient should do to prepare for a doctor’s visit.
- Name three questions a patient should ask during a visit to the doctor.
- Be familiar with important information to have ready in case of emergency.

Materials and Supplies

Flipchart, markers, tape, blackboard, chalk, and eraser.

Handouts:

- 10–1: Daily Health Diary
- 10–2: Ask Me Three
- 10–3: Emergency Information

Chapter Outline

1. Overview
2. Lesson
 - A. Preparing for Your Visit to the Doctor
 - B. During a Visit with the Doctor
 - C. After a Visit with the Doctor
 - D. Planning for an Emergency
3. Summary

Resources

Agency for Healthcare Research and Quality—Quick Tips When Talking with Your Doctor. www.ahrq.gov/consumer/quicktips/doctalk.htm

American Heart Association. www.americanheart.org

National Heart, Lung, and Blood Institute; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov

Partnership for Clear Communication-Ask Me 3. www.askme3.org

Talking with Your Doctor: A Guide for Older People. National Institute on Aging, National Institutes of Health. www.nia.nih.gov/HealthInformation/Publications/TalkingWithYourDoctor/

1. Overview

► **Say:**

In past years, most people considered their doctor to be “the boss” for issues concerning their health. You were expected to do what the doctor said—no questions asked.

But the role of the patient in health care has changed. Now, you are your doctor’s partner in health care. You may have more than one doctor and other health care staff, such as nurses, as part of your medical team. As a partner with your health care team working on getting well, you should do the following things when visiting the doctor:

- Ask questions until you are certain you understand what the doctor is saying, and take notes on what he or she tells you.
- Give complete and honest medical and lifestyle information to the doctor so that he or she can help diagnose and treat your health problems.

It’s not always easy to take an active role in your care. Most doctors plan only 10 to 15 minutes for each visit. With such a short amount of time, you may not feel comfortable taking the time to ask questions, or you may feel rushed and may have trouble remembering what you wanted to ask.

In this session we’ll talk about what you should do before, during, and after your visit. You’ll understand what questions to ask your doctor, when to ask them, and why it’s important to talk to your doctor and get answers to your questions. Afterwards, we’ll practice what you’ve learned about talking to your doctor.

We’ll also talk about some things you should do to prepare yourself in case of emergency.

2. Lesson

A. Preparing for Your Visit to the Doctor

► **Say:**

As a member of your own health care team, you need to be ready for your visit with the doctor, especially if you are visiting this doctor for the first time.

Before your visit, make sure the doctor's office has a list of all the other doctors you see. Also, check with the office staff to see if they have your medical records from your other doctors.

When you go for your doctor's visit, take a list of all your medicines and how often you take them; or, if it's easier for you, take all of your pill bottles and liquid medicines with you.

You should also bring your health diary in which you write down any signs that something is wrong with your body (symptoms). We'll talk about the health diary a little later.

It's always good to take notes, or to record on a tape recorder, what your doctor tells you during a visit. If you don't have a tape recorder, bring a family member or friend along who can take notes during the visit so that you'll have a record of the doctor's advice and can be sure to follow it.

Let's talk in a little more detail about things you can do to get ready for a doctor's visit.

Make sure your doctor has your medical records.

Your doctor can better treat your illness if he or she has a complete picture of your overall health. That's why it's a good idea for your doctor to have a copy of all your medical records.

There are a few ways that your doctor can get your medical records from other doctors or health care centers:

- Your new doctor can request records from your other doctors.
- If your primary care doctor sends you to a new doctor or to a specialist (a doctor who takes care of a certain type of problem), he or she will send your medical records to the doctor or specialist.
- You can ask for copies of your records from your other doctors and take them to the visit yourself.

When you make an appointment with a new doctor or a specialist, ask the office staff if they will be asking for your records from your other doctors. Make sure they have the names of all the doctors you are seeing. You should know the first and last names of every doctor you see and his or her office address and phone number.

If you plan to ask a doctor for copies of your records to take to your appointment yourself, be sure to give the office staff enough time to make the copies for you.

► **Say:**

Bring a list of all the doctors you are seeing.

Even if the doctor you are visiting has your medical records from your other doctors, you should still make a list of all the doctors you are currently seeing or have seen in the past five years, to take with you to your doctor's visit. Besides the doctor's name, write down the type of doctor, such as heart doctor, kidney doctor, or foot doctor. If you can remember when you last saw each of your doctors, write this information down.

Bring a list of all the medicines you take, or bring the medicines themselves.

The best thing to do is to put all of the medicine you are taking in a bag and take it with you to your appointment. Make sure you take the original medicine bottles or packages. If you can't do this, make a list of all the medicines, how often you take each of them, and how much you take.

Be sure to include all medicines or vitamins you take that a doctor did not prescribe for you—cold and sinus medicine, vitamins, laxatives, pain pills, and diet or herbal supplements.

Bring a record of your symptoms or problems.

If you are seeing the doctor because you've not been feeling well, it's important that your doctor understands exactly what your symptoms are (what and how you feel), when they happen, and how often they happen. A list is helpful because it can be hard to remember these things once you are in the doctor's office, especially when the doctor has only a little time to spend with you.

The best way to make sure that your doctor understands how you are feeling is to write down your symptoms (how you have been feeling). Keep a record of anything that feels unusual, hurts, or is not normal for you or your body. If you have pain, take time to think about how it feels. Is it a sharp pain that comes and goes or is it a constant, dull ache? Do you feel pain only when you are active, or do you feel it when you are resting? Do you feel tired all the time, or do you only begin to feel tired in the afternoon? Have you ever felt like this before?

Keep a health diary.

You can keep track of how you feel as part of your health diary.

If you are being treated for high blood pressure, high cholesterol, diabetes, heart failure, or another illness, you should keep a health diary.

You can keep a health diary by filling out a simple form each day. You may want to write down your weight, blood pressure, blood sugar, physical activity, and what you eat. Write down how you feel. For example, do you have pain, tiredness, nausea, numbness, or dizziness? Bring your health diary with you when you visit the doctor.



Handout 10–1: Daily Health Diary

Review the daily health diary and the items to be listed. Ask CHWs to think of ways they might encourage people in their community to keep a health diary and have them share their ideas.

► Say:

Write down the questions you want to ask the doctor.

Take time to sit and think of questions you would like to ask your doctor. It might be a good idea to have a friend or relative help you. If you have several questions, you may want to write them down in order of their importance. The sample questions in Handout 10-2 may be helpful to you.

The three main questions you should ask the doctor are—

- What is my main health problem?
- What do I need to do about it?
- Why is it important for me to do these things?



Handout 10–2.1-10–2.3: Questions to Ask

Review the handout. Have the CHWs talk about how they can use this information with members of the community.

► **Say:**

Bring a notebook or tape recorder.

It can be hard to remember everything your doctor tells you during your visit. But it's very important for your health that you follow your doctor's advice. To make sure you don't miss anything or forget what the doctor tells you, take a notepad or a tape recorder with you to the visit.

Before your visit ask the office staff if you can bring a tape recorder. Then, be sure to practice taping before the visit. Make sure the batteries are working and that you know how to turn the tape recorder on, how to put it on pause, and how to turn it off.

Ask someone to come with you.

Asking someone to come with you to your visit can be a big help, especially if this person lives with you or helps with your health care. You could ask your husband or wife, your sister, your son or daughter, or another close relative or friend.

Having another person with you is good for several reasons. First, this person can give you moral support. Second, if the person takes part in your health care (even if just to remind you to take your medicine), it is important that he or she understands your doctor's instructions. Third, an extra set of ears is useful because the person can later help you remember what the doctor said. Fourth, if you need help reading and filling out forms, this person may be able to help you with them.

If someone comes with you, let the doctor know right way that you have someone in the waiting room who should hear everything the doctor says to you.

B. During a Visit with the Doctor

► **Say:**

Now you are ready for your visit with the doctor. Your doctor has your medical records and you are ready to—

- Ask questions.
- Write or record the answers.

First, your doctor will ask you questions and take notes. Your job is to answer these questions as fully and honestly as possible.

Give complete information.

Tell your doctor about aches and pains, and about other physical feelings you might have, such as tiredness, dizziness, or nausea. You should also tell your doctor about other types of feelings, such as feeling very sad for a long time or feeling very anxious or stressed out.

When your doctor asks you a question, try to give as much information as needed, but stick to the point. Say the things you think are most important first. You'll have a much easier time giving all of your information if you use the daily health diary that we talked about earlier, or if you write down your symptoms (the things you have been feeling) and when they happen. Be sure to bring your health diary or this record of your symptoms to the visit.

Don't be nervous about asking your doctor or nurse questions. They want you to let them know when and what kind of help you need.

Your doctor wants you to know:

- All you can about your health problem.
- How to get better or to stay healthy.
- Why it is important for you to take care of your health.

Ask questions if you don't understand what the doctor tells you.

What if I've asked and I still don't understand what the doctor or nurse told me?

Let your doctor or nurse know if you still don't understand what you need to do.

You might say, "This is new to me. Will you please explain that to me one more time?"

Be honest.

It is very important to be honest with your doctor about your health problems. You should also be honest about your lifestyle and habits. Be honest about how much physical activity you get each day, how much you smoke (if you smoke), and what and how much you eat.

You may want to ask your doctor a question that's a little embarrassing or uncomfortable. Just remember, the doctor has probably heard it before. Doctors are used to talking about personal problems with their

patients. What you tell the doctor is private and is not shared with anyone else without your permission.

Remember, asking questions and being worried about your symptoms is not a sign of weakness. Being honest about what you are feeling doesn't mean that you are complaining. The doctor needs to know how you feel.

Take home information.

Ask for written instructions if you need them.

Often doctors have written material or videos on various health conditions that can help you. Ask your doctor if he or she has any that could help you and, if not, how you can get them.

If you can't read or understand the written information you get at the doctor's office, it's very important that you ask a family member, a friend, or someone else help you understand this information.

C. After a Visit with the Doctor

► Say:

It's important that you understand what your doctor has told you and that you're able to follow any advice or instructions he or she gave you.

After your visit, call the doctor's office and ask to talk to the nurse if any of these things happen:

- You have problems following the doctor's advice.
- You have any questions.
- Your symptoms get worse.
- You have questions about taking your medicine.
- You have problems with the medicines themselves.
- You have had tests done and don't hear back from your doctor about the results.

You should write down the answers you get, or have someone else write them down.

D. Planning for an Emergency

► Say:

As a partner in managing your health, you need to be ready in case of a medical emergency, such as a heart attack or stroke. This is especially important if you are diagnosed with a disease or condition that could cause a heart attack or stroke.

To be ready for a medical emergency, make a list of the following important telephone numbers and put it where you and others can find it easily:

- Numbers for your doctor, an ambulance, and the fire department if the numbers are different from 9-1-1.
- The number of the 24-hour pharmacy closest to your home.
- The number of the power company in case your power goes out (if you use electrical equipment that is vital for your health).
- Numbers of friends or family members who will be there for you (and your children) in case of an emergency.

Nobody “plans” to have a heart attack or stroke. But just as people practice what to do in case of fire, you can prepare for a heart attack—yours or someone else’s.

Keep in mind that the time to prepare is before a life-threatening emergency happens. Then if something should come up, you can act quickly and calmly, and can do the right things fast!



Handout 10–3: Emergency Information

Review the warnings signs of a heart attack and stroke listed on the handout. Then review each section of the handout to be filled in. Make sure the CHWs know what information should be included in each section and why it’s important to have this information available in a medical emergency.

3. Summary



Discussion: What Can Community Health Workers Do to Help Prepare People for Medical Appointments?

Ask CHWs to share experiences they've had in talking to their doctors during visits or with people who didn't understand their doctors' instructions. Ask the class to think of ways they can help community members feel comfortable talking to their doctors, and then ask them to share their ideas with the rest of the class.

► Ask:

- What does a person need to do as a member of his or her health care team?
- What should a person do to prepare for a doctor's visit?
- What should a person ask during a visit to the doctor?
- What information should a person have ready in case of a medical emergency?

Daily Health Diary

Keeping a health diary will help you and your doctor track your problems and your success. Write down what you did for your physical activity, how long you did it, and how you felt while doing it. Write down how you feel in general. Do you have pain, tiredness, nausea, numbness, or dizziness?

Take your health diary with you when you visit your doctor or nurse.

Date	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Weight							
Blood Pressure							
Blood Sugar (times and test results)							
Physical Activity							
What I ate today							
How I feel today							



Good Questions for Your Good Health

Every time you talk with a doctor, nurse, or pharmacist, use the **Ask Me 3** questions to better understand your health.

1

What is my main problem?

2

What do I need to do?

3

Why is it important for me to do this?

When to Ask Questions

You can ask questions when:

- You see your doctor, nurse, or pharmacist.
- You prepare for a medical test or procedure.
- You get your medicine.

What If I Ask and Still Don't Understand?

- Let your doctor, nurse, or pharmacist know if you still don't understand what you need to do.
- You might say, "This is new to me. Will you please explain that to me one more time?"

Who Needs to Ask 3?

Everyone wants help with health information. You are not alone if you find things confusing at times. Asking questions helps you understand how to stay well or to get better.

The **Ask Me 3** questions are designed to help you take better care of your health. To learn more, visit www.npsf.org/askme3

Your Doctor, Nurse, and Pharmacist Want to Answer 3

Are you nervous to ask your health provider questions? Don't be. You may be surprised to learn that your medical team wants you to let them know that you need help.

Like all of us, doctors have busy schedules. Yet your doctor wants you to know:

- All you can about your condition.
- Why this is important for your health.
- Steps to take to keep your condition under control.

Asking these questions can help me:

- Take care of my health
- Prepare for medical tests
- Take my medicines the right way
- I don't need to feel rushed or embarrassed if I don't understand something. I can ask my doctor again.
- When I **Ask 3**, I am prepared. I know what to do for my health.

Bring your medicines with you the next time you visit your doctor or pharmacist. Or, write the names of the medicines you take on the lines below.

Like many people, you may see more than one doctor. It is important that your doctors know all the medicines you are taking so that you can stay healthy.

Write Your Doctor's Answers to the 3 Questions Here:

1 What is my main problem?

2 What do I need to do?

3 Why is it important for me to do this?

Ask Me 3™ is an educational program provided by the **Partnership for Clear Health Communication at the National Patient Safety Foundation™** – a coalition of national organizations that are working together to promote awareness and solutions around the issue of low health literacy and its effect on safe care and health outcomes.

Partnership for
Clear Health Communication
at the National Patient Safety Foundation™

www.npsf.org/askme3

Emergency Information

Warning signs of heart attack:

- **Chest discomfort**
(Uncomfortable pressure, squeezing, fullness, or pain in the center of the chest that lasts more than a few minutes, or goes away and comes back.)

- **Discomfort in other areas of the upper body**
(Can include pain or discomfort in one or both arms, or in the back, neck, jaw, or stomach.)

- **Shortness of breath**
(Often comes with or before chest discomfort.)

- **Other signs**
(May include breaking out in a cold sweat, nausea, or light-headedness.)

Warning signs of stroke:

- **Sudden numbness or weakness of the face, arm, or leg, especially on one side of the body**

- **Sudden confusion, or trouble speaking or understanding**

- **Sudden trouble seeing in one or both eyes**

- **Sudden trouble walking, dizziness, or loss of balance or coordination**

- **Sudden severe headache with no known cause**

If you have any of these warning signs, Call 9-1-1.

If you live in an area that does not have 9-1-1, then call—

The ambulance: _____ The fire department: _____

The hospital in my area that has 24-hour emergency care for treating heart problems is*

The hospital in my area that has 24-hour emergency care for treating strokes is*

* Ask your doctor for this information. Some emergency departments specialize in treating heart problems or strokes.

Family or friends to call that can help me and my family:

Name	Phone Number
_____	_____
_____	_____
_____	_____

My doctors' names and phone numbers:

Name	Phone Number
_____	_____
_____	_____
_____	_____

My medicines:

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

My allergies (medicine or food):

_____	_____
_____	_____

My health insurance policy:

Company	Policy Number	Phone Number
_____	_____	_____

Objectives

By the end of this session, community health workers will be able to—

- Explain the reasons for taking medicine as the doctor prescribed.
- List the types of medicine patients should tell their doctor about taking.
- List ways patients can remember to take medicine.
- Discuss what patients should do if they have questions about their medicines.
- Discuss how community health workers can help people overcome barriers to taking their medicines.

Materials and Supplies

Flipchart, markers, tape, blackboard, chalk, and eraser.

Handouts:

- 11–1: What Community Health Workers Can Do to Help Community Members Get Their Medicines and Take Them
- 11–2: How Do I Manage My Medicine?

Chapter Outline

1. Overview

2. Lesson

- A. Will the Doctor Prescribe More Than One Medicine for Me?
- B. Will I Always Be on the Same Medicine?
- C. How Should I Take My Medicine?
- D. How Can I Best Prepare Myself to Have Enough Medicine on Hand during Trips and Holidays?
- E. What Should I Do if I Can't Afford the Medicine?
- F. Should I Tell the Doctor about Other Medicines I Am Taking or Other Health Problems I Have?
- H. Who Will Advise Me about My Medicines?

3. Summary

Resources

American Heart Association. www.americanheart.org

National Heart, Lung, and Blood Institute; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov

1. Overview

► **Say:**

Taking medicine isn't always as simple as swallowing a pill. Medicine can only help people if they take it as prescribed. In this session we'll discuss what people need to know if they are taking medicine for heart disease, heart attack, or stroke, or to help prevent these conditions. We'll talk about how you, as community health workers, can help people understand why they need to take their medicine, how to get it, and how to take it. You'll learn how to encourage them to watch for problems with their medicines and to be active in solving these problems with their doctor or medical team.

2. Lesson

A. Will the Doctor Prescribe More Than One Medicine for Me?

► **Say:**

Your doctor may give you one or more medicines, depending upon your particular symptoms and health problems.

Sometimes your doctor may prescribe one medicine at first and then add others later, or your doctor may give you two or more medicines at first.

Whatever medicine your doctor prescribes, taking your medicine exactly as the doctor advises is very important in preventing and treating heart disease and stroke.

B. Will I Always Be on the Same Medicine?

► **Say:**

Often the doctor has to make some minor changes in your medicine to be sure you are getting the amount that works best for you. After starting a medicine, you will be tested regularly to make sure the medicine is working. If it's not working as well as the doctor would like, you may get a higher or lower dose or a different medicine.

If your doctor prescribes more than one medicine for you, he or she will look for the combination of medicines that work best for you.

C. How Should I Take My Medicine?

► **Say:**

The medicines work best when taken as advised by the doctor. Skipping a dose or stopping your medicines can be harmful. Your health may get worse if you stop your medicines. Do not stop your medicines unless the doctor tells you to stop, even if you are feeling better. Follow your doctor's instructions about when to stop taking a medicine.

Do not take more of the medicine than your doctor tells you to take. If you do, it may harm you. Your doctor will tell you when to take more of any medication. If you are not feeling better, or are feeling worse, be sure to tell your doctor or nurse.

D. How Can I Best Prepare Myself to Have Enough Medicine on Hand during Trips and Holidays?

► **Say:**

Keep prescriptions for your medicine filled at all times. Refill your prescription several days before you run out. You should have enough medicine for a few extra days so that you won't run out if the weather is bad and you can't get to the pharmacy. If you are going on a trip, be sure to fill your prescription ahead of time. Anytime you will be away from home, be sure to take your medicine with you.

Be sure you know when your pharmacy will be closed for holidays.

E. What Should I Do If I Can't Afford the Medicine?

► **Say:**

If the cost of your medicine is a problem for you, tell your doctor. The doctor may be able to prescribe other medicines for you that cost less. Some medicines have a generic form that costs less than the brand name form. You may also be able to lower your cost by comparing prices at different pharmacies or buying some medicines from mail-order pharmacies. If you need help paying for medicines, ask to see

a social worker while at the hospital or health clinic, or ask the doctor how to contact a social worker in your community. The social worker will know about programs that can help you pay for your medicine, if you qualify. Also, a staff member in the doctor's office or health clinic may be able to help you fill out forms for getting low-cost or free medicine from drug companies or through the Medicare prescription drug card program.

F. Should I Tell the Doctor about Other Medicines I Am Taking or Other Health Problems I Have?

► Say:

Yes! It is very important to tell your doctor about other medicines you are taking. You should include all pills and remedies that you take, including over-the-counter medicines that you buy without a doctor's prescription. Examples are aspirin, cold medicine, allergy medicine, and laxatives. Taking over-the-counter medicine can change the way your prescription medicines work.

Also tell your doctor about any allergies or other problems you have to medicines, foods, or chemicals. The doctor needs this information so that he or she can prescribe the right medicine for you.

G. Who Will Advise Me about My Medicines?

► Say:

The pharmacist (the person at the pharmacy who is trained to help you with your medicines), your doctor, or a nurse will answer your questions about medicines. If you have a question about your medicine, the easiest way to get an answer may be to ask the pharmacist who gives you your medicine. The medicine will come with information about possible side effects, which are problems that may come up when you take it. For example, some diabetes medicines can cause an upset stomach, and some blood pressure medicines can cause leg cramps or cold hands and feet.

Tell your doctor if you think a medicine you are taking is causing a side effect. **Do not stop taking the medicine unless your doctor tells you to stop. Talk to your doctor first!**

The medicine will also come with warnings not to take it if you have certain conditions, such as allergies to certain medicines or chemicals, or if you are pregnant. The medicine may also come with directions for taking it, such as taking it at a certain time or staying away from certain foods or another medicine.

Ask your doctor or your pharmacist to let you know if you need laboratory tests from time to time to check how your medicines are working.



Activity: It Is Important to Take Medicines as Your Doctor Advises

Ask the CHWs: “If you are at risk for, or have had, heart disease, a heart attack, or a stroke, why is it important to take the medicines that the doctor prescribes for you?” Ask them if they can think of reasons why it is important to take medicines the way the doctor advises. Write their answers on the flipchart.

If the following reasons are not mentioned, add them:

- Reduces the risk of developing heart disease, the risk of disability from heart disease (such as weakness or not being able to carry out normal activities), and the risk of dying from heart disease.
- Reduces the risk of stroke, the risk of disability from a stroke (such as not being able to speak or think clearly, or not being able to move parts of the body or walk), and the risk of dying from a stroke.
- Reduces the risk of having a second heart attack or stroke and the disability that might follow.
- Helps control blood pressure in people who have high blood pressure.
- Helps control high levels of fats and cholesterol in the blood, which reduces the risk of heart attack or stroke.
- Controls blood sugar and lowers the risk of developing complications (problems) of diabetes, such as kidney disease, blindness, or problems with the nerves, feet, or gums.
- Reduces feelings of depression and anxiety.
- Reduces the risk of death from heart failure.
- Improves the way a person feels.
- Allows a person to be healthy enough to work and to have a better quality life.
- Helps a person be a good role model for his or her family.



Activity: Overcoming Barriers to Taking Medicines

Ask the CHWs: “What are some reasons why people do not take their medicines as advised by their doctors, and how can community health workers help them overcome these roadblocks?” Ask them for suggestions about what they would do to help people get started with their medicines and to keep taking them. Write their answers on the flipchart.

If the following reasons are not mentioned, add them:

- People do not know what the medicine is supposed to do.
- They are not sure of how to take their medicines.
- They can not afford their medicines and so they do not get them.
- To save money, they only take their medicines every other day or they cut their pills in half.
- They are taking so many other medicines that they don’t want to take any new ones.
- They don’t feel well and think the medicine isn’t helping.
- They feel that the medicine is giving them a side effect they don’t like.
- They forget to take their medicines.
- They think they can do without their medicines.
- They don’t have anyone to help or support them in taking their medicines.



Handout 11–1: What Community Health Workers Can Do to Help Community Members Get Their Medicines and Take Them

Look over the handout with the CHWs. If any suggestions on the handout were not mentioned during the activity on reasons why people do not take their medicine, point them out. Ask the CHWs how those suggestions will help people overcome roadblocks to taking medicine.

3. Summary

► Ask:

- Who are the best people to advise patients about their medicines?
- Why is it important to take your medicines as your doctor advises you?
- What are common barriers to taking medicine and how can you help people overcome the barriers?
- What can CHWs do to help community members get their medicines and take them?



Handout 11–2: How Do I Manage My Medicine?

The American Heart Association handout *How Do I Manage My Medicine?* gives a good overview of what most people need to know about taking medicines. Tell the community health workers to become familiar with all the terms on this handout and with what their community peers should know.

What Community Health Workers Can Do to Help Community Members Get Their Medicines and Take Them (with Program Support)

Ways to Support People in Their Health Care Needs:

- Help community members make a list of their medicines.
- Help community members understand the instructions on the pill bottles. They should take the right amount of medicine at the same time every day.
- Go with people to see their pharmacist to get the answers to their questions about their medicine.
- Encourage people to take their medicine as advised by their doctor.
- Encourage people to call or see their doctors or nurses if they have any questions or problems with their medicines.
- Encourage people to continue to take their medicines even if they are feeling better. When people stop taking their medicines suddenly, their condition can worsen.
- Help them apply for free or affordable medicines.
- Community health workers can be role models by taking their own medicines as advised by their doctor.
- Help people organize their medicines. One method is to put the pills into a pillbox that is clearly marked with the days of the week and the times of day (such as morning, noon, afternoon, and night). People will build a daily habit of taking their medicine if they use a pillbox, put it in a place they will remember, and take it with them when they leave their home.
- Encourage family members and friends to support and encourage persons who need to take medicine and to remind them to take it.

Ways to Help People Make Better Lifestyle Choices:

- Encourage community members to eat more healthily, increase their physical activity, quit smoking, and lose weight. When they do these things, the doctor may be able to reduce some of their medicines.

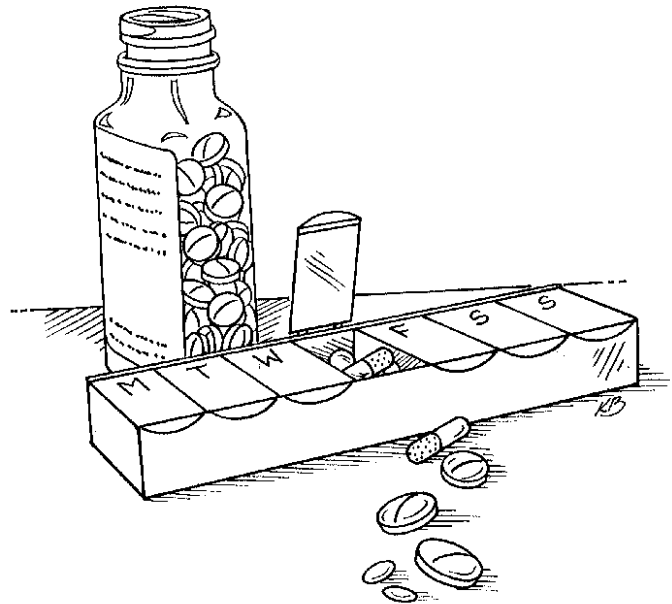


How Do I Manage My Medicines?

Taking medicine may be new to you, and there may be a lot to remember. For example, why are you taking it? What time should you take it? How often do you take it, and how many pills do you take?

It's very important to take medicine the right way — just as your doctor tells you.

If you don't follow your doctor's directions, what could happen? First of all, if medicine isn't taken the right way, it may not work. It could also cause side effects that may be mild — or very harmful. Without knowing it, you could counteract one medicine by taking it with another. Not taken properly, medicine can also make you feel sick or dizzy.



How can I remember to take my medicine?

- Take it at the same time every day.
- Take it along with meals or other daily events, like brushing your teeth.
- Use special pill boxes that help you keep track, like the day-of-the-week divided ones found at drugstores.
- Ask the people who are close to you to help remind you.
- Keep a “medicine calendar” near your medicine and note every time you take your dose.
- Put a sticker or reminder note on your medicine cabinet or refrigerator.

What else should I know?

- Store your medicine the way your doctor or pharmacist tells you. Keep medicine in original containers, or label new containers.
- Keep track of what pills you can and can't take together, including over-the-counter medicines.
- Always get your prescription filled on time, so you don't run out.
- Try to see the same pharmacist each time.
- Don't take more of your medicine than the prescribed dose.
- Ask your doctor or pharmacist before buying a new over-the-counter medicine, such as an antihistamine or “cold tablets,” to be sure they won't interfere with your prescribed medicine.
- Always check with your doctor before you stop taking a medicine.
- If you have any questions about your pills, make a note to remind yourself to ask your doctor or pharmacist.
- Tell your doctor if you have any side effects.

- Write down the names and doses of medicines you are taking. If you go to more than one doctor, take your updated medication list with you to each visit.
- Keep all medicines out of the reach of children.

My medicine

Ask your healthcare professional to help you fill in the blanks below.

Name of Medicine	What it looks like	Dose	What it's for	When to take it	Doctor

How can I learn more?

1. Talk to your doctor, nurse or other health-care professionals. If you have heart disease or have had a stroke, members of your family also may be at higher risk. It's very important for them to make changes now to lower their risk.
2. Call 1-800-AHA-USA1 (1-800-242-8721) or visit americanheart.org to learn more about heart disease.
3. For information on stroke, call 1-888-4-STROKE (1-888-478-7653) or visit StrokeAssociation.org.
We have many other fact sheets and educational booklets to help you make healthier choices to reduce your risk, manage disease or care for a loved one.
Knowledge is power, so *Learn and Live!*

Do you have questions or comments for your doctor?

Take a few minutes to write your own questions for the next time you see your doctor. For example:

How long should I take my medicine?

What if I forget to take a medicine?

Should I avoid any foods or other medicines?

Your contribution to the American Heart Association supports research that helps make publications like this possible.

The statistics in this sheet were up to date at publication. For the latest statistics, see the *Heart Disease and Stroke Statistics Update at americanheart.org/statistics.*

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Objectives

By the end of this session, community health workers will be able to—

- Discuss why weight control is important to good health.
- Describe how to help people lose weight.
- Assist others with making healthy food choices.
- Read a food label and find calorie, fat, saturated fat, trans fat, cholesterol, sodium, carbohydrate, fiber, sugar, and protein content.
- Describe the DASH Eating Plan.

Materials and Supplies

Flipchart, markers, tape, blackboard, chalk, and eraser.

Handouts:

- 12–1: Protect Your Heart. Watch Your Weight.
- 12–2: A. The Energy Balance
B. Tips to Help You Lose Weight
C. Tips for Eating Out the Heart-Healthy Way
- 12–3: Average Daily Calories for Men and Women
- 12–4: Sodium in Foods
- 12–5: A. Tips for Eating Less Salt and Sodium
B. Use Herbs and Spices Instead of Salt
- 12–6: Be Good to Your Heart. Know Your Cholesterol Numbers and Take Action!
- 12–7: How to Read Food Labels
- 12–8: Read the Food Label for Sodium!
- 12–9: A. Read the Food Label for Saturated Fat!
B. Fats and Oils to Choose
- 12–10: The DASH Eating Plan
- 12–11: Serving Sizes
- 12–12: What Community Health Workers Can Do to Help People Make Healthier Food Choices

Training Aid 12–1: Choose a Variety of Heart Healthy Foods

Chapter Outline

1. Overview
 2. Lesson
 - A. How Do You Know if You Are Overweight?
 - B. What Causes People to Be Overweight or Obese?
 - C. Why Is It Unhealthy to Be Overweight?
 - D. How Can I Lose Weight?
 - E. What Should I Eat?
 - F. What Foods Should I Limit?
 - G. Reading Food Labels
 - H. The DASH Eating Plan
 - J. How Much Is a Serving?
 3. Summary
-

Resources

1999 National Health and Nutritional Examination Survey. www.cdc.gov/nchs/nhanes.htm

American Heart Association. www.americanheart.org

Centers for Disease Control and Prevention (CDC) Nutrition and Physical Activity page. www.cdc.gov/nccdphp/dnpa/index.htm

Centers for Disease Control and Prevention (CDC) Overweight and Obesity page. www.cdc.gov/nccdphp/dnpa/obesity/index.htm

The Dash Diet. www.nhlbi.nih.gov/health/public/heart/hbp/dash/index.htm

Dietary Guidelines for Americans, 2005. 6th Edition. U.S. Department of Health and Human Services and U.S. Department of Agriculture. Washington (DC): U.S. Government Printing Office, January 2005. www.healthierus.gov/dietaryguidelines

Embrace Your Health! Lose Weight if You Are Overweight. National Heart, Lung, and Blood Institute; National Institutes of Health; U.S. Department of Health and Human Services; Public Health Service. NIH Publication No. 97-4063. September 1997. www.nhlbi.nih.gov/health/public/heart/other/chdblack/embrace1.htm

Facts about the DASH Eating Plan. National Heart, Lung, and Blood Institute; National Institutes of Health; U.S. Department of Health and Human Services. NIH Publication No. 03-4082. 2003. www.nhlbi.nih.gov

Finding Your Way to a Healthier You: Based on the Dietary Guidelines for Americans. U.S. Department of Health and Human Services. U.S. Department of Agriculture. HHS Publication No. HHS-ODPHP-2005-01-DGA-B. USDA Publication no. Home and Garden Bulletin No. 232-CP. www.health.gov/dietaryguidelines/dga2005/document/pdf/brochure.pdf

Honoring the Gift of Heart Health: A Heart Health Educator's Manual for American Indians and Alaska Natives. National Heart, Lung, and Blood Institute and Indian Health Service; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov/health/prof/heart/other/aian_manual/index.htm

How to Use Fruits and Vegetables to Help Manage Your Weight. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Nutrition and Physical Activity. www.cdc.gov/nccdphp/dnpa/nutrition/pdf/CDC_5-A-Day.pdf

Fruits and Veggies Matter. www.fruitsandveggiesmatter.gov

My Pyramid—Steps to a Healthier You. www.mypyramid.gov

National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), National Institutes of Health. www.niddk.nih.gov

National Heart, Lung, and Blood Institute; National Institutes of Health; Department of Health and Human Services. www.nhlbi.nih.gov

Tips for Adults for Achieving a Healthy Weight. www.cdc.gov/nccdphp/dnpa/bmi/adult_bmi/adult_tips.htm

Your Heart Your Life: A Lay Health Educator's Manual. National Heart, Lung, and Blood Institute; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov/health/prof/heart/latino/lat_mnl.htm

1. Overview

► **Say:**

In this session and the next two sessions, we'll talk about three things that are your best protection against heart disease, heart attack, and stroke when you make them a part of your lifestyle (way of life). These things are—

- Healthy eating.
- Being physically active.
- Living tobacco free.

In this session, we'll discuss healthy eating and how important it is for people to keep their weight within a range that is right for their height. To keep their weight under control, people need a balance between the amount of food they eat and the amount of physical activity they get. In this session and the next one on physical activity, we'll talk about tips for controlling weight.

Being overweight puts a person at greater risk for diabetes and high blood pressure, which are major risk factors for heart disease and stroke.

Weight control has become a major problem in the United States. Six out of ten people in America weigh more than they should. Being overweight is not just a problem for adults. More children and teenagers are overweight than ever before.

2. Lesson

A. How Do You Know if You Are Overweight?

► **Say:**

Many of us have different ideas about who is overweight and who is not.

We've heard a lot about obesity. Is being overweight and being obese the same thing?

Many people use the words *obese* or *obesity* to describe being overweight, but doctors consider the two terms to mean different things. Whether you are at a normal weight, overweight, or obese depends on how much body fat you have.

One way of measuring body fat is by body mass index, or BMI. This measurement can be used by both men and women, but it does have some limits. It may overestimate body fat in people who have a muscular build, and it may underestimate fat in older people and others who have lost muscle mass.

Your BMI is your weight in relation to your height. It can tell you if you are at a healthy weight, overweight, or obese. Using a BMI chart is probably the best way to find your BMI. A person with a BMI of 25 to 29.9 is overweight, and a person with a BMI of 30 or higher is obese.



Handout 12–1: Protect Your Heart. Watch Your Weight.

Review the handout with the CHWs. Explain that the numbers in the far left-hand column are a person's height in feet and inches and the numbers in the columns just to the right of the height column are a person's weight in pounds. The numbers in the top of that column in the chart are the BMI for various heights and weights.

Ask the CHWs to find their own BMI. First they should find their height in inches and feet in the left-hand column. Then they should follow that row to the right until they find the weight closest to their own. Following this column to the top of the page will give them their BMI number.

► **Say:**

Remember, a normal BMI is 19 to 24. Overweight is 25 to 29. Obese is 30 and higher.

Another important way to tell your risk of overweight is by placing a measuring tape snugly around your waist. Doing this will show you how much belly fat you have.

The risk for heart disease and stroke increases with a waist measurement of more than 40 inches in men and more than 35 inches in women.

A person with a BMI of 25 to 29 and a large waist size is at high risk. A person with a BMI of 30 to 39 and a large waist is at very high risk. A person with a BMI of 40 or more and a large waist is at extremely high risk. All of these people need to lose weight.

B. What Causes People to Be Overweight or Obese?

► **Say:**

Obesity is mainly caused by overeating and not getting enough physical activity, but other things can also put you at risk for being overweight.

Family history. Obesity tends to run in families. This could be partly due to genes. But because families also share eating and physical activity habits, it can be hard to separate these causes.

Lifestyle. You are not “doomed” to be overweight because other family members are overweight. You can’t choose your family, but you can choose to change your eating habits and to increase your physical activity, and that will make a big difference. People in the United States tend to eat a lot of high-fat and sugary foods. We often buy foods that are quick and easy to eat instead of eating homemade foods that are healthier. Also, we are not physically active enough.

Mental and emotional factors. Many people eat more food than they need because they are stressed, bored, sad, or angry.

Illness and medicines. Some illnesses can lead to obesity or a tendency to gain weight. Also, taking some drugs, such as steroids, may cause you to gain weight.

C. Why Is It Unhealthy to Be Overweight?

► **Say:**

Many serious health problems and diseases are related to obesity. Some examples are—

- Heart disease.
- Type 2 diabetes.
- High blood pressure.
- Stroke.

Obesity is linked to several other types of diseases and other health problems:

- Cancer.
- Gallbladder disease and gallstones.
- Liver disease.
- Osteoarthritis (a type of arthritis that affects the joints).
- Gout (another disease affecting the joints).
- Breathing problems.
- Reproductive problems in women.

But the way a person feels about herself or himself may be the most painful part of being obese. In our society, overweight people are often seen as lazy, unattractive, and undisciplined—even though this is not true.

Obese people often face prejudice or unfair treatment in the workplace, at school, and in social situations. Often these people feel rejected, shamed, or depressed.

But people can do something about their weight.

Many people are not sure how much weight they should lose. A loss of only 5 to 10 percent of body weight may improve many of the health problems linked to overweight, such as high blood pressure and diabetes.

So, if you weigh 200 pounds, losing 10 to 20 pounds can improve your health.

Even a small weight loss can make a difference. If you are trying to lose weight, do it slowly and steadily. Generally, it is safe to lose 1/2 to 1 pound a week until you reach your goal.

Avoid crash weight-loss diets that strictly limit calories or the variety of foods you can eat. Extreme ways of trying to lose weight can be dangerous to your health and are not likely to bring lasting results.

D. How Can I Lose Weight?

► **Say:**

One of the best ways to lose weight is to burn more calories than you take in.

As we've already learned, food provides the energy or fuel that the body needs to function. A calorie is a way to measure the energy a food item provides for the body. The more active a person is the more food the person's body needs.

It's easy to give your body more food than it needs. When you do that, either the body stores the extra fuel in its fat cells, which become bigger to make room for the extra fuel, or it makes more fat cells.

To keep from becoming overweight, we need to balance the amount of food we eat with the amount of energy we use. The amount of energy we use is based largely on how physically active we are. This balance is known as the Energy Balance.



**Handout 12–2: A. The Energy Balance
B. Tips to Help You Lose Weight
C. Tips for Eating Out the Heart-Healthy Way**

Review the handout with the CHWs. Ask questions to ensure they understand that to maintain weight, physical activity must be balanced with the amount of calories taken in. To lose weight you need to take in fewer calories and increase your physical activity. Invite the CHWs to share ideas and tips about losing weight and eating out.



Handout 12–3: Average Daily Calories for Men and Women

Review the handout with the CHWs. After you read and talk about Grandma Brown, Aunt Mary, and Cousin Joe, ask the CHWs to share the number of daily calories they think they should be eating. Remind them to base it on their activity levels.

If any CHWs are trying to lose weight, they should aim for a lower caloric level. Ask them to talk about specific ways they could reduce their daily caloric intake (for example, eat smaller portions, eat lower fat and high fiber food, or be more physical active).

► **Say:**

In the next session we'll talk more about physical activity and ways to increase your physical activity during the day. Physical activity is important because, together with reducing calories, it helps people lose weight, decrease belly fat, increase fitness, and keep a healthy weight.

E. What Should I Eat?

► **Say:**

Even if you don't need to lose weight, a healthy diet is still very important for reducing the risk for heart disease and stroke.

What is healthy eating? What should you eat if you are trying to lose weight? Healthy eating, which includes controlling how much you eat, can help you lose weight.

According to the Dietary Guidelines for Americans, a healthy diet:

- Favors fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products;
- Includes lean meats, poultry, fish, beans, eggs, and nuts; and
- Is low in saturated fats, trans fats, cholesterol, salt (sodium), and added sugars.

You should eat a variety of foods every day because different foods have different nutrients, such as vitamins and minerals that your body needs.

No single food can supply all nutrients in the amounts you need. For example, oranges provide vitamin C but no vitamin B12; chicken provides B vitamins but no vitamin C.



Training Aid 12–1: Choose a Variety of Heart Healthy Foods

Pass out copies of Training Aid 12–1. Review the food groups and examples of food from each food group with the CHWs. Ask them to think of examples of foods from each group that aren't listed. Have the CHWs name their favorite foods from each group. Invite them to share tips for encouraging community members to eat a variety of foods.

► **Say:**

It's important to eat a variety of foods, and it's especially important to eat several servings of fruits and vegetables each day. One serving is 1/2 cup. Go to www.fruitsandveggiesmatter.gov to find the best number of servings for you.

A diet that includes fresh fruits and vegetables may reduce the risk of heart disease, stroke, and other diseases. Fruits and vegetables provide the vitamins, minerals, and fiber that are important for good health. Most fruits and vegetables are naturally low in fat and calories and are filling.

To keep yourself from becoming thirsty, drink just water. You also get water from juice, milk, fruits, vegetables and, other foods.

Water is a great choice! It's calorie-free, it doesn't cost much (when it comes from a faucet or fountain), and you can always find it. Take water breaks instead of coffee, tea, soda, or other sweet drink breaks.

F. What Foods Should I Limit?

► **Say:**

Now we know that it's important to eat a variety of foods and to eat several servings of fruits and vegetables each day, but there is another side to healthy eating.

It's also important to limit some types of food—foods that are high in—

- Sodium.
- Saturated fats.
- Trans fats.
- Cholesterol.
- Sugar.

These foods should only be eaten once in a while. They play a part in heart disease, heart attack, stroke, and other diseases such as cancer.

Sodium

► **Ask:**

What is sodium?

► **Say:**

Sodium makes up a part of salt. It is used in mixtures to flavor and preserve many foods we buy in the grocery store.

Sodium is important because it brings the right amount of water to our cells. But when we eat foods with too much sodium, water is retained in the blood.

The kidneys usually flush extra fluid from the body, but if the kidneys can't handle all the fluid, it stays in the blood. A higher volume (amount) of blood often makes the pressure in the blood vessels rise.

As we've learned, high blood pressure is a risk factor for heart disease and stroke—and for kidney disease. Eating foods or drinking liquids that are too salty, or cooking with too much salt, will increase blood pressure.

Americans eat way too much sodium. The Dietary Guidelines for Americans suggest that we take in less than 2,300 milligrams of sodium total each day. This is about **1 teaspoon of salt**.

The lower your salt intake is, the lower your blood pressure will be.

Choose fresh, plain, or frozen foods, without added salt. When buying canned or packaged foods, choose "low sodium" items that have no more than 140 milligrams of sodium per serving.



Handout 12–4: Sodium in Foods

Tell the CHWs that much of the additional sodium in people’s diets comes from adding salt to food at the table and when cooking. But some foods already contain high amounts of sodium. Examples are—

- Packaged meats such as bologna, ham, hot dogs, and bacon.
- Canned soups and vegetables.
- Cheese.
- Dill pickles.
- Tomato juice.
- Soy sauce.
- Frozen dinners.

Fresh fruits and vegetables, fish, and lean meats, such as chicken and turkey, are low in sodium and a better choice for healthy eating.

Review the handout with the CHWs. Ask them if they can think of other examples of foods with a high salt content and foods with a lower salt content. Write their answers on the flipchart in two columns.



Handout 12–5: A. Tips for Eating Less Salt and Sodium B. Use Herbs and Spices Instead of Salt

Review the handout with the CHWs. Ask them for other tips. Let them know that this handout is a good one to give to people in their community who need to reduce the amount of salt and sodium in their diet.

Fats

► Say:

You've been hearing for years that too much fat in your diet is not good for you. But the truth is that some fats are good for you and others are not.

There are two main types of fat:

- Saturated fats.
- Unsaturated fats.

Saturated fats are unhealthy fats that can increase your risk for heart disease, heart attack, and stroke.

They are found in red meat, lard, animal shortening, chocolate, and dairy products, such as whole milk, butter, cheese, and ice cream.

Saturated fat is also found in most margarines, vegetable shortening, coconut oil, palm oil, and palm kernel oil.

Saturated vegetable oils are *trans fats*, such as coconut and palm oils, and are used most often at fast-food restaurants to deep fry chicken, french fries, and onion rings.

They are also used in making most potato chips as well as the cakes, muffins, cookies, pastries, crackers, flour tortillas, fry bread, and donuts you buy at the store.

Limit or do not eat foods made with trans fats (partially hydrogenated vegetable oils), which are found in many packaged foods, such as cookies, crackers, pies, cakes, and cakes mixes.

Unsaturated fats are healthier fats. Some unsaturated fats may even lower your risk for heart disease, heart attack, and stroke. Unsaturated fats are found in olives, avocados, most nuts (peanuts, almonds, cashews, walnuts, and pistachios), fish, and oils such as olive, peanut, canola, corn, soybean, sunflower, and safflower.

Saturated fats usually become solid at room temperature, while unsaturated fats are usually liquid at room temperature.

Unsaturated fats help lower your bad (LDL) cholesterol levels and increase your good (HDL) cholesterol levels when used in place of saturated fats in your diet.

Try to use unsaturated fats instead of saturated whenever you can. For example try “light” or “no-fat” salad dressings and mayonnaise.

Foods that have saturated fats and trans fats are harmful if you eat them often.

Even with unsaturated fats, you can have too much of a good thing. All fats are high in calories. You should limit your fat intake to no more than 30 percent of your daily calories. This amounts to—

- 53 grams of fat for a 1,600 calorie diet.
- 73 grams of fat for a 2,200 calorie diet.
- 93 grams of fat for a 2,800 calorie diet.

Cholesterol

► Ask:

What kinds of foods have cholesterol?

► Say:

Cholesterol is a fat-like substance found in all animal foods—meat, chicken and turkey, fish, milk and milk products, and eggs.

In milk products, cholesterol is mostly in the fat, so lower-fat products contain less cholesterol.

Egg yolks and organ meats, such as liver, are high in cholesterol. Plant foods do not contain cholesterol.

Low-fat meats, such as lean cuts of red meat, chicken and turkey (without the skin) and fish are good sources of protein and are better choices than high-fat meats, such as bacon, sausage, hot dogs, hamburgers, and lunchmeats. You should not eat high-fat meats more than once a week.

Reducing saturated fats, trans fats, and cholesterol and replacing them, whenever you can, with unsaturated fats will have the greatest effect on your blood cholesterol levels.

**Handout 12–6: Be Good to Your Heart. Know Your Cholesterol Numbers and Take Action!**

Review the handout with the CHWs. This is a good chance to review cholesterol goals. Invite the CHWs to share other ways they can reduce fats in their family meals and how people can make better low-fat choices when eating out.

Sugar**► Say:**

Most people take in much more sugar than is healthy. Some sugar is found naturally in many foods, such as milk and fruits. But this type of sugar is not the problem. It is the sugar that's added to foods and drinks that is unhealthy.

Most added sugars in the typical American diet come from soft drinks, candy, jams, jellies, syrups, and table sugar used in coffee and put on cereal.

But sugar is also added to many other foods. Examples are ice cream, sweetened yogurt, chocolate milk, canned or frozen fruit with heavy syrup, and sweetened bakery products, such as cakes and cookies.

For healthy eating, go easy on sugars that people add to foods at the table—sugar, honey, and jelly.

Choose less high calorie foods like fruits, over those that have lots of sugar, such as candy, sweet desserts, and soft drinks.

Avoid too much snacking. Instead drink water. For something sweet, but without added sugar, eat a piece of fruit or a sugar-free dessert. Choosing lower calorie alternatives over high-calorie snacks will help control body weight.

Choose Whole Grain

► **Say:**

Choose whole grain foods for most grain servings to get added nutrients, such as minerals and fiber.

For example choose—

- Whole wheat bread instead of white bread.
- Whole grain cereals instead of sugary cereals.
- Brown rice instead of white rice.
- Whole wheat tortillas instead of corn or flour tortillas.
- Wild rice instead of white rice.

When you go grocery shopping, how will you know if an item is whole grain, high in fiber, and low in fat? You need to read the food label, or the Nutrition Facts label.

G. Reading Food Labels

► **Say:**

The food label found on packaged or canned food is one of the best tools you have for choosing foods for a healthy diet. By reading the food label, you can choose foods lower in fat, cholesterol, sugar, and sodium, and high in fiber.



Handout 12–7: How to Read Food Labels

Ask the CHWs to bring in samples of their favorite packaged or canned foods so they can practice reading the labels. Review the handout with the CHWs, explaining each part of the food label.

You can find more sample food choices and food labels in *The Gift of Heart Health and Your Heart, Your Life*.

**Handout 12–8: Read the Food Label for Sodium!**

Review the handout with the CHWs. Tell them that the handout is a good one to use to teach community members with high blood pressure how to look for sodium content in packaged or canned foods.

**Handout 12–9: A. Read the Food Label for Saturated Fat!
B. Fats and Oils to Choose**

Review the handout with the CHWs. Tell them that this is a good handout to use to teach community members about the fat content of packaged or canned foods.

H. The DASH Eating Plan

► **Say:**

The DASH plan is good to follow to make sure that you're eating several servings of fruits and vegetables a day and limiting sodium, fat, and sugar. DASH stands for Dietary Approaches to Stop Hypertension. The DASH diet is recommended by the American Heart Association and the National Heart, Lung, and Blood Institute and has been proven to lower blood pressure and blood cholesterol levels. It is a good plan for anyone who wants to eat healthier.

The DASH eating plan includes whole grain products, fish, poultry, nuts, and low-fat dairy foods. It includes reduced amounts of red meat, sweets, and sugar-containing beverages. It is rich in magnesium, potassium, and calcium, as well as protein and fiber.

It's important to eat a variety of foods, but it's also important to not eat too much.

I. How Much Is a Serving?



Handout 12–10: The DASH Eating Plan

Review the handout with the CHWs. Talk about the plan. Ask if they have questions about the plan. Ask them to look at the DASH Eating Plan to see the serving sizes that are best for them. Ask CHWs how they could adopt the plan. Ask the CHWs how they would talk about the DASH Eating Plan with community members. Ask for volunteers to role play CHWs and community members.



Handout 12–11: Serving Sizes

Review the handout with the CHWs. Talk about the plan. Ask if they have questions. Ask CHWs what they think is the average serving sizes of food they have been eating. Remind them to check the serving size on canned and packaged foods.

► Say:

Take a good look at your dinner plate. Vegetables, fruit, and whole grains should take up the largest part of your plate. If they do not, replace some of the meat, cheese, white pasta, or rice with your favorite vegetable. This will lower the total calories in your meal without reducing the amount of food you eat. BUT remember to use a normal- or small-size plate—not a platter.

**Handout 12–12: What Community Health Workers Can Do to Help Community Members Make Healthier Food Choices**

Ask the CHWs for ideas for helping people eat more healthily. What changes will people need to make? What roadblocks may get in the way?

Encouraging and helping people to choose healthy foods and drinks is very important for creating a healthy community, but it is also very important to create environments and establish policies that offer opportunities for healthy eating for all community members.

For example, CHWs can encourage places of worship to have a policy that encourages healthy (low fat) baked foods instead of high-fat fried foods and less sugary, rich desserts to be brought to social events. Schools and work sites can remove sugary drinks and junk food from their vending machines and replace them with healthier foods and drinks.

3. Summary

► **Ask:**

- How do you know if you are overweight?
- What causes people to be overweight or obese?
- Why is it unhealthy to be overweight?
- What are suggestions for losing weight?
- What kinds of food are healthy to eat?
- What foods should you limit in your diet?
- How do you read food labels?
- What are some tips for eating healthier food?
- How much is a serving?
- Why is it important to check the serving size on canned and packaged foods?

Protect Your Heart. Watch Your Weight.

Check the chart to find your body mass index (BMI). Find your height on the left of the graph. Go straight across from that point until you come to your weight. The number at the top of that row is your BMI.

	HEALTHY WEIGHT						OVERWEIGHT					OBESE					
BMI	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Height	Weight (in pounds)																
4'10"	91	96	100	105	110	115	119	124	129	134	138	143	148	153	158	162	167
4'11"	94	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	173
5'0"	97	102	107	112	118	123	128	133	138	143	148	153	158	163	168	174	179
5'1"	100	106	111	116	122	127	132	137	143	148	153	158	164	169	174	180	185
5'2"	104	109	115	120	126	131	136	142	147	153	158	164	169	175	180	186	191
5'3"	107	113	118	124	130	135	141	146	152	158	163	169	175	180	186	191	197
5'4"	110	116	122	128	134	140	145	151	157	163	169	174	180	186	192	197	204
5'5"	114	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204	210
5'6"	118	124	130	136	142	148	155	161	167	173	179	186	192	198	204	210	216
5'7"	121	127	134	140	146	153	159	166	172	178	185	191	198	204	211	217	223
5'8"	125	131	138	144	151	158	164	171	177	184	190	197	203	210	216	223	230
5'9"	128	135	142	149	155	162	169	176	182	189	196	203	209	216	223	230	236
5'10"	132	139	146	153	160	167	174	181	188	195	202	209	216	222	229	236	243
5'11"	136	143	150	157	165	172	179	186	193	200	208	215	222	229	236	243	250
6'0"	140	147	154	162	169	177	184	191	199	206	213	221	228	235	242	250	258
6'1"	144	151	159	166	174	182	189	197	204	212	219	227	235	242	250	257	265
6'2"	148	155	163	171	179	186	194	202	210	218	225	233	241	249	256	264	272
6'3"	152	160	168	176	184	192	200	208	216	224	232	240	248	256	264	272	279
6'4"	156	164	172	180	189	197	205	213	221	230	238	246	254	263	271	279	287

the top of that row is your BMI.

What is BMI?

- BMI measures weight in relation to height.
- Heart disease risk increases at higher levels of overweight and obesity.

My weight _____

My BMI _____

Waist Circumference:

A waist measurement of more than 35 inches for women and more than 40 inches for men is high. A high waist measurement increases your risk for heart disease.

My waist measurement _____

What Does Your BMI Mean?

■ **Healthy Weight** (BMI from 18.5–24.9) Good for you! Make it a goal to keep your healthy weight.

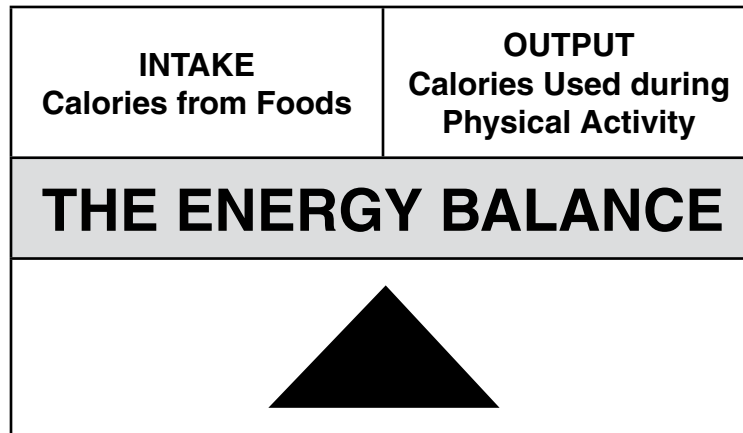
■ **Overweight** (BMI from 25–29.9) Try not to gain any weight. You need to lose weight if you have two or more risk factors and:

- are overweight, or
- have a high waist measurement

Ask your doctor or registered dietitian for help.

■ **Obese** (BMI 30 or higher) You need to lose weight. Lose weight slowly about 1–2 pounds a week. Ask your doctor or registered dietitian for help.

The Energy Balance



Controlling body weight is a balancing act. If you eat more than your body needs to stay healthy, you gain weight. If you eat less and begin getting rid of these extra calories, you lose weight!

If your weight is not in the healthy range, try to reduce health risks by choosing healthy foods and by becoming more physically active. Cutting out one 12 oz. soda (150 calories) or adding a brisk 30-minute walk most days can subtract about 10 pounds from your weight each year.


Tilt the Balance with Healthy Eating

- Eat a variety of foods that are low in calories and high in nutrients. Check the Nutrition Facts label on canned or packaged foods.
- Eat less fat and fewer high-fat foods.
- Eat smaller portions of foods high in fat and calories.
- Eat more vegetables and fruits without adding fats and sugars during preparation or at the table.
- Eat pasta, rice, breads, and cereals without adding fats and sugars during preparation or at the table.
- Eat less sugar and fewer sweets (such as candy, cookies, cakes, and ice cream).
- If you drink alcohol, limit it to no more than one drink per day for women or two drinks per day for men.

Tilt the Balance with Physical Activity

Adding physical activity five or more times a week to your schedule uses 150 calories of energy on each day of activity.

The following moderate activities* burn approximately 150 calories:

Examples of Moderate Amounts of Physical Activity		
<p>Common Chores</p> <ul style="list-style-type: none"> • Washing and waxing a car for 45–60 minutes • Washing windows or floors for 45–60 minutes • Gardening for 30–45 minutes • Wheeling self in wheelchair for 30–40 minutes • Pushing a stroller 1½ miles in 30 minutes • Raking leaves for 30 minutes • Walking 2 miles in 30 minutes (15 min/mile) • Shoveling snow for 15 minutes • Stair walking for 15 minutes 	<p>Sporting Activities</p> <ul style="list-style-type: none"> • Playing volleyball for 45–60 minutes • Playing touch football for 45 minutes • Walking 1¾ miles in 35 minutes (20 min/mile) • Basketball (shooting baskets) for 30 minutes • Bicycling 5 miles in 30 minutes • Dancing fast (social) for 30 minutes • Water aerobics for 30 minutes • Swimming laps for 20 minutes • Basketball (playing game) for 15–20 minutes • Bicycling 4 miles in 15 minutes • Jumping rope for 15 minutes • Running 1½ miles in 15 minutes (10 min/mile) 	<p>Less Vigorous, More Time</p>  <p>More Vigorous, Less Time</p>

* Talk to your health care provider before starting a vigorous exercise program if you have ever had heart trouble or high blood pressure; if you suffer from chest pains, dizziness or fainting, or arthritis; or if you are over age 40 (men) or 50 (women).

Tips To Help You Lose Weight

1. Choose foods low in fat and low in calories. Try:

- ♥ Fat free (skim) milk or lowfat (1 percent) milk
- ♥ Cheeses marked “lowfat” or “fat free” on the package
- ♥ Fruits and vegetables without butter or sauce. Fruits and vegetables are low in calories and help you feel fuller.
- ♥ Rice, beans, cereals, corn tortillas, and pasta



- ♥ Lean cuts of meat, fish, and skinless turkey and chicken
- ♥ Drink water or low-calorie beverages instead of soda pop and sugar-filled fruit drinks.



2. Make foods the healthy way.

- ♥ Bake, broil, or boil foods instead of frying.
- ♥ Cook beans and rice without lard, bacon, or fatty meats.
- ♥ Use less high-fat cheeses, cream, and butter when cooking.
- ♥ Use cooking oil spray or a little bit of vegetable oil or margarine when cooking.
- ♥ Garnish salads with lowfat or fat free mayonnaise and salad dressings.



3. Limit your portion size.

- ♥ Serve smaller portions—do not go back for seconds.
- ♥ Eat smaller meals and snacks throughout the day instead of one big meal.
- ♥ If you drink fruit juice, make sure it is 100 percent fruit juice and keep an eye on the portion size. The calories in beverages add up quickly.

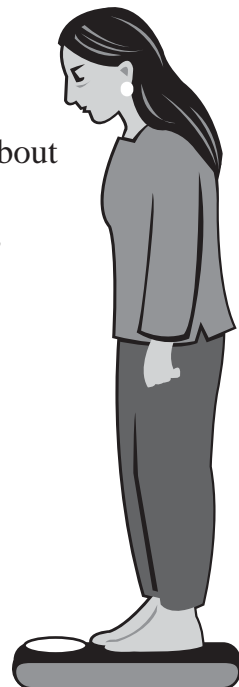
4. Get active! Don't make excuses!

- ♥ Do your favorite physical activity for at least 30 minutes each day. You can do 10 minutes of activity three times a day.

Try this: If you are pressed for time, walk for 10 minutes three times a day.

5. Aim for a healthy weight.

- ♥ Try not to gain extra weight. If you are overweight, try to lose weight slowly. Lose about 1 to 2 pounds a week. Even losing 10 pounds can help reduce your chances of developing heart disease.



Tips for Eating Out the Heart-Healthy Way

You don't have to give up eating fast foods to eat right.

Here are some tips on how to make heart healthy choices at fast-food restaurants.

Sandwiches

- ♥ Order sandwiches without mayonnaise, tartar sauce, or special sauces. Try mustard or lowfat mayonnaise.
- ♥ Order small, plain hamburgers instead of super-size and deluxe sandwiches.
- ♥ Order sandwiches made with lean roast beef or turkey. Chicken salad and tuna salad made with regular mayonnaise are high in fat and calories.
- ♥ Choose grilled chicken sandwiches instead of breaded chicken sandwiches.

Main dishes

- ♥ Many entrees are big enough to serve two people (sometimes more). Share an entree with a friend or family member, or cut your meal in half (put it in a box right away) and take the rest home.
- ♥ Consider the appetizer selections. These items are generally smaller portions, and you may request that they be served as your entree item.
- ♥ Choose rotisserie-style chicken rather than fried chicken. Always remove the skin.
- ♥ Order pizza with vegetable toppings like peppers, mushrooms, or onions. Ask for half the usual amount of cheese.



Side dishes

- ♥ Share a small order of French fries instead of eating a large order by yourself.
- ♥ Ask that no salt be added to your serving.
- ♥ Order a baked potato instead of fries.
 - Try salsa or vegetables as a potato topping.
 - Ask that high fat toppings be served on the side, and use less.
- ♥ Use low calorie/lowfat salad dressing when eating a salad. Bring your own if the restaurant does not offer a low fat version. You can buy packets at some stores. Ask that condiments such as dressing, cheese, and sour cream be served on the side, and use less.



Beverages

- ♥ Choose water, 100 percent fruit juice, or lowfat (1 percent) or fat free (skim) milk rather than a soda or a milk shake.
- ♥ If you want a soda, order a diet soda or small regular soda.
- ♥ If you drink 100 percent fruit juice, watch the serving size and keep in mind that it has a lot of naturally occurring sugar.



Desserts

- ♥ Try fresh fruit or a small nonfat frozen yogurt instead of cookies or pies.

Average Daily Calories for Men and Women

Average Daily Amount of Calories (in Kilocalories) for Men and Women by Age		
Age (years)	Women	Men
19-30	2,000-2,200	2,400-3,000
31-50	1,800-2,200	2,200-3,000
51+	1,600-2,200	2,000-2,800

The amount of calories you need each day depends on your age and how active you are. Here are some examples of the calorie needs of people at different ages and with different activity levels:

Grandma Brown is 71 years old and only does the light physical activity that is part of daily living. She has low activity. She only needs 1,600 calories a day. This amount is at the lowest end of the range for her age.

Aunt Mary is 45 years old and is moderately active. Besides the light physical activity that is part of daily living, she walks 1 1/2 to 3 miles a day, at 3 to 4 miles an hour. She needs about 2,000 calories a day. This amount is in the middle of the range for her age.

Cousin Joe is 21 years old. He is a highly active person. Besides the light physical activity that is part of daily living, he walks more than 3 miles a day, at 3 to 4 miles an hour. He needs about 3,000 calories a day. This amount is at the high end of the range for his age.

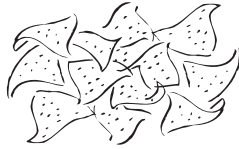
Remember, if you want to lose weight you need take in fewer calories a day and increase your amount of physical activity.

Sodium in Foods

Choose **MORE** Often

(Foods **LOWER** in Sodium)

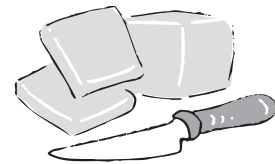
- Chicken and turkey (with skin removed)
- Fresh fish or rinsed canned fish such as salmon or tuna
- Canned foods packed in water
- Low sodium or reduced sodium cheeses
- Low salt or salt free chips, nuts, pretzels
- Plain rice, noodles, or pasta
- Homemade, low sodium, or reduced sodium chips
- Fresh, frozen, “no salt added,” or rinsed canned vegetables
- Spices, herbs, and flavorings such as cilantro, dill, basil, parsley, garlic powder, onion powder, vinegar, and chili



Choose **LESS** Often

(Foods **HIGHER** in Sodium)

- Smoked and cured meats such as bacon, ham, sausage, hot dogs, and bologna
- *Canned lunch meat, canned fish such as sardines (that are not rinsed), and salted/dried cod
- *Canned foods packed in broth or salt
- Most cheeses
- Salty chips, crackers, nuts, and pretzels
- Quick-cooking rice, boxes of mixed rice, potatoes, or noodles
- Regular canned soups or instant soups
- *Regular canned vegetables, pickles, olives, and pickled vegetables
- Condiments and seasonings such as soy sauce, ketchup, garlic salt, seasoning salt, bouillon cubes, meat tenderizer, and monosodium glutamate (MSG)



*Rinse canned foods to reduce the sodium.

Tips To Eat Less Salt and Sodium

1. Read the food label to choose foods lower in sodium.
2. Eat fewer canned and processed foods that are high in sodium (e.g., bologna, crisp pork rinds, sausage, pepperoni, salami, hot dogs, regular canned and instant soups, regular cheese, and chips).

3. Eat fresh fruits and vegetables instead of salty snacks.
4. Eat fewer salted crackers and nuts. Try unsalted nuts and unsalted or low sodium crackers.



5. Eat fewer olives and pickles.

6. Use half the amount of salt you normally use when cooking, if any. Gradually reduce the amount of salt you use, until you use none.



7. Season food with herbs and spices instead of salt.
8. Use reduced sodium bouillon, and soy sauce. If you use these condiments, do not add salt to your food.

9. Use garlic **powder** and onion **powder** instead of garlic salt or onion salt.

10. Use less salt at the table.

11. Eat vegetables and fruits without adding salt.



12. When eating out, ask that salt **not be** added to your portion, especially with french fries.

13. Taste your food before you add seasoning.

Use Herbs and Spices Instead of Salt

Basil: Use in soups, salads, vegetables, fish, and meats.



Cinnamon: Use in salads, vegetables, and breads.

Cilantro: Meats, sauces, stews, and rice.

Chili Powder/Chile Pequeño: Use in soups, salads, vegetables, and fish.

Cloves: Use in soups, salads, and vegetables.

Dill Weed and Dill Seed: Use in fish, soups, salads, and vegetables.

Garlic Powder: Used in pasta sauces, stews, soups, marinades, and meats.

Ginger: Use in soups, salads, vegetables, and meats.

Marjoram: Use in soups, salads, vegetables, beef, fish, and chicken.

Nutmeg: Use in vegetables and meats.

Oregano: Use in soups, salads, vegetables, meats, and chicken.



Onion Powder: Meats, poultry, soups, and salads.

Parsley: Use in salads, vegetables, fish, and meats.



Rosemary: Use in salads, vegetables, fish, and meats.

Sage: Use in soups, salads, vegetables, meats, and chicken.

Thyme: Use in salads, vegetables, fish, and chicken.



Note: To start, use small amounts of these herbs and spices to see if you like them.

Be Good to Your Heart.

Know Your Cholesterol Numbers and Take Action!

Do you know your cholesterol and triglyceride numbers?

A lipid profile measures your cholesterol and triglyceride levels and can be tested at the doctor's office. Adults 20 and older should have a lipid profile.

Here is what your cholesterol numbers mean:

Total cholesterol (mg/dL):

Less than 200	Desirable
200–239	Borderline high: Depending on your other risk factors, you may be at a higher risk for heart disease.
240 or higher	High: You are at risk for clogged arteries and a heart attack.

LDL (lousy, bad) cholesterol (mg/dL): Keep it low!

Less than 100	Optimal (ideal)
100–129	Near optimal/above ideal
130–159	Borderline high
160–189	High
190 and above	Very high

Write Your Numbers Here

Total: _____

LDL: _____

HDL: _____

Triglycerides: _____

HDL (healthy, good) cholesterol (mg/dL):

The higher the better! Keep it above 40.

Triglycerides (mg/dL) Keep it below 150.

Make the switch to heart healthy eating today!

How I switched my family from whole to fat free milk:

To switch my family from drinking whole milk to fat free milk, I served them whole milk mixed with reduced fat milk for a month. During the next month, I served them reduced fat milk mixed with lowfat milk, then lowfat milk mixed with fat free milk, until they were drinking only fat free milk. Soon they couldn't even taste the difference.



How to Read Food Labels

The Nutrition Facts food label found on canned and packaged foods is one of the best tools we have for choosing foods for a healthy diet. The food label gives serving size and number of servings in the container. It also gives the amount of calories, fat, saturated fat, cholesterol, and sodium in one serving of the food.

Nutrition Facts	
Serving Size: 1 cup (228g) Servings Per Container: 2	
Amount Per Serving	
Calories 250 Calories from Fat 110	
	% Daily Value*
Total Fat 2.5g	18%
Saturated Fat 3g	15%
Trans Fat 3g	
Cholesterol 30mg	
Sodium 470 mg	20%
Potassium 700mg	20%
Total Carbohydrate 31g	10%
Dietary Fiber 0g	0%
Sugars 5g	
Protein 5g	
Vitamin A	4%
Vitamin C	2%
Calcium	20%
Iron	4%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:	
	Calories 2,000 2,500
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2400mg 2400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g

← Start here

← Check calories

Quick guide to % DV
5% or less is low
20% or more is high

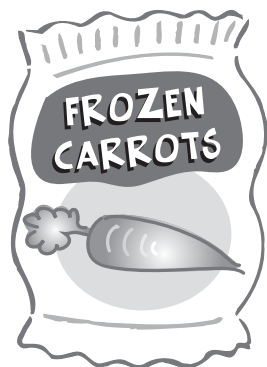
← Limit these

← Get enough of these

← Footnote

Finding Your Way to a Healthier You: Based on the Dietary Guidelines for Americans. U.S. Department of Health and Human Services, U.S. Department of Agriculture.

Read the Food Label for Sodium!



Food labels tell you what you need to know about choosing foods that are lower in sodium. Here's a food label for frozen carrots. The label tells you:

Amount Per Serving

The nutrient amounts are for one serving. So, if you eat more or less than a serving, you need to add or subtract nutrient amounts. For example, if you eat 1 cup of carrots, you are eating two servings.

Nutrients: Sodium

Listed are the amounts of sodium in one serving. These amounts are given in milligrams.

Frozen Carrots

Nutrition Facts	
Serving Size 1/2 cup (64g)	
Servings Per Container 5	
Amount Per Serving	
Calories 30	Calories from Fat 0
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 35mg	2%
Total Carbohydrate 6g	2%
Dietary Fiber 2g	8%
Sugars 3g	
Protein 1g	
Vitamin A 100% • Vitamin C 2%	
Calcium 2%	• Iron 0%
<small>*Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.</small>	

Number of Servings

The serving size is 1/2 cup. There are about five servings in the package. Remember, the numbers on the label are for ONE serving, NOT the whole container.

Percent Daily Value

The Percent DV helps you compare products and quickly tells you if the food is high or low in sodium. Choose products with the lowest Percent DV for sodium. 5 percent or less is low and 20 percent or more is high.

The Choice Is Yours—Compare!

Which one would you choose?

Frozen carrots are lower in sodium.

Read the food labels and choose foods that are lower in sodium to help keep your heart strong.

Calories 30	Calories from Fat 0
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 35mg	2%

Frozen Carrots

One serving (1/2 cup) of frozen carrots has only 35 mg of sodium and 2 percent of the Daily Value for sodium, which is low (5 Percent DV is low).

Calories 30	Calories from Fat 0
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 380mg	16%

Canned Carrots

One serving (1/2 cup) of canned carrots has 380 mg of sodium and 16 Percent DV for sodium. That is more than ten times the sodium found in a serving of frozen carrots.

Read the Food Label for Saturated Fat!



Food labels tell you what you need to know about choosing foods that are lower in saturated fat, trans fat, and cholesterol. Here's a food label for a can of pork luncheon meat. The label tells you:

Amount Per Serving

The nutrient amounts are for one serving. So, if you eat more or less than one serving, you need to add or subtract nutrient amounts. For example, if you eat 4 ounces of meat, you are eating two servings. So, you need to double the amount of total fat, saturated fat, and cholesterol.

Nutrients

Here are the amounts of saturated fat, trans fat, and cholesterol in one serving. These amounts are given in grams (g) or milligrams (mg).

Canned Lunch Meat

Nutrition Facts	
Serving Size 2 oz (56g)	
Servings Per Container 6	
Amount Per Serving	
Calories 190	Calories from Fat 155
% Daily Value*	
Total Fat 17g	26%
Saturated Fat 6g	30%
Trans Fat 0g	
Cholesterol 35mg	11%
Sodium 730mg	30%
Total Carbohydrate 1g	0%
Dietary Fiber 0g	0%
Sugars 0g	
Protein 7g	
Vitamin A 0%	Vitamin C 0%
Calcium 0%	Iron 2%

*Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.

Serving size and number of servings

The serving size is 2 ounces. There are six servings in the can.

Percent Daily Value

The Percent DV helps you compare products. Choose products with the lowest Percent DV for saturated fat, and cholesterol. If you have high blood cholesterol you need even less saturated fat, trans fat, and cholesterol. A doctor or registered dietitian can help you with this.

The Choice Is Yours—Compare!

Which one would you choose?

The lean meat is lower in saturated fat, cholesterol, and calories.

That makes the lean meat a better choice! Read food labels and choose products to keep your heart strong.

Calories 190	Calories from Fat 155
% Daily Value*	
Total Fat 17g	26%
Saturated Fat 6g	30%
Trans Fat 0g	
Cholesterol 35mg	11%
Sodium 730mg	30%

Canned Lunch Meat

Two ounces of canned meat have 30 percent (over 1/3) the DV of saturated fat you should limit yourself to in 1 day—that's a lot.

Calories 60	Calories from Fat 15
% Daily Value*	
Total Fat 1.5g	2%
Saturated Fat 0.5g	3%
Trans Fat 0g	
Cholesterol 25mg	8%
Sodium 470mg	20%

Lean Lunch Meat

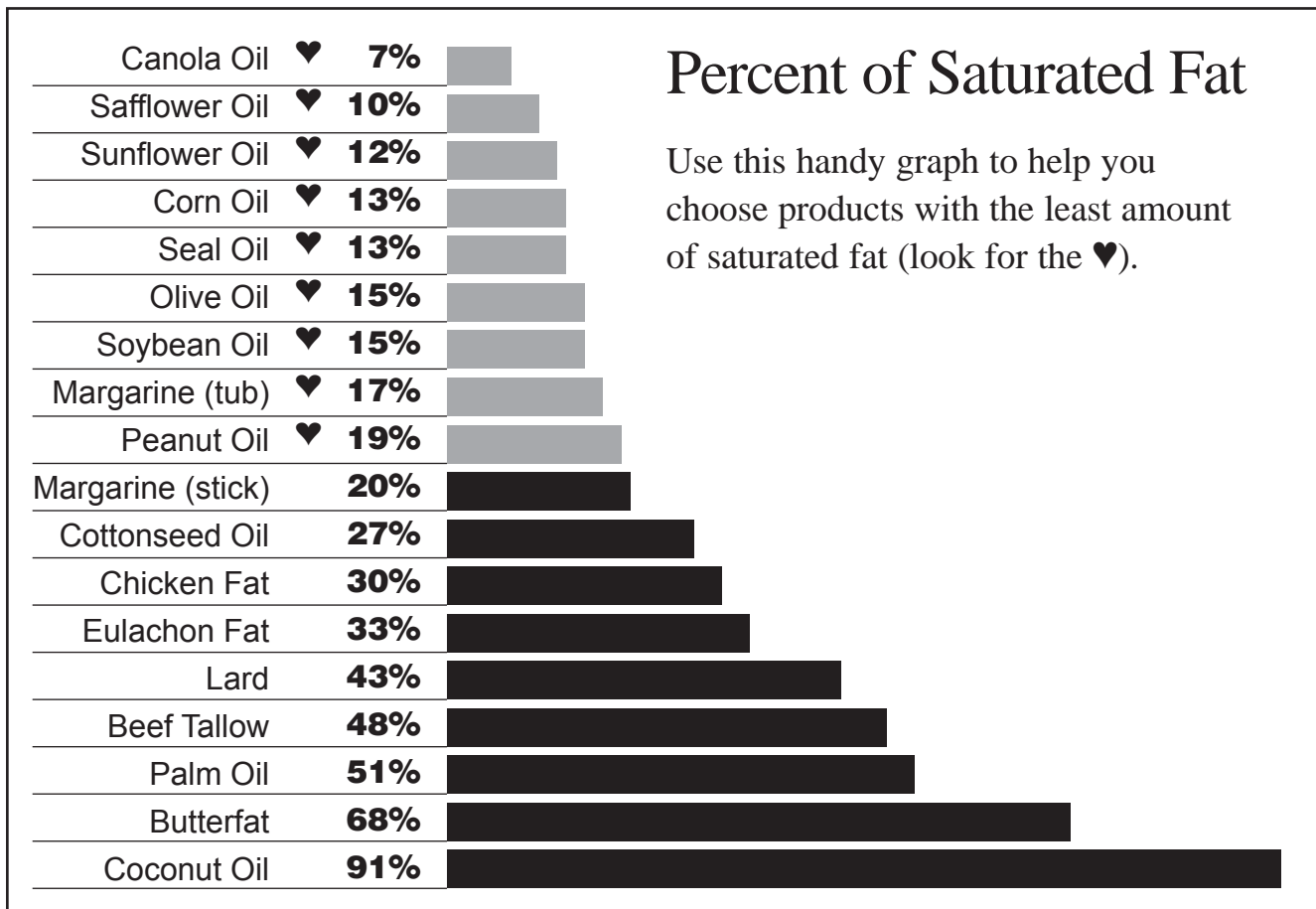
Two ounces of lean lunch meat have only 3 Percent DV of saturated fat. You can learn a lot from a food label.

Fats and Oils To Choose

When you do use fats and oils, choose those with less saturated fat.

Lower in Saturated Fat— Choose <u>More</u> Often	Higher in Saturated Fat— Choose <u>Less</u> Often
♥ Canola, olive, safflower, soybean, and sunflower oils	♥ Butter
♥ Margarine (especially light margarine)	♥ Solid shortening
	♥ Lard
	♥ Fatback
	♥ Stick margarine

Read the Food Label To Choose Foods
Lower in Saturated Fat, Trans Fat, and Cholesterol!



Adapted from Canola Council of Canada

The DASH Eating Plan—Number of Daily Servings for Calorie Levels

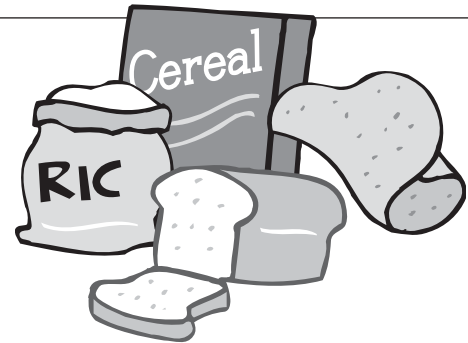
Grains	6 servings	7–8 servings	10–11 servings	12–13 servings	1 slice bread; 1 oz dry cereal; ½ cup cooked pasta, rice, or cereal	Whole wheat bread, English muffin, pita, bread, bagel, cereals, grits, oatmeal, crackers, unsalted pretzels, and popcorn	Major sources of energy and fiber.
Vegetables	3–4 servings	4–5 servings	5–6 servings	6 servings	1 cup raw leafy vegetable, ½ cup cooked vegetable, 6 oz vegetable juice	Tomatoes, potatoes, carrots, green peas, squash, broccoli, turnip greens, collards, kale, spinach, artichokes, green beans, lima beans, sweet potatoes	Rich sources of potassium, magnesium, and fiber.
Fruits	4 servings	4–5 servings	5–6 servings	6 servings	6 oz fruit juice; 1 medium fruit; ¼ cup dried fruit; ½ cup fresh, frozen, or canned fruit	Apricots, bananas, dates, grapes, oranges, orange juice, grapefruit, grapefruit juice, mangoes, melons, peaches, pineapples, prunes, raisins, strawberries, tangerines	Important sources of potassium, magnesium, and fiber.
Low-fat or fat-free dairy foods	2–3 servings	2– servings	3 servings	3–4 servings	8 oz milk; 1 cup yogurt; 1½ oz cheese	Fat-free or low-fat milk, fat-free or low-fat buttermilk, fat-free or low-fat regular or frozen yogurt, low-fat and fat-free cheese	Major sources of calcium, protein, potassium and magnesium.

Meat, poultry, fish	1–2 servings	2 or fewer servings	2 servings	2–3 servings	3 oz cooked meats, poultry, or fish	Select only lean types; trim away visible fats; broil, roast, or boil instead of frying; remove skin from poultry	Rich sources of protein and magnesium.
Nuts, seeds, legumes	3–4 servings/week	4–5 servings/week	1 serving	1 serving	1/3 cup or 1½ oz nuts; 2 tbsp or ½ oz seeds; ½ cup cooked dry beans or peas	Almonds, filberts, mixed nuts, peanuts, walnuts, sunflower seeds, kidney beans, lentils	Rich sources of energy, magnesium, potassium, protein, and fiber.
Fat and oils	2 servings	2–3 servings	3 servings	4 servings	1 tsp soft margarine; 1 tbsp low-fat mayonnaise; 2 tbsp light salad dressing; 1 tsp vegetable oil	Soft margarine, low-fat mayonnaise; light salad dressing, vegetable oil (such as olive, corn, canola, or safflower)	DASH has 27 percent of calories as fat (low in saturated fat), including fat in or added to foods.
Sweets	0 servings	5 servings/week	2 servings	2 servings	1 tbsp sugar; 1 tbsp jelly or jam; ½ oz jelly beans; 8 oz lemonade	Maple syrup; sugar; jelly; jam; fruit-flavored gelatin; jelly beans; hard candy; fruit punch sorbet, ices	Sweets should be low in fat.

Serving Sizes*

Breads, Cereals, Rice, and Pasta

- ♥ 1 slice of bread
- ♥ 1 ounce of ready-to-eat cereal
- ♥ 1/2 cup of cooked cereal, rice, or pasta
- ♥ 1 tortilla



Fruit

- ♥ 1 medium apple, banana, or orange
- ♥ 1/2 cup of chopped, raw, cooked, or canned fruit
- ♥ 3/4 cup of 100 percent fruit juice
- ♥ 1/4 cup of dried fruit



Vegetables

- ♥ 1 cup of raw leafy vegetables
- ♥ 1/2 cup of other vegetables, cooked or chopped raw
- ♥ 3/4 cup of vegetable juice



Milk, Yogurt, and Cheese

- ♥ 1 cup of fat free (skim) or lowfat milk (lactose free, if needed) or yogurt
- ♥ 1 1/2 ounces of lowfat natural cheese
- ♥ 2 ounces of lowfat processed cheese



Lean Meat, Poultry, Fish, Dry Beans, Eggs, and Nuts

- ♥ 2 to 3 ounces of cooked lean meat, poultry without the skin, or fish
- ♥ 1/2 cup of cooked dry beans or 1 egg equals 1 ounce of lean meat
- ♥ 2 tablespoons of peanut butter or 1/3 cup of nuts equals 1 ounce of meat



* These serving sizes may differ from those found on a food label.

What CHWs Can Do to Help Community Members Make Healthier Food Choices (with Program Support)

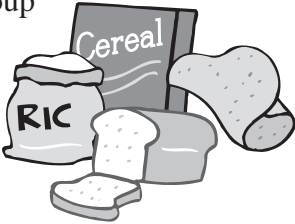

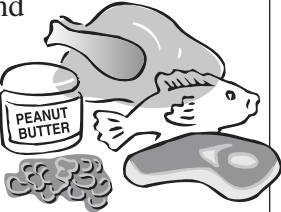
Talk about the benefits of healthier eating.

- You will have more energy.
- You will reduce the risk for heart disease, stroke, and diabetes.
- You can lose weight, feel better, and increase your chance for a longer life.

Ideas for healthier eating:

Roadblocks to Healthier Eating	Overcoming These Roadblocks
I don't have time...	Plan ahead, pack your lunch the night before for the next day, plan meals and shop ahead of time for a variety of nutrient-rich foods for meals and snacks throughout the week. Bring a healthy snack when you are away from home. On a long commute or shopping trip, pack some fresh fruit, cut-up vegetables, string cheese sticks, or a handful of unsalted nuts to help avoid impulsive, less healthful snack choices.
There are times during the day and in the evening when I am used to eating junk food, desserts, etc...	Plan ahead for these times and have low fat, low sugar items ready to eat like cut up fresh fruit and veggies and unbuttered, unsalted popcorn, stop buying and eating junk food like chips, packaged baked items, and soda. If you have these items in your house, put them out of sight.
I don't know how to get started...	Ask your healthcare provider or employer if there is a nutrition class you could take or a nutritionist you can talk to, make an action plan and set goals for yourself, look for healthier cooking recipes. When grabbing lunch, have a sandwich on whole-grain bread and choose low-fat/fat-free milk, water, or other drinks without added sugars. In a restaurant, have steamed, grilled, or broiled dishes instead of those that are fried or sautéed.
When I feel stressed I eat junk food...	Instead of eating unhealthy foods choose fresh fruits, veggies, or unbuttered, unsalted popcorn, go for a walk, work on a hobby, do something relaxing that you enjoy, drink water.
I'm afraid of slipping into old habits...	Find a support group in your community, ask your family and friends to support you, set new goals, make healthy eating a priority. Try new fruits, veggies, and grains, and recipes to keep from getting bored.
It's hard when I'm away from home...	Bring healthy snacks with you, drink water, make time for physical activity, choose healthy foods when eating out.

Choose a Variety of Heart Healthy Foods

<p>Grains Group: Breads, Cereal, Starchy Vegetable, Rice, and Pasta Group</p> 	<ul style="list-style-type: none"> ♥ Corn or lowfat whole wheat tortillas ♥ Sliced bread (like wheat, rye, or white), pita bread, English muffins, and bagels ♥ Starchy vegetables such as potatoes, corn, and cooked dry beans, peas, and lentils ♥ Unsalted lowfat crackers (like graham crackers), unsalted pretzels, and plain popcorn ♥ Cooked hot cereals (not instant) and whole grain cold cereals ♥ Pasta (like plain noodles, spaghetti, macaroni) and rice
<p>Fruit Group</p>	<ul style="list-style-type: none"> ♥ Fresh, frozen, or canned fruit juices ♥ Fresh, frozen, canned, or dried fruits (like oranges, papaya, grapefruit, bananas, apples, mangoes, pineapples, watermelons, peaches, and fruit cocktail)
<p>Vegetable Group (without added fat)</p>	<ul style="list-style-type: none"> ♥ Fresh, frozen, or no salt added canned vegetables (like, green beans, carrots, cabbage, tomatoes, yucca, squash, and broccoli)
<p>Milk Group: Milk, Yogurt, and Cheese (Choose lowfat more often)</p>	<ul style="list-style-type: none"> ♥ Fat free (skim) and lowfat (1percent) milk ♥ Lowfat or fat free yogurt ♥ Cheeses lower in fat and sodium 
<p>Meat and Beans Group: Lean Meat, Poultry, Fish, Eggs, and Nuts</p> 	<ul style="list-style-type: none"> ♥ Chicken or turkey without the skin ♥ Fish ♥ Lean cuts of meat ♥ Beef: round, sirloin, chuck, loin, extra lean ground beef ♥ Pork: leg, shoulder, tenderloin, lean ham ♥ Nuts ♥ Cooked, dry beans, peas, and lentils ♥ Eggs
<p>Fats (Use only in small amounts)</p>	<ul style="list-style-type: none"> ♥ Margarine (liquid, tub (soft), and reduced calorie) ♥ Oils (like canola, corn, safflower, olive, peanut, or sesame oil)
<p>Sweets (Some may be high in calorie. Choose in small amounts.)</p>	<ul style="list-style-type: none"> ♥ Frozen treats (frozen juice pops, frozen lowfat yogurt, sherbet) ♥ Lowfat cake and cookies (angel food cake, fig bar cookies, ginger-snaps, animal crackers, vanilla wafers)

Objectives

By the end of this session, community health workers will be able to—

- Explain why physical activity is important.
- Explain to community members the basics of a personal physical activity program.
- Explain how much physical activity is necessary.
- Explain how physical activity helps people lose weight.
- Describe ways to motivate people to become more physically active.
- Describe ways to help the community be more supportive of physical activity.

Materials and Supplies

Flipchart, markers, tape, blackboard, chalk, and eraser.

Before the training session, make a list of free or low-cost recreational opportunities in your community and places where people can be physically active (for example, parks, community and recreation centers, senior centers, available school facilities, walking groups, walking trails, yoga or Tai Chi classes, dance programs, shopping mall walking programs, and ball fields). Make a copy of the list for each participant.

Handouts:

- 13–1: My Personal Physical Activity Plan
- 13–2: Make Physical Activity a Habit: My Personal Record
- 13–3: Ways to Add Physical Activity to Your Life
- 13–4: Walking Tips
- 13–5: Examples of Physical Activities and Their Intensity Levels
- 13–6: A. Stretching
B. How to Exercise
C. Sample Walking Program
- 13–7: Ideas for Becoming More Physically Active
- 13–8: What Can Communities Do to Support Physical Activity?

Training Aid 13–1: What Physical Activity Can Do for You

Chapter Outline

1. Overview
 2. Lesson
 - A. Why Is Physical Activity So Important?
 - B. How Do I Get Started?
 - C. How Much Physical Activity Is Needed?
 - D. How Does Physical Activity Help People Lose Weight?
 - E. What Community Health Workers Can Do to Help People Become More Physically Active
 - F. How Community Health Workers Can Help Create More Physically Active Communities
 3. Summary
-

Resources

Aim for a Healthy Weight. National Heart, Lung, and Blood Institute. <http://hin.nhlbi.nih.gov/joinhin/news/nutrition.htm>

American Heart Association/ American Stroke Association. www.americanheart.org

Centers for Disease Control and Prevention, Division of Physical Activity and Nutrition. www.cdc.gov/nccdphp/dnpa/physical/index.htm

Energize Yourself! Stay Physically Active. U.S. Department of Health and Human Services; Public Health Service; National Institutes of Health; National Heart, Lung, and Blood Institute. NIH Publication No. 97-4059. September 1997. www.nhlbi.nih.gov/health/public/heart/other/chdblack/energiz1.htm

Honoring the Gift of Heart Health: A Heart Health Educator's Manual for American Indians and Alaska Natives. National Heart, Lung, and Blood Institute and Indian Health Service; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov/health/prof/heart/other/aian_manual/index.htm

Marcus BH, Simkin LR. The stages of exercise behavior. *J Sports Med Phys Fitness.* 1993;33:83-88.

NIH SeniorHealth Web site. <http://nihseniorhealth.gov>

Physical Activity: Community Health Advisor Training Manual. UAB Prevention Center. University of Alabama at Birmingham. In Press

Shape Up America! www.shapeup.org

Your Heart Your Life: A Lay Health Educator's Manual. National Heart, Lung, and Blood Institute; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov/health/prof/heart/latino/lat_mnl.htm

1. Overview

► **Say:**

In earlier sessions, we talked about how important physical activity is. We've learned that being physically inactive puts people at risk for heart disease and stroke. Heart disease is twice as likely to develop in inactive people as in people who are physically active.

Men, women, and children are less active now than in the past. Fewer than half of all adults in America get the recommended amount of physical activity—at least 30 minutes most days.

Regular physical activity is important at all ages. Middle-aged and older people benefit from regular physical activity just as much as young people do.

2. Lesson

A. Why Is Physical Activity So Important?

► **Say:**

There are many reasons people should try to be physically active each day. For example, physical activity can—

- Lower the risk of developing heart disease and the risk of dying from heart disease.
- Lower the risk of having a second heart attack in people who have already had one heart attack.
- Lower the risk of stroke.
- Lower the risk of developing high blood pressure.
- Lower the risk of developing Type 2 diabetes.
- Lower both total blood cholesterol and triglycerides and increase HDL—the “good” cholesterol.



Training Aid 13–1: Reasons Why Being Physically Active Is Important

Ask the CHWs if they can think of other reasons for being active other than the ones given above. Write their responses on the flipchart.

If CHWs don't mention the following reasons, add them:

- Gives you more energy.
- Helps lower your blood pressure.
- Helps you lower your stress and feelings of depression and anxiety.
- Helps you feel better about yourself.
- Helps you control your weight.
- Helps you control your blood sugar.
- Helps you sleep better.
- Helps you build and keep healthy bones, muscles, and joints.
- Helps older adults become stronger and better able to move about without falling or becoming very tired.

Pass out copies of Training Aid 13–1.

► Say:

Four types of physical activity are important for staying healthy and fit:

- Strength exercises.
- Balance exercises.
- Stretching exercises.
- Endurance exercises.

Strength exercises build muscle and increase metabolism, helping to keep people's weight and blood sugar in check.

Balance exercises build leg muscles and help prevent falls.

Stretching exercises give people more freedom of movement to do the things they need and like to do.

Endurance exercises are any activity (for example, walking, jogging, swimming, or raking leaves) that increases the heart rate and breathing for an extended period.

B. How Do I Get Started?

► Say:

There are a few things you should know before starting to become more active.

Most people can safely increase their physical activity if they start slowly and sensibly. Before beginning, it's important to talk to your doctor or nurse, especially if you have—

- Arthritis.
- Diabetes.
- High blood pressure or any other heart condition.
- Pain or discomfort in the chest brought on by vigorous physical activity.
- Dizziness, lightheaded, or get breathless after mild activity.
- Other health problems and are 40 years and older if you are a man, or 50 years and older if you are a woman, and want to do a more vigorous activity, such as jogging.

If a person has had a heart attack, it's important that he or she talk to the doctor to get help in planning a safe activity program that will help prevent heart pain and further damage from overexertion. People who include regular physical activity in their lives after a heart attack improve their chances of survival.

Drink plenty of water before and after exercising, even if you're not thirsty. Special sports drinks aren't needed.

Wear comfortable clothes, and wear shoes that give your feet support.

Never wrap your body in plastic! You'll risk getting heat stroke. Any weight you lose will only be water weight lost from sweating.

Don't wear clothing that's too heavy.

Put off physical activity if you have a fever or are ill.

Many communities have recreational facilities, such as parks and community centers, that are open to all without cost, and many offer free or low-cost classes.

**Handout 13–1: My Personal Physical Activity Plan**

Tell CHWs that setting a goal is a good way to get started on increasing their physical activity and to stay on track. Review Handout 13-1 with the CHWs. Ask them how much physical activity a person should engage in each week. Have them fill out activity plans for themselves. Tell them that Handouts 13-1 and 13-2 are useful handouts for CHWs to give community members.

**Handout 13–2: Make Physical Activity a Habit:
My Personal Record**

Another suggestion to help people stay on track is to keep a Physical Activity Record. This record tracks time spent or miles walked. One mile walked, or about 20 minutes of moderate activity, burns 100 calories. People can work toward reaching a physical activity goal of at least 1,000 calories burned each week. Burning 1,000 calories requires walking 10 miles or spending 200 minutes in moderate activity.

► Say:

You should know about places where people can be active in your community and where physical activity classes are offered. Check if shopping malls near you have walking programs. Many malls are open early in the morning and late at night to provide a safe walking place for people who don't want to walk alone, in the dark, or outside. Many other places, such as parks, recreation centers, and schools, have physical activity areas. Remind community members who go walking after dark to make sure the area is well-lit and to go with a friend or two.

Recreation centers and senior centers often offer water aerobic or water arthritis classes or Tai Chi classes that help improve flexibility and balance. They may also offer sitting exercise classes for people who cannot stand or walk easily.

(Give each participant a copy of the list of local recreational facilities and free or low-cost physical activity classes.)

There are a variety of enjoyable physical activities. The key is to find one that you like. Some of the most popular are—

- Walking. This activity is the most natural exercise of all, and it fits with most everyone’s lifestyle.
- Gentle exercise. Classes that teach gentle exercise provide great opportunities to be social and to get support from others in becoming more physically active.
- Swimming. This activity provides good all-around exercise and is a great way to get fit.
- Water aerobics. This type of exercise is usually taught in a group class in the water and is especially popular among older adults.
- Weight training. This exercise keeps bones and muscles strong.
- Tai Chi. This form of martial arts combines a physical workout with relaxation.
- Gardening. This activity provides hours of enjoyment while improving strength and flexibility.



Handout 13–3: Ways to Add Physical Activity to Your Life

Review the suggestions in the handout with the CHWs. Discuss how they can use this handout when talking to community members.

► **Say:**

If you are still unsure which type of activity might be best for you, try walking. Walking doesn’t require special equipment, it doesn’t cost anything, and it can be a lot of fun.

A goal to set for yourself is walking 10,000 steps each day. The best way to keep track of your steps is to buy a low-cost pedometer from a discount store, drugstore, or grocery store. You fasten the pedometer to your belt, pants, or skirt, and it measures your steps. Wear the pedometer for two weeks, and at the end of each day write down the number of steps you took. You might be surprised to see how few steps you take. Set a goal to slowly increase the number of steps you take each day (for example, add 500 steps a day for one week, then add 500 more steps daily the following week, and so on) until you reach 10,000 steps a day. **You can do it!**

**Handout 13–4: Walking Tips**

Review the walking guidelines in this handout with the CHWs. Ask them how they can use this handout to help community members start walking.

C. How Much Physical Activity Is Needed?**► Say:**

Adults should get a total of at least **30 minutes** of moderate physical activity most days the week, or every day if possible.

If you can't set aside 30 minutes at one time to be active, you can break your activity into shorter periods of at least 10 minutes. Just be sure it adds up to at least 30 minutes on most days.

For example, you can—

- Park your car farther away and walk to your office, or take the stairs instead of the elevator. If done before and after work, this change could equal 10 minutes of physical activity each workday.
- Take a 10-minute walk at lunch time.
- Dance to your favorite music for at least 10 minutes later in the day.
- On grocery shopping trips, park as far from the store as possible and walk around the store a couple of times before you begin your shopping. You will have added another 10 minutes.

Remember, whatever activity you choose to do, be physically active, at a moderate intensity for at least 30 minutes most days of the week.

Increasing the intensity or the amount of time that you are physically active can have even greater health benefits and may be needed to control body weight.

About 60 minutes a day may be needed to prevent weight gain or to lose weight.

Children and teenagers should be physically active 60 minutes every day, or most every day.

► **Ask:**

How do you know if an activity is at a moderate level of intensity?

► **Say:**

A simple method for measuring intensity of an activity is the “talk test.”

The talk test method of measuring intensity is simple. If you are active at a *light* intensity level, you should be able to sing while doing the activity.

If you are active at a *moderate* intensity level, you should be able to talk to others comfortably during the activity.

If you become too winded or too out of breath to talk to others, the intensity level of the activity is high.



Handout 13–5: Examples of Physical Activities and Their Intensity Levels

Review the handout with the CHWs. Point out activities that can be done at different intensity levels, such as housework, golf, swimming, and bicycling. Advise non-active people to start with activities at moderate intensity levels and work up to activities at high intensity levels.

D. How Does Physical Activity Help People Lose Weight?

► **Say:**

Physical activity burns calories.

A calorie is a measure of the energy in food. You may remember from an earlier session that we get nutrients and energy from the food we eat. Food is our bodies’ fuel.

The more calories in a food, the more energy or activity it takes to burn those calories. Extra calories are stored in our bodies as fat.

You should burn at least 1,000 calories a week by being physically active. Burning this many calories takes about 30 minutes of activity seven times per week.

Burning up to 2,000 calories a week may offer even greater health benefits—

- Walking one mile (2,000 steps) in about 20 minutes burns about 100 calories.
- Walking two miles (4,000 steps) five times a week will burn about 1,000 calories.
- Drinking one 12-ounce soda (150 calories) a day can add about 10 pounds to your weight each year.
- Thirty minutes of brisk walking most days can subtract about 10 pounds from your weight each year.

E. What Community Health Workers Can Do to Help People Become More Physically Active

► Say:

If a person has been inactive for a while, encourage him or her to start slowly. He or she should start out with as little as five minutes of walking at a time and then slowly more add minutes to that time.



Handout 13–6: A. Stretching B. How to Exercise C. Sample Walking Program

Review the handout with the CHWs. Invite the CHWs to share ideas on how they can help people in their community become more physically active.

► Say:

Help people choose physical activities they'll enjoy. They'll be more likely to stick with them.

Tell them to slowly build the time spent doing an activity by adding a few minutes every few days or so until they've reached at least 30 minutes of activity per day.

As they find that doing 30 minutes of activity becomes easier, they should gradually increase either the number of minutes or the intensity of the activity.

Encourage people to try new activities to keep from becoming bored with one and to get the benefits of different activities.

They should reward themselves afterwards (with something other than a sugary or fat-filled snack, of course).



Activity: Reasons Why People Are Not Physically Active

Ask the CHWs to share their ideas about why people are not physically active. Write their answers on the flipchart. If no one mentions the following reasons, add them to the list.

Possible answers are—

- Do not have enough time to exercise.
- Find it inconvenient to exercise.
- Lack self-motivation.
- Do not find exercise enjoyable.
- Find exercise boring.
- Lack confidence in the ability to be physically active.
- Fear being injured or have been injured recently.
- Lack self-management skills, such as the ability to set personal goals, monitor progress, or reward progress toward such goals.
- Lack encouragement, support, or company of family and friends.
- Do not have parks, sidewalks, bicycle trails, or safe and pleasant walking paths convenient to home or office.



Handout 13–7: Ideas for Becoming More Physically Active

Review the ideas for becoming more physically active on Handout 13-7. Ask the CHWs for further suggestions for how to encourage people to be physically active.

F. How Community Health Workers Can Help Create More Physically Active Communities

► Say:

There are many ways that you can help people in your community who are at risk for heart attack and stroke to be more physically active. For example:

- Know the locations of walking trails, parks, and other places to walk in your community. Have maps available if possible.
- Know about shopping mall walking programs or other free physical activity programs.
- Talk to local recreation groups about sponsoring programs for community members who don't have free recreation programs where they live and can't afford those that charge a fee.
- Get to know community members who can help promote health and physical fitness programs and opportunities (for example, leaders of local non-profit organizations).
- Encourage and support people in the community who need to do rehabilitation after a stroke or heart attack or other physical therapy activities.

To learn more about programs in your state for promoting physical activity and reducing obesity, visit the Web site of the Centers for Disease Control and Prevention's State-Based Nutrition and Physical Activity Program to Prevent Obesity and Other Chronic Diseases at www.cdc.gov/nccdphp/dnpa/obesity/state_programs/index.htm.



Handout 13–8: What Can Communities Do to Support Physical Activity?

Ask the CHWs to share examples of how their communities support physical activity.

Discuss Handout 13-8 with the CHWs. Tell them that encouraging and helping people to be active is very important for the health of their community. Remind them that they can play a vital role in helping to shape community policies and to create an environment that encourages active lifestyles for all community members. Invite the CHWs to tell about ways they can encourage physical activity in their communities. This might include being a role model themselves, giving talks to community groups, leading or organizing walking groups, and working with community groups to identify community needs and resources and to plan and ask for safe sidewalks, in residential and business areas; safe, attractive, accessible trails, parks, and play areas; and running tracks, ball fields, and other facilities open to the public.

3. Summary

► **Say:**

Community health workers can explain the benefits of physical activity to members of their communities. They can help motivate people to become more active by being role models, by helping them overcome barriers to being physically active, and by working to create an environment that encourages active lifestyles for all community members.

► **Ask:**

- Why is it important to be physically active?
- Who should talk to a doctor or nurse before starting a physical activity program?
- How much physical activity do people need?
- What are some of the reasons people are not physically active?
- What can you do to help community members overcome personal barriers to being physically active?

My Personal Physical Activity Plan

My goal is to spend _____ minutes per week in physical activity.

I plan to meet my goal by:

1. _____

2. _____

I know my roadblocks to being more physically active are:

1. _____

2. _____

I will overcome my roadblocks by:

1. _____

2. _____

At the end of four weeks, I will reward myself. My reward is:

Signed: _____ Today's date: _____

Did you meet your goal?

Yes Congratulations! Decide if you want to keep your goal or set a new goal, but keep going!

No Review your roadblocks, set a new goal, and try again!

Make Physical Activity a Habit

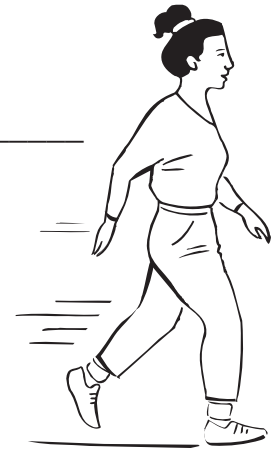
My Personal Record



Name _____

**Track your progress every day.
Start out slowly.**

Aim to reach 30 minutes or more a day!



Write in the log the number of minutes you are active each day:

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Example Week 1	5 min	5	10	10	15	15	15
Week 1							
Week 2							
Week 3							
Week 4							
Week 5							
Week 6							
Week 7							
Week 8							

Ways to Add Physical Activity to Your Daily Life

There are 1,440 minutes in every day. Use 30 of them for physical activity.

Adults need recess too! With a little creativity and planning, even the person with the busiest schedule can make room for physical activity.

For many folks, before or after work or meals is often a good time to cycle, walk, or play. Think about your weekly or daily schedule and look for or make ways to be more active.



Every little bit helps. Consider the following ideas:

- Walk or cycle to work, school, the store, or your place of worship.
- Park your car farther away and walk.
- Get on or off the bus one or two stops early and walk home or to work.
- Take the stairs instead of the elevator or escalator.
- Play with children or pets. Everyone wins. If you find it too hard to be active after work, try being active before work.
- Take fitness breaks – walking or doing desk exercises – instead of taking coffee breaks.
- Garden.
- Use leg power. Take small trips on foot to get your body moving.
- Exercise while watching TV (for example, use hand weights, ride a stationary bicycle, or stretch).
- Dance to your favorite music.

- Keep a pair of comfortable walking or running shoes in your car and where you work. You'll be ready for activity wherever you go!
- Make a Sunday morning walk a group habit with friends and family.
- Walk while doing errands.
- Play sports.
- Join the other walkers at shopping malls open for walking early in the morning.
- Jump rope or play tag with your kids or grandkids.

Walking Tips

Why walk? It is easy. It is free. It is safe. It improves your health. But if you don't like to walk, choose any activity that helps you move.

How often and how long should I walk? It depends on how active you are now and the condition of your health. Just increasing your daily activities will improve your health. It doesn't take much more activity to improve your fitness level.

Can you talk while you walk? You should be able to walk and talk at the same time. If you can't talk because you are gasping for air, you are going too fast. If you can talk as easily while walking as you can while standing still, you may want to go a little faster. However, your pace should feel comfortable to you.



Where can I walk? You can walk anywhere that is easy, close, and safe for you. Plan where you will walk before you go and think about flat places near your home, such as shopping malls, school tracks, or your street. Think about your safety! Find a walking partner, or if you do walk alone, make sure someone knows when and where you are walking.

What do I wear? Wear loose-fitting clothes and comfortable, well-cushioned athletic or walking shoes. Wear socks to give a little more cushion and help prevent blisters.

When should I not walk? Do not walk if you are sick or have a fever. Wait 24 hours after your temperature is normal before increasing your activity.

Do not walk outdoors if the weather is too hot or too cold. When it is hot, consider the temperature and humidity. A suggestion is to walk indoors if the temperature is higher than 80 degrees. When it is cold, consider the temperature and the wind chill. A suggestion is to walk indoors when the temperature goes below 40 degrees.

If you miss more than 3 days of walking, decrease your time and begin again slowly. This is a plan for life, so don't worry about "catching up" too soon.

If you have symptoms, such as an uncomfortable feeling of constant pressure, pain, or fullness or squeezing in the chest, shortness of breath, nausea, unusual tiredness, light-headedness, abnormal heartbeat, or any other signs or symptoms of trouble, get medical help immediately!

Call 9-1-1, the emergency rescue service, or have someone drive you to the nearest hospital with cardiac emergency care.

Some Examples of Activities and Their Intensity Levels

Time depends on intensity of the physical activity.

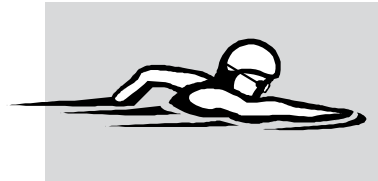
Higher intensity activities require less time spent. Lower intensity activities require more time spent. For example, walking up stairs burns almost five times more calories than riding an elevator.

Light-Intensity Activities:

- Walking slowly
- Swimming (slow treading)
- Gardening or pruning
- Bicycling (very light effort)
- Dusting or vacuuming
- Conditioning exercise (light stretching or warm up)

Moderate-Intensity Activities:

- Walking briskly
- Swimming, recreational
- Mowing lawn (using a power motor)
- Tennis (doubles)
- Bicycling 5 to 9 mph level roads or with a few hills
- Scrubbing floors or washing windows
- Weight lifting (machines or free weights)



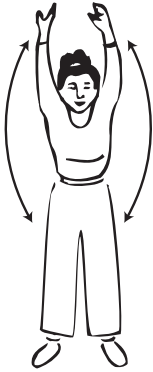
Vigorous-Intensity Activities:

- Racewalking, jogging, or running
- Swimming laps
- Mowing the lawn (using a hand mower)
- Tennis (singles)
- Bicycling more than 10 mph, or on steep uphill roads
- Moving or pushing furniture
- Circuit training

For details about the intensity levels of other physical activities, visit www.cdc.gov/nccdphp/dnpa/physical/pdf/PA_Intensity_table_2_1.pdf.

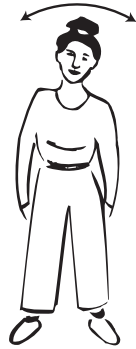
Stretching Exercises

Do these stretches gently and slowly. Do not bounce.



1. Deep breathing

Arms up, breathe in, arms down, breathe out. Two times each.



2. Neck Stretching

Side to side. Two times.



3. Shoulder Stretches

Up and down five times on each side.



4. Side Stretches

Up and down five times in each direction.



5. Waist Stretches

Side to side three times in each direction.



6. Twists

Side to side three times in each direction.



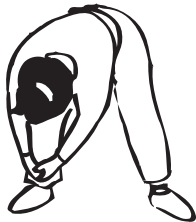
7. Back and Leg Stretches

Down and up five times.



8. Back Stretch

Arms through legs six times.



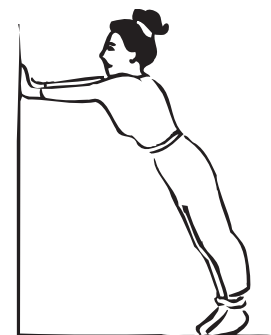
9. Leg Stretch (1)

Hold on to ankle, four times on each side.



10. Leg Stretch (2)


Down and up five times.



11. Leg Stretch (3)

Move heels up and down six times.


How To Exercise



1. Do stretching exercises. (See handout on stretching exercises.) Then walk slowly for 5 minutes.



2. Walk briskly for 20 minutes.




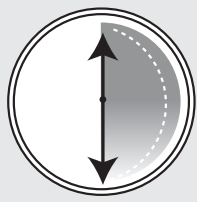


3. Walk slowly for 5 minutes.



4. Relax!

Sample Walking Program

				
	Warm Up	Walk	Cool Down	Total Time
Week 1*	Walk slowly 5 minutes	Walk briskly 5 minutes	Walk slowly 5 minutes	15 minutes
Week 2*	Walk slowly 5 minutes	Walk briskly 7 minutes	Walk slowly 5 minutes	17 minutes
Week 3*	Walk slowly 5 minutes	Walk briskly 9 minutes	Walk slowly 5 minutes	19 minutes
Week 4*	Walk slowly 5 minutes	Walk briskly 11 minutes	Walk slowly 5 minutes	21 minutes
Week 5*	Walk slowly 5 minutes	Walk briskly 13 minutes	Walk slowly 5 minutes	23 minutes
Week 6*	Walk slowly 5 minutes	Walk briskly 15 minutes	Walk slowly 5 minutes	25 minutes
Week 7*	Walk slowly 5 minutes	Walk briskly 18 minutes	Walk slowly 5 minutes	28 minutes
Week 8*	Walk slowly 5 minutes	Walk briskly 20 minutes	Walk slowly 5 minutes	30 minutes

*Do every day of the week

Ideas for Becoming More Physically Active

Roadblock:	Solution Idea:
“Being active is hard work.”	Pick an activity that you enjoy and that is easy for you. “No pain, no gain” is a myth.
“I do not have time.”	Can you do without three TV shows each week to make time for physical activity?
“I do not enjoy being active.”	Begin with an active hobby or way of playing a sport or game that gets you moving.
“There is no convenient place.”	Pick an activity you can do near your home or work. Walk around your neighborhood, or workout while watching a TV show at home, or workout while watching a video.
“I am usually too tired.”	Regular activity will improve your energy level. Tell yourself, “This activity will give me more energy.”
“I do not have a safe place.”	If your neighborhood is not safe, you can walk at work, walk in a group, or walk in the morning.
“I do not have anyone to go with me.”	Maybe you have not asked. A neighbor, family member, friend, or someone at work may be a willing partner.
“The weather is too bad.”	There are many activities you can do in your home, in any weather. You can also walk in malls or go dancing.
“It is boring.”	Listening to music during your activity keeps your mind occupied. Walking, biking, or running can take you past lots of interesting scenery.
“I am afraid of being hurt.”	You can avoid muscle soreness by starting slowly and stretching after your activity. Walking is very safe, and it is a great activity to improve your health.
“I am too overweight.”	You can benefit from physical activity regardless of your weight. Pick an activity that is for you, such as walking. It’s never too late to start being active.
“I am too old.”	Age is not a problem! If you have medical problems, it is important to talk to your doctor about doing physical activity that suits you.
“I do not enjoy it.”	Start a new hobby or an enjoyable activity that gets you moving.

What Can Communities Do to Support Physical Activity?

In the community:

- Ask for simple signs that point to stairs, and encourage people to take the stairs instead of elevators.
- Ask for clean, lighted stairwells.
- Ask for more places and more opportunities where people can be physically active and feel safe.

In worksites:

- Ask for policies that allow employees to use work time for healthy activities, such as walking.
- Ask for walking trails and other places to exercise, and for support for walking groups.
- Ask employers to partner with community organizations such as the YMCA's, to create opportunities for their workers to be physically active.



In schools:

- Ask schools to offer physical education (PE), to have better-educated PE teachers, and to increase the amount of time for student physical activity. If schools have stopped giving recess and PE classes, ask for a policy to put them back in place.

In health care sites:

- Doctors, other health care providers, and CHWs should encourage people to take part in regular physical activity.

What Physical Activity Can Do For You



- Give you energy.
- Lower your chance for a heart attack.
- Lower your chance for a stroke.
- Lower your chance for diabetes.
- Lower your chance for high blood pressure.
- Help control you blood pressure, blood cholesterol, and blood sugar.
- Help you sleep better.
- Help you control your weight.
- Helps people become stronger.

Objectives

By the end of this session, community health workers will be able to—

- List the harmful effects of smoking.
- List the harmful effects of secondhand smoke.
- List the positive effects of not smoking.
- Describe methods for helping smokers quit smoking.
- Describe methods for helping people reduce the stress of not smoking.
- Describe methods for helping people stay smoke-free.

Materials and Supplies

Flipchart, markers, tape, blackboard, chalk, and eraser.

Handouts:

- 14–1: A. How Smoking Can Harm You
B. How Smoking Harms Infants and Children
- 14–2: How Can I Avoid Weight Gain When I Stop Smoking?
- 14–3: Are You Ready to Stop Smoking?
- 14–4: A. Tips for Quitting Smoking
B. Break Free from the Smoking Habit
C. Smoke-Free Family Sign
- 14–5: How Can I Quit Smoking?
- 14–6: How Can I Handle the Stress of Not Smoking?
- 14–7: Lift the Lid on Chew Tobacco: Get the Truth
- 14–8: What Can Communities Do to Prevent Tobacco Use?

Training Aid 14–1: Role Play: How to Ask Someone to Not Smoke Around You

Chapter Outline

1. Overview
2. Lesson
 - A. What Makes Tobacco Smoke So Harmful?
 - B. Is It Harmful to Be Around Smoking?
 - C. The Positive Effects of Not Smoking
 - D. Helping People to Quit Smoking
 - E. Helping Smokers Stay Smoke-Free
 - F. A Word About Smokeless Tobacco
 - G. Helping Parents Prevent Smoking
3. Summary

Resources

American Heart Association. www.americanheart.org

Centers for Disease Control and Prevention. *Tobacco Information and Prevention Source (TIPS)*. www.cdc.gov/tobacco www.cdc.gov/tobacco/youth/index.htm *Tobacco Fact Sheets*. www.cdc.gov/tobacco/data_statistics/Factsheets/tobacco_related_mortality.htm

Get into Your Kid's Head. Here's How. Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. #6996. 2003. www.cdc.gov/tobacco/tobacco_control_programs/campaigns_events/got_a_minute/GotAMinute_brochure

Centers for Disease Control and Prevention tobacco control campaigns. www.cdc.gov/tobacco/tobacco_control_programs/campaigns_events/GotAMinute_brochure/gotamin.htm

Honoring the Gift of Heart Health: A Heart Health Educator's Manual for American Indians and Alaska Natives. National Heart, Lung, and Blood Institute and Indian Health Service; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov/health/prof/heart/other/aian_manual/index.htm

National Heart, Lung, and Blood Institute; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov

Pathways to Freedom: Winning the Fight against Tobacco. Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. www.cdc.gov/tobacco/quit_smoking/how_to_quit/00_pdfs/pathways.pdf

Refresh Yourself. Stop Smoking. National Heart, Lung, and Blood Institute; National Institutes of Health; U.S. Department of Health and Human Services; Public Health Service. NIH Publication No. 97-4065. September 1997. www.nhlbi.nih.gov/health/public/heart/other/chdblack/refresh1.htm

Surgeon General's Report 2004. Coronary Heart Disease and Stroke. www.cdc.gov/tobacco/data_statistics/sgr/sgr_2004/

What Smoking Means to You. www.cdc.gov/tobacco/data_statistics/sgr/sgr_2004/00_pdfs/SGR2004_Whatitmeanstoyou.pdf

Your Heart Your Life: A Lay Health Educator's Manual. National Heart, Lung, and Blood Institute; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov/health/prof/heart/latino/lat_mnl.htm

Online Guide to Quitting. www.smokefree.gov

1. Overview

► **Say:**

We've all heard—and we all know—that smoking is bad for your health. In the United States, cigarette smoking kills more than 400,000 people each year from diseases related to smoking. Also, another 40,000 people die each year because they were exposed to secondhand smoking (smoking by others around them). More than 2,000 persons die each day. Smoking causes about one of every five deaths.

Smoking harms nearly every organ of the body, causing many diseases. This damage can lead to a poor quality of life and earlier death. On average, adults who smoke cigarettes die 14 years earlier than nonsmokers do.

But how, exactly, does smoking harm your heart?

When you smoke, you breathe in a number of chemicals, one of which is carbon monoxide. Carbon monoxide keeps blood cells from taking in the oxygen that the rest of your body needs to keep you healthy.

Often smokers feel as if they have extra energy after smoking a cigarette. But this burst of energy is bad for you in the long run. The energy comes from a hormone called adrenaline. Adrenaline makes your heart speed up and causes your arteries to become narrower. These two things put an extra strain on your heart, and your blood pressure can rise.

The toxins, or poisons, you breathe in from cigarette smoke increase the waste products in your blood and make the blood more likely to clot.

The toxins also damage the lining of the blood vessels, making it easier for plaque to build up or cause a blood clot. Remember that we talked about atherosclerosis in the overview session on heart disease and stroke. Atherosclerosis is a leading cause of heart attack and stroke because damage to your arteries and blood clots, that block blood flow, cause heart attacks and strokes.

2. Lesson

A. What Makes Tobacco Smoke So Harmful?

► Say:

Tobacco smoke contains nicotine, a drug that you can become addicted to, so it's important to remember two things when working with people who smoke or chew tobacco:

- Smoking is an addiction (a craving that is very hard to change).
- It's hard to quit smoking.

In addition to nicotine, tobacco contains more than 4,000 other chemicals; some of these chemicals are known to cause cancer. These cancer-causing chemicals are called **carcinogens**.

They include (write the following chemical names on the flipchart):

- Carbon monoxide: the same chemical that exists in car exhaust fumes.
- Pyrene: the main ingredient of coal tar.
- DDT: a pesticide.
- Methanol: a form of alcohol.

The toxins and carcinogens in tobacco smoke are the reason that—

- On average, smokers die 14 years earlier than nonsmokers.
- Smoking causes heart disease.
- Cigarette smoking is the major cause of stroke in the United States.
- Smoking contributes to heart failure.
- Smoking is the leading cause of cancer deaths among women and men; smoking causes about 90 percent of lung cancer deaths in men and almost 80 percent of lung cancer deaths in women.
- Smoking contributes to cancer in many organs in your body (including mouth, throat, voice box, esophagus, lung, blood, stomach, kidney, bladder, pancreas, cervix, and uterus).
- Smoking by the mother causes sudden infant death syndrome (SIDS), low birth-weight, stillbirth, lung injury to the baby, and premature delivery.

- Cigarette smoking causes injury to the airways and lungs leading to serious lung diseases like emphysema, lung infections, bronchitis, and chronic coughing, wheezing, and asthma among children, teens, and adults.
- Smoking low-tar and low-nicotine cigarettes does not reduce your risk for cancer or coronary heart disease.



Handout 14–1: A. How Smoking Can Harm You B. How Smoking Harms Infants and Children

Review the handouts with the CHWs. Ask which items would be the most likely to convince people to quit smoking. Are there other reasons to quit smoking besides the ones on the list?

B. Is It Harmful to Be Around Smoking?

► Say:

Even if you don't smoke, you can develop smoking-related health problems if you are around other people who are smoking. The smoke you breathe in from other people's cigarettes is called secondhand smoke.

If you breathe in secondhand smoke, you have a greater risk of developing the diseases caused by smoking.

Nonsmokers should know of the dangers of secondhand smoke, especially if they have family members or friends who smoke. They may need help finding a way to ask others not to smoke around them or in their house or car.

Nonsmokers face many risks to their health from secondhand smoke.

- Secondhand smoke increases the risk of developing diseases associated with smoking.
- Secondhand smoke can cause lung cancer and heart disease. It makes blood stickier (more likely to clot), damages the lining of blood vessels, and increases the chance of heart attack.

Your risk of developing a disease increases with the amount of smoke you breathe in.

The health risks of secondhand smoke for children are even greater than those for adults. Children of smokers have a greater chance of developing—

- Colds.
- Bronchitis and pneumonia, especially in the first two years of life.
- Sudden infant death syndrome (SIDS).
- Constant coughs.
- Ear infections.
- Lung problems.

The more smoke children are exposed to, the more they are at risk of developing illnesses related to smoking.

When working with smokers who are **not** thinking about quitting, you can help educate them about the harm that secondhand smoke can do to their family members.

By helping smokers understand why they shouldn't smoke around others, you are helping create a more heart-healthy environment for everyone.

As a trusted member of the community and a community health worker, you are in a special position to pass on important information about the dangers of smoking, the importance of never starting to smoke, and the benefits of quitting if you do smoke.



Training Aid 14–1: Role Play: How to Ask Someone to Not Smoke Around You

Hand out copies of the training aid. Have the participants form groups of three. Explain that one person will play the role of a new mother, one the role of a smoker, and one the role of an observer. Give each group a few minutes to act out the scenario. Then ask them to change roles. After each person has had an opportunity to play the role of the new mother, bring the entire group back together.

If there is time, you may ask for a small group to volunteer to act out the scenario for the whole group. At the least, spend some time asking each person how it felt to be the new mother, how it felt to be the smoker, and what observations they had as the observer. Encourage participants to act out this exercise with their clients in the community, giving their clients a chance to practice being assertive in a situation that is not comfortable for them.

► **Say:**

Although nonsmokers who are exposed to secondhand smoke breathe less tobacco smoke than those who actually smoke, you can still inhale a large amount of smoke each day if you live with a heavy smoker.

When you help people in your community understand the dangers of secondhand smoke, they are more likely to insist on having smoke-free rooms and buildings.



Discussion: Avoiding Secondhand Smoke

Ask CHWs to come up with ideas on how to teach community members to minimize the dangers of secondhand smoke for themselves, if they are the ones exposed, or for members of their family, if they are the ones who smoke. Write their responses on the flipchart. Possible responses include—

- Educating people about the dangers of smoking and secondhand smoke, so that they can quit smoking or can urge their family members or friends to quit smoking.
- Encouraging smokers to quit smoking.
- Encouraging people to make their homes nonsmoking homes.
- Encouraging smokers to smoke outdoors.
- Encouraging people to never smoke or allow anyone else to smoke around children.
- Encouraging smokers to smoke only when they do not expose others.
- Encouraging people to keep their cars smoke-free.
- Encouraging people to make sure their workplace is smoke-free.
- Encouraging people to speak up when they feel uncomfortable around smokers.
- Encouraging people to make sure that their children's day care and schools are smoke-free.
- Encouraging people to go to restaurants and other businesses that are smoke-free and to thank the businesses for being smoke-free.

► **Say:**

It can be hard to get some people to quit smoking simply because you tell them how dangerous smoking is for the body. If a person feels OK at the time, it is easy to put off quitting.

Money is often a stronger motivator than health issues are. If someone you are trying to help stop smoking doesn't seem bothered about the health effects, try stressing how much smoking costs.



Activity: “Do the Math”

Have CHWs form small groups of three or four. Ask the whole group how much an average pack of cigarettes costs. Write on the flipchart the cost that most of the CHWs agree is average. With the entire group, multiply the cost by two to determine how much a 2-pack-a-day smoker spends on cigarettes. Then multiply this number by seven to determine how much the smoker spends on cigarettes in a week. Write these numbers on the flipchart. Ask each group to make a list of things other than cigarettes that a smoker can buy with the amounts of money spent on cigarettes in a day and in a week. Have group members come back together to share their findings and ideas. If no one mentions health care costs, discuss the huge cost of smoking-related diseases.

C. The Positive Effects of Not Smoking

► **Say:**

Long-term benefits, reducing risks for diseases caused by smoking and improving health in general.

- **Within 12 hours:** Levels of carbon monoxide and nicotine in the body decrease. The heart and lungs begin to repair the damage caused by cigarettes.
- **Within three months:** Blood circulation improves. Breathing becomes easier. Walking becomes easier. The voice becomes less hoarse.
- **Within one year:** The risk of heart attack is cut in half. Coughing, sinus congestion, fatigue, and shortness of breath decrease.
- **Within several (5 to 15) years:** Risks of life-threatening diseases, such as lung cancer, cancer of the mouth, and heart disease, are reduced almost to that of a nonsmoker.

When you quit smoking, you will—

- Live longer and live better.
- Lower your chance of having a heart attack, a stroke, cancer, and breathing problems.
- Improve your chances of having a healthy baby if you are pregnant.
- Improve the health of the people you live with, especially children and older people.
- Have extra money to spend on things other than cigarettes.

The best result may be that you just feel better.

Many smokers are afraid they will gain weight if they quit smoking. Nicotine does keep you from getting hungry, and some ex-smokers may still have the urge to put something in their mouth—most likely food.

When people who quit smoking gain weight, it is often because they eat more after they quit. The benefits of not smoking far outweigh the disadvantages of gaining a few pounds.



Handout 14–2: How Can I Avoid Weight Gain When I Stop Smoking?

Review the handout with the CHWs. Ask them to name the most important activities for avoiding weight gain. Possible responses include—

- Make sure to eat a well-balanced and low-fat diet.
- Follow a regular exercise program.
- Drink lots of water. Drink water before meals.
- Eat low-calorie snacks.
- Plan menus carefully.

► Say:

Smoking is the most preventable cause of sickness and death. By sharing information about the benefits of not smoking, you can encourage people in your community to quit smoking and prevent further damage to their health.

Remind community members that—

- It is never too late to improve your health.
- Quitting smoking is one of the best things you, if you are a smoker, can do for your health.
- It is best to never start smoking, but you can reduce or prevent serious damage your health if you quit smoking—the sooner, the better.

D. Helping People to Quit Smoking

► Say:

As trusted members of the community, community health workers play a key role in helping people adopt healthier habits, such as not smoking. It is important for community health workers to understand how to share information about the dangers of smoking in a positive and supportive way.

When you talk to smokers and community groups about the dangers of smoking and the benefits of not smoking, remember that you should—

- Understand that people smoke, and quit smoking, for different reasons.
- Be nonjudgmental, even if your clients choose not to quit smoking.
- Be a friend and offer support. Make it OK for smokers to contact you at a later date, when they have had time to think about your suggestions to quit smoking. By being nonjudgmental, you leave the door open for people to ask for help from you—when they are already to quit smoking or when they need other health information.



Discussion

Ask CHWs to consider this question: Why is it important to be nonjudgmental when you talk to smokers about not smoking?

► **Say:**

Be kind when working with smokers. Nagging people about their smoking can make them become angry or defensive. For people addicted to nicotine, quitting smoking is very hard. You should know that—

- Quitting is not easy, but it is possible.
- Physical withdrawal symptoms are temporary, lasting only one or two weeks.
- When people try to quit smoking, most go back to smoking within the first week after quitting, when the body is still dependent on nicotine.
- Many go back to smoking within the first three months after quitting, during stressful times.
- When people try to quit smoking, they usually quit several times before they are able to quit for good.

Share this information with the smokers you are working with, when appropriate.

As a first step in helping someone to stop smoking, ask the person to answer the questions on Handout 14–3: Are You Ready to Stop Smoking?



Handout 14–3: Are You Ready to Stop Smoking?

Review the questions on the handout with the CHWs.

- Do you want to stop smoking?
- Are you willing to make some changes in your daily routine that will help you stop smoking?
- Are you willing to deal with some discomfort while trying to stop smoking?

Explain to the CHWs that if the person answers “yes” to all three questions, then he or she is ready to try to stop smoking.

► Say:

The next step might be to ask the person to think about the reasons he or she smokes.

- Tell smokers that knowing what leads them to smoke and keeps them smoking can help them modify their smoking habits. Have the smoker make a list of the reasons that he or she smokes.
- Ask the person to look at his or her answers and think of ways to avoid a chance to smoke or to do something else when he or she wants a cigarette. By recognizing activities that trigger smoking (e.g., driving, talking on the phone, finishing a meal), they can begin to think of other things to do during those times.
- Encourage smokers to keep a diary of the times when they smoke. This exercise will help them identify the times of the day when they smoke or the activities that lead to smoking.

**Activity: Reasons Why People Smoke**

Ask the CHWs to think of reasons why people smoke. Have a volunteer write their responses on the flipchart. Be sure to cover all of the following possible responses:

- For enjoyment and relaxation.
- To keep from slowing down.
- To keep their hands busy.
- To make themselves happy.
- Because they are angry.
- Because they are upset.
- Because they are worried.
- Because they crave cigarettes/are addicted to nicotine.
- Because they smoke without being aware of it.

► Say:

Another way to help people quit smoking is to have them think of reasons to quit. Have them repeat the reasons to themselves, write the reasons down, and read them often before they quit and while they are trying to quit.

If people are having a hard time thinking of the positive benefits of not smoking, you might help by mentioning—

- Gaining better health.
- Living longer.
- Gaining more energy.
- Saving money.
- Setting a good example for their children, friends, and family members.
- Getting rid of an unattractive habit.
- Keeping smoke from harming their loved ones.
- Keeping their clothes, car, and home from smelling of cigarettes.

If you are working with smokers who are committed to not smoking but are still having a hard time quitting, or who don't believe they can quit on their own, let them know there is hope—and help.

The first thing smokers should do is talk to their doctor or other health professional.

Over-the-counter nicotine gum and patches or prescription pills are available to help people quit smoking. Medical treatment is usually combined with counseling.

Support groups and counseling are also available in most communities. By providing support to smokers, individual or group counseling can help them quit smoking.

And there are nontraditional methods of help, such as hypnosis. This method has helped many smokers quit smoking.

More than 3 million Americans quit smoking every year. Some people are successful on the first try, but others may make many attempts before they finally quit.

U.S. Quit Line:

- For phone support from anywhere in the United States, call (800) QUIT-NOW or (800) 784-8669.
- For help via computer, access the Online Guide to Quitting at www.smokefree.gov.

**Activity: Ways to Quit**

Ask the CHWs if they or someone they are close to has ever tried to quit smoking. Ask them to share some of the techniques that these people used to help them quit. Explain that there is no one right way to quit smoking. Ask for other suggestions for quitting smoking. Record all of their responses on the flipchart. Possible responses might be—

- Cut down on the number of cigarettes you smoke.
- Switch brands so you won't enjoy smoking as much as before.
- Don't smoke automatically. Do something else instead of smoking; for example, go for a walk, have a healthy snack, or wait for a while before you smoke.
- Pick a day to quit smoking totally "cold turkey," or begin quitting by cutting down on the number of cigarettes you smoke.
- Envision yourself in various situations without a cigarette. This is a way to prepare yourself mentally for being a nonsmoker.
- Find a quitting partner.
- Make smoking harder; for example, stop carrying cigarettes.
- Practice not smoking.

► Say:

There are four key steps that people can take to overcome the urge to smoke:

1. Replace old habits with new activities. If stress causes you to light up, try breathing deeply to calm down.
2. Keep busy. Get involved in activities that require the use of your hands, such as beading, sewing, or a fix-up project around the house.
3. Keep moving. Try going for a nature walk, working in the garden, doing stretching exercises, or practicing your favorite dance steps.
4. Know what to expect. During the first week after quitting, a person may experience temporary withdrawal symptoms (what you feel). These symptoms include headaches, irritability, tiredness, and trouble concentrating. While these feelings are not pleasant, it is important to know that they are signs that your body is recovering from smoking.



**Handout 14–4: A. Tips for Quitting Smoking
B. Break Free from the Smoking Habit
C. Smoke-Free Family Sign**

Ask the CHWs to review the handouts. These are good handouts to give to people who are trying to quit smoking.



Handout 14–5: How Can I Quit Smoking?

Ask the CHWs to review the handout. Have them break into groups of two or three. Tell the CHWs to take turns having one person role play a smoker while the other is the CHW who is trying to convince the smoker to quit. The CHW should use the handout to discuss the steps for quitting with the “smoker.”

Allow about 10 to 15 minutes for this activity. Afterwards, ask the CHWs if they found it difficult to talk with the “smoker” about smoking and, if so, why it was difficult.

Ask the CHWs how they would help smokers answer the following questions:

- Why should I quit smoking?
- How do I quit?
- What if I smoke again after quitting?
- How will I feel after I quit, and what will the benefits be?

E. Helping Smokers Stay Smoke-Free

► **Say:**

Successful ex-smokers usually tried to quit smoking several times before they were able to quit for good.

**Activity: Staying Smoke-Free**

Ask CHWs why so many people try to quit smoking but fail. List their answers on the flipchart. Possible responses include—

- Lack of emotional support.
- Lack of positive reinforcement or encouragement.
- Nicotine addiction.
- Stress.
- Fear of gaining weight.
- Need to occupy hands.

► Say:

A smoker's family and friends play an important role in helping the smoker "kick the habit." They can be supportive by doing the following:

- Encourage your friend or family member to keep trying to quit.
- Be positive. Let the person know you are proud of him or her for trying and that you appreciate the effort he or she is making.
- Don't judge the person, especially if he or she fails at first.
- Encourage the person to stop if he or she starts smoking again.
- Reward the person. Even a certificate of accomplishment is a good idea.
- Call or visit just to let the person know how proud you are of his or her efforts to quit smoking

Smoking helps many people deal with stress, and not smoking only makes them feel more stressed and anxious.

**Handout 14–6: How Can I Handle the Stress of Not Smoking?**

Review the handout with the CHWs and ask them how they might help people who are trying to quit deal with the stress of not smoking. Ask them how they would help a smoker answer the following questions:

- How can I cope with the urge to smoke?
- How can I relax?
- How can exercise help?

**Activity: Alternatives to Smoking**

Ask each CHW to write down as many alternatives to smoking as they can think of that meet the following criteria:

- Does not cost a lot.
- Does not contribute to weight gain.
- Will improve a person's general health.

Give the group a few minutes, but set a clear start and stop time. When time is up, have all CHWs put down their pens. Ask each person to tell how many ideas they have on their list. Have the person with the longest list of ideas read the list. Record those ideas on the flipchart, and then move on to the person with the next longest list of ideas, adding to the flipchart any ideas that have not already been mentioned. Proceed around the room until everyone has had a chance to contribute his or her ideas to the list. Before ending the activity, ask if anyone came up with any new ideas during the time you were writing. Possible responses include—

- Developing a clean, fresh non-smoking environment.
- Throwing away all cigarettes around the house.
- Getting rid of the ashtrays and lighters.
- Eating healthy snacks when there is an urge to smoke.
- Drinking lots of water, especially when there is an urge to smoke.
- Chewing gum or sucking on a sugarless mint or hard candy instead of smoking.
- Taking deep breaths.
- Exercising.
- Meditating as a way of dealing with stress.
- Calling a friend when there is an urge to smoke.
- Thinking about the benefits of quitting.
- Finding a hobby to occupy hands.
- Spending more time in nonsmoking environments, such as the library or a museum.

Community health workers can help community members maintain a positive attitude while trying to quit smoking.

► **Say:**

Share quitting tips with the smokers with whom you are working. Emphasize these tips:

- Quitting is hard. Be proud of your accomplishments.
- Take quitting one day at a time.
- Set daily goals.
- If you give in to smoking, don't give up on quitting.

F. A Word About Smokeless Tobacco

► **Say:**

The two main types of smokeless tobacco in the United States are **chewing tobacco** (loose tobacco leaves) and **snuff** (finely ground tobacco). Users put the tobacco in their mouths, chew on it and spit out the tobacco juices, which is why smokeless tobacco is often called spit or spitting tobacco. Smokeless tobacco is not as harmful to your blood vessels and heart as cigarettes and cigars are, but it IS dangerous to your health in other ways.

Smokeless tobacco should never be used to replace smoking. You would simply be trading one harmful habit for another. Chew tobacco has nicotine, and it is just as addictive as the nicotine in cigarettes.

Smokeless tobacco has been directly linked to cancer of the mouth, throat, tongue, windpipe, and larynx (or voice box). It can also cause gum disease and tooth loss.



Handout 14–7: Lift the Lid on Chew Tobacco: Get the Truth

Ask the CHWs to quickly review the handout. Ask if they have any questions. Remind them that smokeless tobacco should never be used as a substitute for cigarettes or cigars.

G. Helping Parents Prevent Smoking

► Say:

Preteens who report that they eat meals regularly, follow a family calendar, and discuss free-time activities with their parents are less likely to smoke and are more likely to live longer, healthier lives than those who don't do these things.

Most parents don't expect their children to smoke. But children and teenagers are exposed to thousands of images that make smoking look glamorous. That's one of the reasons that one out of eight middle school students use tobacco.

If your teenager is smoking or chewing tobacco, it will be up to him or her to quit. But you can help.

Avoid making threats. Find out why your child is smoking. The reason may be that he or she wants to be accepted by other preteens or teens, or that he or she wants your attention. Plus, the preteen and teenage years can be very difficult and stressful.

Ask questions that will help you understand why your teen is smoking, but don't make him or her feel threatened or afraid to talk to you.

Are there changes that need to be made in your child's life to help him or her stop smoking?

What about others in the family? Are they smokers?

Never ask your children to bring your cigarettes or light a cigarette for you. If you smoke, quit.

If you used to smoke and have already quit, talk to your child about your experience. Talk honestly about how hard it is to quit. Tell your child personal stories about problems you had when you smoked (for example, people asking you not to smoke in their house, or your teeth becoming stained and yellow).

Teens and preteens often believe they can quit smoking whenever they want, but many teens never do.

Your job, as a parent, is to support your child's attempt to quit. Both you and your teen will need to prepare for the mood swings and crankiness that can come with nicotine withdrawal. Offer your teen the "**5 D's**" to get through the tough times:

- **Delay.** The craving will eventually go away.
- **Deep breath.** Take a few calming deep breaths.
- **Drink water.** It will flush out the chemicals.
- **Do something else.** Find a new habit.
- **Discuss.** Talk about your thoughts and feelings.

Quitting for a day is easy. Quitting for life is tougher.

Tell your child to make a list of all the reasons why he or she wants to quit. Remind him or her to read the list when tempted to smoke. It is best to quit all at once “cold turkey.” Gradually reducing the number of cigarettes only delays the withdrawal symptoms.

Finally, reward your teen when he or she quits. Plan something special for you to do together. Helping your child quit is one of the best parenting activities you could ever do.



Handout 14–8: What Can Communities Do to Prevent Tobacco Use?

Encouraging and helping people to not start smoking or to stop smoking is a very important step for the health of your community. But it is also very important to create an environment and policies that help people who want to quit smoking and that discourage people from smoking, especially in public places.

3. Summary

► Say:

To summarize what we’ve learned today, remember—

- Smoking and secondhand smoke are dangerous. They cause many diseases including cancer, heart attack, and stroke, as well as early death.
- Smoking puts extra strain on your heart and raises your blood pressure.
- Smoking is a major cause of blood vessel disease inside and outside the heart. Smoking damages the cells lining your blood vessels and heart, and leads to the build up of plaque in the arteries.

- Smoking causes coronary heart disease.
- Smoking can increase the risk of dangerous blood clots that cause heart attacks and strokes.
- Smoking low-tar and low-nicotine cigarettes does not reduce your risk for cancer or coronary heart disease.
- Because the nicotine in tobacco is addictive it is hard to quit smoking or chewing tobacco.
- Quitting smoking has benefits right away; you will breathe more easily and feel less tired. Your clothes, hair, and breath will smell fresher, and you will save money by not buying tobacco products. Most important, when you quit smoking, your children won't be exposed to your secondhand smoke and they will have a good example to follow.
- Quitting smoking has long-term benefits, such as reducing risks for diseases (cancer, heart disease, lung disease, heart attacks, stroke) caused by smoking and improving health in general.
- Community health workers can teach community members about the dangers of tobacco use and secondhand smoke.
- Community health workers can help community members quit smoking, but they should realize that people decide to quit smoking for many different reasons. There is no "one size fits all" solution to quitting smoking.
- As community health workers, you can encourage and support smokers who want to quit smoking, and you can encourage those who do not succeed on the first, second, or even third try to keep trying until they do succeed.
- As community health workers, you may be the only ones who encourage a person to quit smoking.
- Community health workers can teach smokers the skills that will make their efforts to quit smoking successful.
- Community health workers can encourage people to ask for smoke-free day care, schools, workplaces, restaurants, businesses, and other community buildings.

How Smoking, Second Hand Smoke and Chewing or Spit Tobacco Can Harm You and How You Can Benefit by Quitting

Smoking cigarettes and chewing tobacco causes—

- Early death
 - On average smokers die 14 years earlier than nonsmokers do.

- Heart disease, heart attack, and stroke
 - Smoking puts extra strain on your heart and raises your blood pressure.
 - Smoking is a major cause of disease of blood vessels inside and outside the heart. Smoking damages the cells lining your blood vessels and heart, and leads to the build up of plaque that hardens and narrows your arteries.
 - Smoking increases the risk of dangerous blood clots that cause heart attacks and strokes.
 - Smoking low-tar and low-nicotine cigarettes rather than regular cigarettes does not reduce your risk for heart disease or other diseases.
 - Even chewing and spit tobacco can lead to heart and blood vessel disease.

Smoking and secondhand smoke causes—

- Cancer in many organs of the body.
- Serious lung damage and diseases, such as emphysema.
- More colds, sore throats, and lung infections like bronchitis.
- Chronic coughing, wheezing, and asthma among children, teens, and adults.
- Babies that weigh less and have a greater risk of death and disease.
- Poor overall health.

Unpleasant effects of smoking and chew tobacco include—

- Yellow stains on teeth and fingers.
- Bad breath.
- Gum disease.
- Early wrinkling of the skin.
- Decreased sense of smell and taste.

The benefits of quitting—

Even if you have smoked for a long time, there is always a benefit to quitting.

Within 20 minutes after you smoke that last cigarette, your body begins a series of changes that continue for years.

- **Within 20 minutes:** your heart rate drops.
- **Within 12 hours:** Levels of carbon monoxide and nicotine in the body decrease. The heart and lungs begin to repair the damage caused by cigarettes.
- **Within three months:** Blood circulation improves. Breathing becomes easier. Walking becomes easier. The voice becomes less hoarse.
- **Within one year:** The risk of heart attack is cut in half. Coughing, sinus congestion, fatigue, and shortness of breath decrease.
- **Within several (5 to 15) years:** Risks of heart disease and stroke are reduced almost to that of a nonsmoker; your lung cancer risk is half that of a nonsmoker. Your risk of cancers of the mouth, throat, esophagus, bladder, kidney, and pancreas decreases.

How Smoking Harms Infants and Children

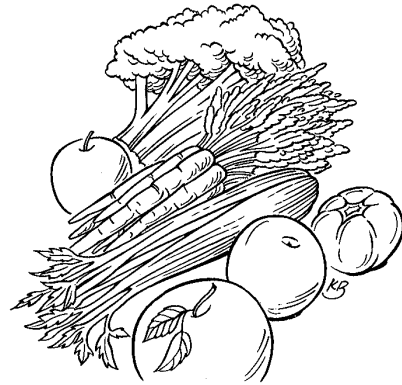


- Each time a pregnant woman smokes, her baby's heart rate increases.
- When a pregnant woman smokes, her baby gets less oxygen.
- The birth weight for babies born to smokers is less than for babies born to nonsmokers.
- Smoking increases the chance of a baby being born dead.
- Babies whose mothers smoke have a greater risk of dying from SIDS (sudden infant death syndrome) or crib death.
- Harmful chemicals pass through the placenta and directly into the baby's blood.
- If the mother continues to smoke after the baby is born, the baby can get more chest colds, ear infections, bronchitis, pneumonia, and asthma.
- Babies who are exposed to smoke cry, sneeze, and cough more than babies who are not.
- Children who grow up in a home with smokers are more likely to become smokers.

Honoring the Gift of Heart Health: A Heart Health Educator's Manual for American Indians and Alaska Natives. National Heart, Lung, and Blood Institute and Indian Health Service; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov/health/prof/heart/other/aian_manual/index.htm

How Can I Avoid Weight Gain When I Stop Smoking?

Quitting smoking doesn't mean you'll automatically gain weight. And even if you do gain a couple pounds, that's not as important as saving your life... and the lives of others. When people gain weight, it's usually because they start to eat more once they quit smoking. If you watch what you eat and stay physically active, you may not gain at all!



What should I eat and drink?

- Plenty of fruits and vegetables (at least 8–10 servings a day).
- Whole-grain cereals, pastas and breads.
- Fat-free or low-fat snacks like pretzels.
- Sugar-free hard candy.
- Foods low in saturated fat, trans fat and cholesterol. Read food labels and choose healthful options.
- Drink lots of water! Cut back on alcohol and drinks with caffeine (coffee, tea and soft drinks)

How can physical activity help?

- Walking and other exercise releases stress and calms you.
- It can help control your appetite.
- It can improve your mood.
- It burns calories and can help you lose weight if you take in fewer calories than you use up.
- It can help you stay at a healthy weight.

What are good activities to help keep weight off?

Becoming more active can help you reduce or maintain your weight. Try any of the following. Check with your doctor first if you've been inactive a long time or have medical problems, you're middle-aged or older, and you plan a vigorous exercise program.

- Walk in your neighborhood or at indoor shopping malls.
- Do gardening or yard work.
- Take stairs instead of escalators and elevators.
- Park farther from stores and walk.
- Learn a new dance.
- Ride a bicycle.
- Try aerobic dance classes or use a videotape at home.

What can I do instead of smoking?

- Play with a pencil, paper clip or marbles.
- Munch on carrots, apples, celery and sugarless gum.
- Brush your teeth often and keep a fresh taste in your mouth.
- Keep your hands busy — wash the car, garden, knit, do crossword puzzles, write letters, cook.
- Try a new sport.
- Get plenty of rest and physical activity.

What else can I do?

- Try relaxation techniques like deep breathing or meditation.
- Think positive thoughts! Feel proud about quitting.
- Write down why you're quitting and read it.
- Spend time with other nonsmokers.
- Go where there's no smoking, like stores, movies, churches and libraries.
- Reward yourself every day or week that you stay a nonsmoker. Don't use food as a reward.

How can I learn more?

1. Talk to your doctor, nurse or other health-care professionals. If you have heart disease or have had a stroke, members of your family also may be at higher risk. It's very important for them to make changes now to lower their risk.
2. Call 1-800-AHA-USA1 (1-800-242-8721) or visit americanheart.org to learn more about heart disease.
3. For information on stroke, call 1-888-4-STROKE (1-888-478-7653) or visit StrokeAssociation.org.

We have many other fact sheets and educational booklets to help you make healthier choices to reduce your risk, manage disease or care for a loved one.

Knowledge is power, so *Learn and Live!*

Do you have questions or comments for your doctor?

Take a few minutes to write your own questions for the next time you see your healthcare provider. For example:

How do I read food labels?

Are You Ready to Stop Smoking?

Do you want to stop smoking? **Yes** **No**

Are you willing to make some changes in your daily routine that will help you stop smoking? **Yes** **No**

Are you willing to deal with some discomfort while trying to stop smoking? **Yes** **No**

If you answer “yes” to all the questions above, you are ready to try to stop smoking!



Tips for Quitting Smoking

Quitting smoking is one of the most important things you will ever do.

Cigarette smoke contains more than 4,000 chemicals, and **200 of these are poisonous.**



Get ready:

- Set a quit date.
- Get rid of **ALL** cigarettes, lighters, matches, and ashtrays in your home, car, and workplace.
- Don't let people smoke in your home.
- Review your past attempts to quit. Think about what worked and what did not.
- Once you quit, don't smoke—**NOT EVEN A PUFF!**

Line up support:

- Tell your family, friends, and coworkers that you are going to quit and want their support. Ask them not to smoke around you or leave cigarettes out.
- Get individual, group, or telephone counseling. The more counseling you have, the better your chances are of quitting.
- Call (800) QUIT-NOW or (800) 784-8669.
- Go online to www.smokefree.gov.

Learn new activities:

- Try to distract yourself from urges to smoke. Talk to someone, go for a walk, or get busy with a task.
- Change your routine. Use a different route to work. Drink tea instead of coffee.
- Do something to reduce your stress. Listen to music, talk to your friends, or walk.
- Plan something enjoyable to do every day.
- Drink a lot of water.

Be prepared if you slip:

- **Be kind to yourself.** Remind yourself of the reasons you want to quit. Try again.

Try to avoid:

- **Alcohol.** Avoid drinking alcohol. Drinking lowers your chances of success.
- **Other smokers.** Being around smoking can make you want to smoke.

Don't be discouraged by:

- **Weight gain.** Many smokers will gain weight when they quit, usually less than 10 pounds. Eat a healthy diet and stay active. Don't let weight gain distract you from your main goal—quitting smoking.
- **Bad mood or depression.** There are a lot of ways to improve your mood other than smoking. Go for a walk, talk to a friend, listen to your favorite music.

Smoke-Free Family Sign

Thank You
for Not Smoking.



We're a
Smoke-Free Family.

We're a
Smoke-Free Family.



Thank You
for Not Smoking.

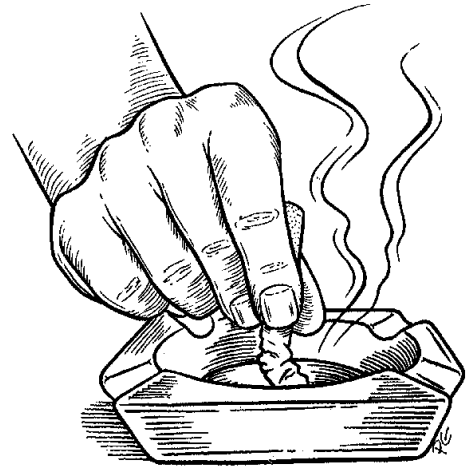


How Can I Quit Smoking?

What if I go back to old habits?

Smoking cigarettes tops the list as the most important preventable major risk factor of our No. 1 killer — heart and blood vessel disease. The long list of diseases and deaths due to smoking is frightening. Smoking also harms thousands of nonsmokers, including infants and children, who are exposed to cigarette smoke.

If you smoke, you have good reason to worry about its effect on your health, your loved ones and others. You could become one of the more than 440,000 smoking-related deaths every year. When you quit, you reduce that risk tremendously!



Is it too late to quit?

No matter how much or how long you've smoked, when you quit smoking, your risk of heart disease and stroke starts to drop. In time your risk will be about the same as if you'd never smoked!

How do I quit?

Step One

- List your reasons to quit and read them several times a day.
- Wrap your cigarette pack with paper and rubber bands. Each time you smoke, write down the time of day, how you feel, and how important that cigarette is to you on a scale of 1 to 5.
- Rewrap the pack.

Step Two

- Keep reading your list of reasons and add to it if you can.
- Don't carry matches, and keep your cigarettes out of easy reach.
- Each day, try to smoke fewer cigarettes, and try not to smoke the ones that aren't most important.

Step Three

- Continue with Step Two. Set a target date to quit.
- Don't buy a new pack until you finish the one you're smoking.
- Try to stop for 48 hours at one time.

Step Four

- Quit smoking completely. Throw out all cigarettes and matches. Hide lighters and ashtrays.
- Stay busy! Go to the movies, exercise, take long walks, go bike riding.
- Avoid situations and "triggers" you relate with smoking.
- Find healthy substitutes for smoking.

- Carry sugarless gum or artificially sweetened mints. Munch carrots or celery sticks. Try doing crafts or other things with your hands.
- Do deep breathing exercises when you get the urge.

What if I smoke after quitting?

It's hard to stay a nonsmoker once you've had a cigarette, so do everything you can to avoid that "one." The urge to smoke will pass. The first 2 to 5 minutes will be the toughest. If you do smoke after quitting:

- This doesn't mean you're a smoker again — do something now to get back on track.
- Don't punish or blame yourself — tell yourself you're still a nonsmoker.
- Think about why you smoked and decide what to do differently the next time.
- Sign a contract to stay a nonsmoker.

What happens after I quit?

- Your senses of smell and taste come back.
- Your smoker's cough goes away.
- Your digestive system returns to normal.
- You feel alive and full of energy.
- You breathe much easier.
- It's easier to climb stairs.
- You're free from the mess, smell and burns in clothing.
- You feel free of "needing" cigarettes.
- You'll live longer and have less chance of heart disease, stroke, lung disease and cancer.

How can I learn more?

1. Talk to your doctor, nurse or other health-care professionals. If you have heart disease or have had a stroke, members of your family also may be at higher risk. It's very important for them to make changes now to lower their risk.
2. Call 1-800-AHA-USA1 (1-800-242-8721) or visit americanheart.org to learn more about heart disease.
3. For information on stroke, call 1-888-4-STROKE (1-888-478-7653) or visit StrokeAssociation.org.

We have many other fact sheets and educational booklets to help you make healthier choices to reduce your risk, manage disease or care for a loved one.

Knowledge is power, so *Learn and Live!*

Do you have questions or comments for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider. For example:

When will the urges stop?

How can I keep from gaining weight?





How Can I Handle the Stress of Not Smoking?

No one says that quitting smoking is easy. But everyone says it's worth it! Quitting will drastically reduce your risk of developing heart and blood vessel diseases — diseases that kill someone every 36 seconds. It will also lower your chance of having lung disease and cancer. Most of all, quitting can save your life and the lives of nonsmokers around you.

No matter how much or how long you've smoked, when you quit your risk of heart disease goes down. In fact, only three years after quitting, your risk of heart disease is almost the same as if you'd never smoked!



How can I cope with the urge?

- Write down the reasons why you quit and look at the list often.
- Don't talk yourself into smoking again. When you feel an urge to have "just one," stop yourself. Think of what triggered you, and find a different way to handle it. For example, if you feel nervous and think you need a cigarette, realize that you could take a walk to calm down instead.
- Be prepared for times when you'll get the urge. If you smoke when drinking, cut down on alcohol so you don't weaken your promise to yourself.
- Change your habits. Instead of having a cigarette after dinner, brush your teeth or walk the dog.
- Go where smoking isn't allowed. In restaurants ask to be seated in the nonsmoking section.
- Stick around people who don't smoke. Ask for support and find a buddy you can call when you feel weak. Tell others they can help you by not giving you a cigarette and by being supportive.
- Reward yourself each time you get through a day or week without smoking. Treat yourself to a movie. Or figure out how much money you've saved and buy yourself something special.

How can I relax?

- Try deep breathing. Take a long, deep breath, count to 10 and release it. Repeat five times and you'll feel much more relaxed.
- Allow 20 minutes a day to let go of tension this way: Close your eyes, relax your muscles and think hard about one word, like "calm." Say it until you reach a state of relaxation.
- Think positive thoughts! Focus on how great it is that you've stopped smoking, how food tastes better and how nice it is not to wake up coughing. Remind yourself how smoking stinks, stains your teeth and gives you bad breath.
- Listen to relaxation audiotapes.

How can physical activity help?

- Walking and other exercise releases stress and calms you.
- It can improve your mood.
- It keeps your mind off cigarettes.
- It can help control your appetite.
- It can help you lose weight if you're overweight, or stay at a normal weight.
- It can lower your blood pressure level.
- It can increase your "good" blood lipid level.
- It can help reduce your risk of developing heart disease and stroke.
- It can help control blood sugar by improving how your body uses insulin.

How can I learn more?

1. Talk to your doctor, nurse or other health-care professionals. If you have heart disease or have had a stroke, members of your family also may be at higher risk. It's very important for them to make changes now to lower their risk.
2. Call 1-800-AHA-USA1 (1-800-242-8721) or visit americanheart.org to learn more about heart disease.
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We have many other fact sheets and educational booklets to help you make healthier choices to reduce your risk, manage disease or care for a loved one.

Knowledge is power, so *Learn and Live!*

Do you have questions or comments for your doctor?

Take a few minutes to write your own questions for the next time you see your healthcare provider. For example:

How long will the cravings last?

What about nicotine gum?

What about the nicotine patch?

Your contribution to the American Heart Association supports research that helps make publications like this possible.

The statistics in this sheet were up to date at publication. For the latest statistics, see the *Heart Disease and Stroke Statistics Update* at americanheart.org/statistics.

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Lift the Lid on Chew Tobacco: Get the Truth

What is chew tobacco? The two main types of smokeless tobacco in the United States are chewing tobacco (loose tobacco leaves) and snuff (finely ground tobacco). Users put the tobacco in their mouths, chew on it, and spit out the tobacco juices, which is why smokeless tobacco is often called spit or spitting tobacco.

Smokeless tobacco is the term used by the tobacco industry. It makes these products sound safe; but they aren't.

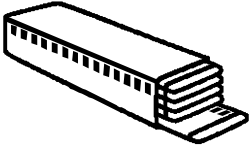


Getting "hooked." People get hooked before they know the facts about chewing tobacco. They don't know that chew tobacco—

- Causes cancer.
- Contains nicotine (an addictive drug).
- Harms the body, including the heart.
- Is not a safe alternative to cigarettes.
- Makes it more likely that teens who use it will become cigarette smokers.
- Is costly.
- Can ruin your social life (because of stained teeth, bad breath, and smelly clothes).

Chew tobacco is not safe. There are no benefits of chewing tobacco. Here are some of the dangers:

- Sugar in chew tobacco may cause decay in exposed tooth roots.
- Chew tobacco can cause your gums to pull away from your teeth in the place in your mouth where you hold the tobacco. The gums do not grow back.
- Leathery white patches, called leukoplakia (loo-ko-play-kia), and red sores are common in people who chew tobacco. These sores can turn into cancer.

Some Alternatives to Chew or Snuff Tobacco

<p>Sugarless Gum</p> <p>It can keep your mouth moist and active without the risk of chew tobacco.</p> 	<p>Healthy Snacks</p> <p>Fruit and vegetable sticks can also be substitutes for chew tobacco. They are tasty and good for you, too.</p> 	<p>Physical Activity</p> <p>It can reduce stress and renew energy. Try the activities you like, such as walking, swimming, jogging, or playing a sport.</p> 
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Some ideas for quitting:

- **Write down your reasons for quitting.** Put them in a place where you can see them. Write down the things you will buy with the money you saved. Pick a quit date.
- **Choose a method for quitting.** Talk to your health care provider, dentist, counselor, or coach about possible quitting methods.
- **Seek support from your friends.** Avoid “hanging out” in places where chew tobacco is used. If your friends use chew tobacco, consider quitting together as a group.

If you haven't started, why take the risk? If you have started, why not quit?

What Can Communities Do to Prevent Tobacco Use?

- Work together with schools, health professionals, and community members and organizations to support education of children in grades K–12. These people and organizations can help young people develop the skills they need to avoid tobacco use.
- Support “tobacco-free environment” policies in schools. These policies prohibit cigarette, cigar, and pipe smoking and the use of smokeless tobacco by students, teachers, staff, and visitors.
- Establish policies that prohibit tobacco use in school buildings, on school grounds, in school buses or other vehicles used to transport students, and at off-campus school-sponsored events.
- Support tobacco-free environments and laws that prohibit smoking or limit it to separately ventilated areas in restaurants and other public places.
- Encourage employers to provide smoke-free indoor air by prohibiting smoking or limiting it to separately ventilated areas.
- Encourage employers to offer programs for workers who want to quit smoking.
- Make sure health care providers encourage nonsmokers not to start smoking and encourage smokers to quit.
- Make sure health insurance plans and managed care organizations (HMOs) cover smoking cessation services as part of their benefits.
- Control the sale of tobacco products to children, preteens, and teens.

Role Play: How to Ask Someone to Not Smoke Around You

Let's try role playing. Some people have a hard time telling smokers not to smoke around them or around their children. This activity will let you practice what you say when someone smokes around you or your family.

Marla is on a bus with her new baby. She is on her way to visit a friend. It is a warm spring day, and many people on the bus are lowering the windows. Marla feels hot sitting in a crowded spot with her bundled baby on her lap. A man standing next to her seat pulls out a pack of cigarettes. He takes a cigarette out of the pack and lights it. "No Smoking" signs are posted throughout the bus. The man holds the lighted cigarette out of the sight of the bus driver. The smoke seems to be drifting right over Marla's baby, and it is burning Marla's eyes. Along with the heat, the smoke makes her feel dizzy. Marla can't move to another part of the bus because there are no empty seats.

Objectives

By the end of this session, community health workers will be able to—

- Explain why heart disease prevention should begin in childhood.
- Explain when to have a child's cholesterol levels checked.
- Explain when to have a child's blood pressure checked.
- Explain when to have a child's blood sugar checked.
- Explain why it is important that overweight children try to lose weight.
- Describe the types of foods children should be eating and the types that should be limited.
- Describe how parents can help their children and teens to not start smoking and to quit smoking.

Materials and Supplies

Flipchart, markers, tape, blackboard, chalk, and eraser.

Handouts:

- 15–1: Arteries
- 15–2: Blood Cholesterol Levels in Children
- 15–3: Normal Blood Pressure Levels in Children
- 15–4: Tips for Kids with Type 2 Diabetes: What Is Diabetes?
- 15–5: Tips for Kids with Type 2 Diabetes: A. Be Active
B. Eat Healthy Foods
C. Stay at a Healthy Weight
- 15–6: Helping the Student with Diabetes Succeed: A Guide for School Personnel
- 15–7: Dietary Recommendations for Children
- 15–8: GO, SLOW, and WHOA Foods
- 15–9: Lifestyle Recommendations for Children Age 2 Years and Older
- 15–10: Examples of Moderate Amounts of Physical Activity
- 15–11: What Teens Should Know about Tobacco
- 15–12: What Parents Should Know about Keeping Children and Teens Tobacco-Free

Chapter Outline

1. Overview
 2. Lesson
 - A. Cholesterol
 - B. Blood Pressure
 - C. Diabetes
 - D. At Risk for Overweight
 - E. Healthy Eating
 - F. Physical Activity
 - G. Tobacco Control
 3. Summary
-

Resources

101 Tips for Family Fitness Fun. National Association for Sport and Physical Education. 1-800-321-0789. Stock number: 304-10322. Also available in Spanish.

American Diabetes Association. www.diabetes.org

BAM! Body and Mind. Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. www.bam.gov

CDC Division of Nutrition and Physical Activity: Programs and Campaigns. Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. www.cdc.gov/nccdphp/dnpa/programs/index.htm

CDC Healthy Youth! Web site. Health Topics: Childhood Overweight. www.cdc.gov/HealthyYouth/overweight/index.htm

Centers for Disease Control and Prevention, Tobacco Information and Prevention Source (TIPS). www.cdc.gov/tobacco
www.cdc.gov/tobacco/youth/index.htm *Tobacco Fact Sheets.* [www.cdc.gov/tobacco/data_statistics/Factsheets/tobacco related mortality.htm](http://www.cdc.gov/tobacco/data_statistics/Factsheets/tobacco_related_mortality.htm)

Children with Diabetes: Information for School and Child Care Providers. American Diabetes Association. Publication No. 5958-01 July 2003.

Diabetes Public Health Resource, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. www.cdc.gov/diabetes

Dietary Recommendations for Children and Adolescents: A Guide for Practitioners: Consensus Statement from the American Heart Association. Endorsed by the American Academy of Pediatrics. Samuel S. Gidding, MD, Chair; Barbara A. Dennison, MD, Co-chair, et al., *Circulation* 2005;112(13):2061–2075. <http://circ.ahajournals.org/cgi/reprint/112/13/2061>

The Eagle Books: Stories about Growing Strong and Preventing Diabetes. www.cdc.gov/diabetes/pubs/eagle.htm

Eating Disorder Resources:

mentalhealth.samhsa.gov/publications/allpubs/ken98-0047/default.asp
www.aacap.org/cs/root/facts_for_families/teenagers_with_eating_disorders
www.brightfutures.org/mentalhealth/pdf/bridges/eat_disorder.pdf

For Your Children. American Heart Association brochure. 50-1459A 4/02. www.americanheart.org/presenter.jhtml?identifier=3007645

Fourth Report on the Diagnosis, Evaluation, and Treatment of High Blood Pressure in Children and Adolescents. National Heart, Lung, and Blood Institute; National Institutes of Health; U.S. Department of Health and Human Services. NIH Publication No. 05-5267. Originally printed September 1996 (96-3790). Revised May 2005. www.nhlbi.nih.gov/guidelines/hypertension/child_tbl.htm

Fruits and Veggies Matter www.fruitsandveggiesmatter.gov

Get Into Your Kid's Head. Here's How. Centers for Disease Control and Prevention. U.S. Department of Health and Human Services. NIH Publication No. 6996. 2003. www.cdc.gov/tobacco/tobacco_control_programs/campaigns_events/got_a_minute/GotAMinute_brochure/

Healthy Youth! Key Strategies to Prevent Obesity. Centers for Disease Control and Prevention. U.S. Department of Health and Human Services. www.cdc.gov/healthyyouth/keystrategies/index.htm

Joanne Ikeda MA, RD. Co-director of the Center for Weight and Health at the University of California at Berkeley allowed us to provide questions she developed. Using her questions, we suggest that CHWs ask parents about their children's eating habits (Section E) and physical activity habits (Section F).

State Children's Health Insurance Program and Insure Kids Now! U.S. Department of Health and Human Services. www.cms.hhs.gov/home/schip.asp
<http://www.insurekidsnow.gov>

Kids Walk-to-School: Home. Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. www.cdc.gov/nccdphp/dnpa/kidswalk/index.htm

Make Your Calories Count. Food and Drug Administration. www.cfsan.fda.gov/~ear/hwm/labelman.html

My Pyramid for Kids. www.mypyramid.gov/kids

National Diabetes Education Program, National Institutes of Health, U.S. Department of Health and Human Services. www.ndep.nih.gov

National Network of Quitlines. 1-800-QUIT-NOW or 1-800-784-8669. www.smokefree.gov

NHLBI Educational Materials Catalog. <http://emall.nhlbihin.net/>

Portion Sizes and School-Age Children. United States Department of Agriculture Food and Nutrition Service. Team Nutrition, North Carolina Training Modules. www.fns.usda.gov/tn/healthy/NC_portions.html

Resources for School Personnel. National Institutes of Health, U.S. Department of Health and Human Services. www.ndep.nih.gov/resources/school.htm

Tips 4 Youth. Tobacco Information and Prevention Source (TIPS). Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. www.cdc.gov/tobacco/tips4youth.htm

Youth Zone: The Scoop on Sugar. American Diabetes Association. For information on how to read food labels. www.diabetes.org/youthzone/the-scoop-on-sugar.jsp

VERB: It's What You Do. Youth Media Campaign, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. www.cdc.gov/youthcampaign/index.htm

We Can: Families Finding the Balance. A Parent Handbook. National Institutes of Health, U.S. Department of Health and Human Services. NIH Publication No. 05-5273. June 2005. www.nhlbi.nih.gov/health/public/heart/obesity/wecan_mats/parent_hb_en.pdf

Wisdom Kit. American Diabetes Association. For information on kids and diabetes, including sports and exercise, surviving sick days, wearing a medical ID bracelet or necklace, parents and your diabetes, and managing school. www.diabetes.org/wizdom

1. Overview

► **Say:**

When community health workers work in clinics, visit clients at home, or see them at other places in the community, they often see or work with entire families.

Healthy eating and physical activity aren't only for adults; they're just as important for children!

If you see children who are overweight, very inactive, or eating unhealthy foods and drinking sugary drinks, take action by asking questions about the children's eating habits and physical activity levels. Let the families know about places where their children can safely play actively and how the whole family can eat more healthily.

In earlier sessions, we have focused on adults, but preventing heart disease should begin in childhood.

► **Ask:**

Why do you think the prevention of heart disease should start in childhood?

Possible answers are—

- It's important to start good habits early.
- Healthy eating and physical activity are good for you at any age.
- Lifestyle habits that prevent heart disease prevent other illnesses as well.

(If CHWs do not mention these points, find a way to bring them up.)

► **Say:**

All of these things are true. It's much easier to start healthy lifestyle habits in childhood, and the habits we start early are more likely to stay with us throughout our lives. Another important reason to start heart disease prevention in childhood is that this disease begins in childhood.

We now know that atherosclerosis begins in childhood.

► **Ask:**

Who remembers what atherosclerosis is? (Wait for answers.)

► **Say:**

Yes. Atherosclerosis is the build-up of plaque on the artery walls, which restricts the blood flow through the arteries and makes the artery walls stiff and less flexible.



Handout 15–1: Arteries

Review the handout with the CHWs. The handout shows an artery clogged by plaque.

► **Say:**

Science shows that atherosclerosis begins in childhood and continues into adulthood. As we know from earlier sessions, this condition leads to heart disease, heart attack, and stroke.

Science also shows that high blood cholesterol levels in childhood may lead to developing atherosclerosis later in life.

To prevent atherosclerosis from developing, children and teens should—

- Not use tobacco.
- Be physically active at least 60 minutes at moderate intensity on most days of the week, or even better, every day.
- Eat several servings of fruit and vegetables each day and a variety of other foods low in saturated fat and cholesterol.
- Avoid becoming overweight.
- Get their cholesterol levels checked every year beginning at age two, depending on family history or other conditions.
- Get their blood pressure checked every year beginning at age three.
- Be tested for diabetes if they are overweight and their family has a history of diabetes.

Some parents may not have their children tested for diabetes and high cholesterol because they think they can't afford a doctor's visit. Every state has a health insurance program, called the State Children's Health Insurance Program (SCHIP), for infants, children, and teens. It includes health and dental coverage. Another program that states offer is called Insure Kids Now. Free or low-cost insurance is available to children in working families, including immigrant families. Families who earn up to \$34,100 for a year (for a family of four) are eligible for Insure Kids Now coverage.

(Write the Web site for the SCHIP and the Insure Kids Now! Program on the flipchart: www.cms.hhs.gov/home/schip.asp and www.insurekidsnow.gov).

2. Lesson

A. Cholesterol

► Say:

Starting at age two, children should have their cholesterol levels checked if—

- There is a family history of heart disease or stroke, such as a grandparent, aunt, uncle, or parent who has had a heart attack or stroke or who has heart failure or atrial fibrillation, especially if this person developed the problem before the age of 55.
- A parent has high blood cholesterol (240 mg/dl or higher).
- The child is overweight, has diabetes, or has high blood pressure.



Handout 15–2: Blood Cholesterol Levels in Children

Look at the total cholesterol and LDL cholesterol levels for children listed on the handout. Ask the CHWs if they can remember the levels for adults. Ask how those levels compare with the levels for children. Write the adult cholesterol numbers on a flipchart.

► **Say:**

There is increasing evidence that the build-up of plaque in the arteries of children and teenagers is linked to high cholesterol levels. Because there are no outward signs of this build-up, most people won't be aware of it until they have a heart attack or stroke as adults.

The best way to avoid heart disease later in life is stop it before it begins in children. Families will be healthy if they prepare and eat foods that are low in saturated fat, trans fat, cholesterol, salt, and sugar. It's important to eat more fruits and vegetables, low-fat dairy products, whole grains, and fish.

By eating healthy foods, not smoking, being physically active, and keeping a healthy body weight, children and teenagers can delay or prevent heart disease later in life.

B. Blood Pressure

► **Say:**

Children's blood pressure should be measured starting at age three during a visit to the doctor, a school nurse, or a local clinic. Blood pressure should be measured with a child-sized blood pressure cuff, not an adult-sized cuff.

Normal blood pressure levels for a child are determined by the child's sex, age, and height.



Handout 15–3: Normal Blood Pressure Levels in Children

The handout shows normal blood pressure levels for children based on their age, weight, and height. If a child's numbers are higher than the ones listed, the doctor will prescribe some type of treatment, starting with lifestyle changes, such as healthy eating and increased physical activity.

► **Say:**

The chance of having high blood pressure rises with increasing body weight. Three out of ten overweight children have high blood pressure.

High blood pressure often occurs with other risk factors for heart disease. If a child has high blood pressure, his or her blood cholesterol levels and blood sugar levels should be checked.

If an overweight child snores, parents should tell the doctor because snoring can be related to high blood pressure.

C. Diabetes

► Say:

Type 2 diabetes was once rare in children, but now it's becoming more common.

Type 2 diabetes in children can go undiagnosed for a long time because children may have no signs or only mild signs. A blood test is needed to diagnose (find out if child has) diabetes.

Children and teens diagnosed with type 2 diabetes generally are between 10 and 19 years old, are overweight, and have a strong family history of type 2 diabetes.

If a child has a strong family history of type 2 diabetes and is overweight, the doctor should have him or her tested for diabetes. Children who develop type 2 diabetes and do not keep their blood sugar levels under control are at serious risk for having heart and kidney disease, heart attack, stroke, foot amputations, blindness, and other problems in their mid-to-late 20s.

Most often, type 2 diabetes in children is a lifestyle disease—the result of too much high-calorie junk food and too many sugary drinks, not being physically active, and being overweight.



Handout 15–4: Tips for Kids with Type 2 Diabetes: What Is Diabetes?

This handout from the National Diabetes Education Program is good for children with type 2 diabetes. It's important that children know that diabetes can be controlled, and it's important that they know that it must be controlled.

► **Say:**

If children have diabetes, it is important that they eat the right foods, check their blood glucose regularly, and take all diabetes medicines as prescribed by their doctor.

Family support is very important because diabetes is stressful for both children and their families. Parents should be alert for signs of depression or eating problems in their child. If there is any sign of either, the child must see a doctor.

Also, parents should talk to their children about how important it is to avoid smoking, alcohol, and other drugs because each of these substances can have very serious effects on people with diabetes.

A team that includes doctors, nurses, diabetes educators, and nutritionists can help parents and other family members or caregivers decide on the best treatment plan to help the child understand and manage his or her diabetes.

It is very important for a school-aged child with diabetes to have a medical and emergency management care plan in place at school. The school nurse usually works with the family, the student's doctor, and teachers to make sure a safe and effective plan to manage diabetes is in place for the child. Parents should know about the plan and take part in creating it.

Remember, type 2 diabetes doesn't have to happen to children. In most cases, it can be prevented or delayed by a family's commitment to healthy eating and physical activity.



Handout 15–5: Tips for Kids with Type 2 Diabetes:

A. Be Active

B. Eat Healthy Foods

C. Stay at a Healthy Weight

These three handouts are additional tip sheets for children with type 2 diabetes. Each tip sheet provides useful information to help them deal with diabetes and to take steps to keep their blood sugar levels under control.

You can order or download the tip sheets from: www.ndep.nih.gov/resources/school.htm.



Handout 15–6: Helping the Student with Diabetes Succeed: A Guide for School Personnel

This handout is a copy of the front page of an 88-page booklet called *Helping the Student with Diabetes Succeed: A Guide for School Personnel*. The booklet provides information for students, teachers, school nurses, and the principal, and other school staff on managing diabetes in the school setting. It can be ordered from the National Diabetes Education Program or downloaded from: www.ndep.nih.gov/resources/school.htm.

D. At Risk for Overweight

► Say:

Did you know that—

- One out of 10 preschoolers aged 2- to 5-years-old is overweight.
- Today more than twice as many children aged 6 to 11, and three times as many teens aged 12 to 19 are overweight than were overweight 20 years ago.
- Overweight and obesity are most common among African American and Native American children.
- Overweight teens have a 70 percent chance (7 out of 10 overweight teens) of becoming overweight or obese adults. This chance increases to 80 percent (8 out of 10) if one or more parents are overweight or obese.

Overweight is the result of an energy imbalance.

When you are taking in more energy, or calories, than you are burning the result is weight gain.

Extra pounds affect a child's health just as they do an adult's health.

More than half of young people who are overweight have another risk factor for heart disease, such as high blood cholesterol or high blood pressure.

Compared with children who have a normal weight, children who are overweight are much more likely to have high blood pressure, high blood cholesterol, and diabetes as young adults. Same as adults, they are at greater risk for heart disease, heart attack, and stroke.

► **Ask:**

When is a child overweight?

► **Say:**

In an earlier session, we talked about body mass index, or BMI, as a way to determine if a person is overweight. Because children are still growing, we can use growth charts for boys and for girls, based on age, to find their BMIs.

Parents should ask their children's doctor what a healthy weight range is for their child. A high BMI might point to the need for follow-up by the doctor.

You may go to www.cdc.gov/nccdphp/dnpa/bmi/index.htm to figure out BMI for girls and boys. If you use the program, share the results with your child's doctor. To find out if a child is overweight, talk to your doctor.

A healthy lifestyle, including healthy eating and physical activity, can lower the risk of becoming overweight and developing related risks and diseases.

Children come in all sizes and shapes, and some children are larger than others. If a larger child has a healthy lifestyle, chances are there is no need to worry.

Remember, overweight children have a hard time because they may not be able to keep up with other children when physically active. Also, others may tease them about their weight.

Preteens and teens especially tend to worry that their bodies aren't like those of the girls and boys they see on TV or in magazines. TV shows and magazines that include preteens and teenagers often send the message that you must be thin to be attractive and popular.

A very low BMI, in children and teens, is also a signal for you to talk to your doctor because your child or teen may be sick or have different kinds of eating disorders (problems) that can be harmful to the heart. To learn more about these kinds of eating problems you can find information at these Web sites:

- <http://mentalhealth.samhsa.gov/publications/allpubs/ken98-0047/default.asp>
- www.aacap.org/cs/root/facts_for_families/teenagers_with_eating_disorders
- www.brightfutures.org/mentalhealth/pdf/bridges/eat_disorder.pdf

Never let anyone make fun of an underweight or overweight child or teenager, and don't single out those who are underweight or overweight. Be sensitive to the feelings and needs of these children.

Provide activities that overweight children and teens can enjoy and can do successfully.

Help families make a healthy lifestyle a family project.

One way to help families and communities live healthier lives is to create surroundings at home, school, and in the community that promote healthy lifestyles.

Parents can ask that schools have daily physical education classes, taught by qualified PE teachers, and that healthy foods and drinks are available in vending machines and in the cafeteria.

Also, parents can take their children less often to fast-food places and can choose healthier foods and smaller amounts of food and drink if they do go.

Parents can limit "value" or "monster" meals, which may contain more food than the family needs. Encourage parents to say "no" to fried foods, desserts, chips and other salty snacks, and soft drinks.

Children who often eat in restaurants, including fast-food restaurants, are more likely to become overweight and to have risk factors for heart disease and diabetes than those who hardly ever eat in restaurants.

Parents can and should promote healthy behaviors and lifestyles, and model them for their children, whether or not their children are overweight.

E. Healthy Eating

► Say:

These are good questions to ask parents about their children's eating habits:

- Tell me what your child usually eats.
- What does your child usually drink with meals and when thirsty?
- Does your child drink soda?
- How much soda does he or she drink every day?

- What kind of milk does your child drink (for example, fat-free or low-fat), and how much does he or she drink each day?
- How much fruit and vegetables does he or she eat every day?

Many of the unhealthy habits that lead to heart disease are habits we formed as children, especially the food choices we made.

Parents can make a big difference in their children's eating habits. Children look up to them as role models and copy their behavior. If parents make good food choices and stay physically active, their children are more likely to do the same.

Today, many children as young as age two drink soft drinks regularly. These drinks have little nutritional value and are loaded with calories. The average can of soda has more than 200 calories.

Parents should give their children water or low-fat and fat-free milk, and 100 percent fruit juice to drink instead of soft drinks (soda or pop). Children need to drink at least two glasses of milk a day to build strong bones. But children aged 2 years and older should not drink whole milk because of the high amount of fat it contains. Low-fat (1%) milk and fat-free milk have all the nutrients of whole milk without the fat. Children younger than age 2 should drink whole milk.

Today in the United States, children aren't eating the foods that will help them stay healthy and be free of heart disease as adults. Eight out of 10 children are not eating enough fruits and vegetables each day.

Many children are eating too much food that has low nutritional value, but has plenty of added fat, salt, and sugar; such as, cookies, cake, pies, chips, and french fries.

Children should eat a variety of fruits, vegetables, whole grains, and low-fat dairy products as well as fish, chicken, and lean meat. Parents should replace high-fat snacks and sugary desserts with healthier choices such as fruits and vegetables.

**Handout 15–7: Dietary Recommendations for Children**

Review the handout with the CHWs. Explain that most children in the United States, including preschoolers, eat too much total fat and saturated fat and too few fruits and vegetables. Nearly half of all teens eat more than the recommended amount of saturated fat each day. Making even simple changes in a child's or teen's diet can make a difference in lowering cholesterol levels and an even bigger difference in lowering the risk of heart disease. Children aged 2 years and older should eat a diet that is low in total fat, saturated fat, and cholesterol. They should eat plenty of fruits and vegetables.

You can find a colorful posters at these Web sites:

- http://teamnutrition.usda.gov/Resources/mpk_poster.pdf
- http://teamnutrition.usda.gov/Resources/mpk_poster2.pdf

Go to www.fruitsandveggiesmatter.gov to find the best number of fruits and vegetables for your children.

**Activity: How Can Parents Get Children to Eat More Healthily?**

Ask CHWS for their ideas. Possible answers include—

- Get young children started on eating fruits and vegetables.
- Offer a variety of healthy food choices.
- Let children shop for and help prepare vegetables.
- Let child grow vegetables in a small garden.
- Serve vegetables raw with a low-fat dip.
- Be good role models by showing your children how you enjoy eating vegetables and fruits.
- Put a bowl of fruit on the kitchen table for a healthy snack, and have the family agree not have to have chips and other high-calorie food for snacks.
- Pack lunches with nutritious foods, such as baby carrots, grape tomatoes, and low-fat string cheese.
- Choose store checkout lines without a candy display.
- Limit the amount of “junk food” (high-calorie, high-salt, high-fat, and high-sugar food) in the house.
- Allow children to serve themselves food; doing so can help children who overeat when served large portions.
- Eat smaller portions of food at home and at restaurants. For example, or order a medium pizza for the family instead of a large one. Everyone will get the same number of slices as before, but the slices will be smaller.
- Instead of giving a child an entire bottle of fruit juice or soda, pour a small amount (1/2 cup) into a cup.
- Have family meals together.
- Don't give children food as a reward.
- Have children eat a good breakfast.
- Tell children that eating healthful food and drinking healthful drinks, such as milk and water, will make their bodies healthy and will help them look and feel their best.

**Handout 15–8: GO, SLOW, and WHOA Foods**

The chart in this handout lists foods that can be eaten almost anytime, foods that should be eaten sometimes, and those that should be eaten only occasionally. It is from the We Can! Program. We Can! stands for Ways to Enhance Children's Activity and Nutrition. It's a new public education outreach program designed to help children 8 to 13 years old stay at a healthy weight through improved food choices, increased physical activity, and reduced time watching TV and playing computer games. You can find more information about the We Can! program at www.nhlbi.nih.gov/health/public/heart/obesity/wecan_mats/parent_hb_en.pdf.

► Say:

We've already talked about how healthy eating habits that help prevent heart disease and strokes are formed in childhood, but how early should parents begin to be concerned about what their children are eating and drinking? The answer is **at birth**.

If possible, babies should only be fed breast milk for the first 4 to 6 months of life, and they should continue breastfeeding through their first year.

At 4 to 6 months, as you begin to introduce solid baby foods remember to—

- Be careful not to overfeed infants.
- Introduce healthy foods repeatedly (even if your baby refuses them at first).
- Limit sweets and high-fat foods to special occasions.
- Don't offer juice until your baby is at least six months old, and then limit the amount to 4 to 6 ounces a day.

A 1-year-old child needs two cups of whole milk a day, along with 1 1/2 ounces of lean meat or beans, 1 cup of fruit, 3/4 cup of vegetables, and two ounces of grains.

**Handout 15–9: Lifestyle Recommendations for Children Age 2 Years and Older**

Tell CHWs to give this handout to parents who might need ideas on how to keep their family physically fit and eating healthily.

F. Physical Activity

► Say:

Almost one quarter of children in the United States get no free-time physical activity at all. There are many things that keep children from being active: schools have cut back on recess and physical education classes; children spend hours each day watching TV or playing video games; and in some neighborhoods it's not safe to play outdoors.

When children don't have a chance to be active they are burning fewer calories and those extra calories can turn into fat.

These are good questions to ask parents about their children's physical activity habits:

- How does your child spend your free time?
- What does your child do when he or she comes home from school?
- How about after dinner?

► Ask:

How much physical activity should children get?

► Say:

Children and teenagers should be active for at least 60 minutes on most, if not all, days of the week. Activities should be fun and right for the child's age.



Handout 15–10: Examples of Moderate Amounts of Physical Activity

Tell CHWs that getting 60 minutes of physical activity on most days can be a challenge for most families, but it can be done, and doing physical activity as a family can make it easier.

► **Say:**

Parents may think that they don't have time to make sure their children get at least one hour of physical activity a day, much less be active themselves for that long. But you can help families think of ways they can fit physical activity into their daily schedules.

Just as with healthy eating habits, physical activity should be a part of each day as soon as the child begins to walk. Toddlers rarely need to be encouraged to be active, but they need a safe area in which to play. As children get older, they tend to settle down and begin spending more time in front of the TV. Parents should be good role models and should get the family to play active games, go on walks, have family dance nights, or do other activities that are enjoyable for the children. Remember, physical activity is fun for the whole family.

**Activity: How Can Parents Help Their Children Be More Physically Active?**

Ask CHWS for their ideas. Possible answers include—

- Be good role models and get the family to play active games, go on walks, or do other physical activities together.
- Keep a log to see how much time your children spend watching TV and playing computer games. Limit the time to two hours or less each day. At the beginning of the week, help your children pick TV shows to watch during that week.
- Take TVs and computers out of your children's bedrooms.
- Buy toys that are fun and that keep everyone active, such as balls, jump ropes, skates, and paddle balls.
- Walk or bike to and from school with your children.
- Go for family walks after dinner and on weekends.
- Start slowly with ten minutes of physical activity and then work up to more.
- Turn off Saturday morning cartoons and take your children to the park or to the zoo.
- Encourage your children to play ball instead of a video game.
- Stretch, dance, or do other physical activities while watching TV with your children.
- Have a contest with your children. See who can do the most push-ups or jumping-jacks during a commercial break.
- Pop in your favorite exercise tape or DVD to get your heart pumping! Have your children join you.
- Bike to the library together.
- Celebrate a birthday by doing something active, such as a hike, a volleyball game, or swimming.
- Train together to walk or run a 5K race.
- Challenge your child to jump rope for 5 minutes. When he or she is done, enjoy a big hug. Then you try it!
- Take your children outside to play with the dog for 20 minutes.
- Take the stairs instead of the elevator or the escalator.
- Swim laps at a pool with your children.
- Encourage outdoor play.
- Talk to your child's school about having more active time for students.
- Ask if the school can be used for physical activities during after-school hours.
- Involve your children in active programs with the YMCA, 4-H, the Boy Scouts and Girl Scouts, or Boys and Girls Clubs.
- Talk to community leaders about providing safe and active places for children to play.
- Volunteer to help create or fix up community playgrounds.

G. Tobacco Control

► Say:

One out of eight middle school students uses tobacco.

There are many reasons children and teens start smoking. Here are some of them:

- They feel peer pressure or want to be part of the group.
- Seeing their favorite sports figures and movie and rock stars smoking makes it seem “cool” and attractive.
- Girls, especially, will smoke to help control their weight.
- Children are more likely to smoke if their parents or older brothers or sisters smoke.
- They use smoking is a way of claiming their independence.
- Smoking makes them feel mature.

Encourage children not to smoke. Tell them the following:

- Nicotine in cigarettes, cigars, and spit tobacco is addictive.
- Smoking can damage lungs, and it reduces the oxygen available for muscle use during sports.
- Smoking affects overall athletic performance; in general, smokers run more slowly and can’t run as far as nonsmokers.
- Cigars and chew tobacco are NOT safe alternatives to cigarettes.
- Tobacco makes your hair and clothes stink.
- Tobacco stains teeth and causes bad breath.

Parents can help their child quit smoking in the following ways:

- Try to avoid threats and find out why he or she is smoking (for example, stress, wanting to be accepted by other teens, to get your attention).
- Let your child know that for health and legal reasons you disapprove of using tobacco.
- Show your interest in a non-threatening way, ask a few questions about why your teen is smoking, and decide what changes can be made to help him or her stop.
- If you smoke, **quit**. If you have already quit, talk to your child about your experience.

- Be supportive. Both you and your teen will need to prepare for the mood swings and crankiness that can come with tobacco withdrawal.

If your teen is trying to quit smoking, remind him or her of the “5 D’s” to get through the tough times:

- **Delay!** The craving will eventually go away.
- **Deep breath.** Take a few calming breaths.
- **Drink water.** It will flush out the tobacco chemicals.
- **Do something else.** Find new habits to replace smoking.
- **Discuss.** Talk about your thoughts and feelings.

Remind your teen that quitting for a day is easy but quitting for life is a bit tougher. Get help for yourself or your child. Make a list with your teen or preteen stating the reasons for wanting to quit. Go back to this list when your child is tempted to go back to smoking.

It’s best to quit “cold turkey” (all at once). Reward your child when he or she quits smoking. Plan something special for you to do together.

Get professional help if it’s needed. Many health insurance companies pay for programs that help children quit smoking. Some states offer assistance and counseling for people trying to quit smoking through toll-free telephone numbers. These are known as quitlines. You can find out how to get help by calling the U.S. Quit Line at (800) QUIT-NOW. The Quit Line offers the following:

- A single easy-to-remember number for free information on quitting.
- One-on-one help.
- Support and help with how to cope with quitting smoking.
- Information on ways to quit and tips on helping you quit for good.
- Information about medicines to help you quit smoking.
- Referrals to local quit-smoking programs and services.



Handout 15–11: What Teens Should Know about Tobacco

Tell CHWs that they can use this handout when talking to preteens and teens about smoking.

**Handout 15–12: What Parents Should Know about Keeping Children Tobacco-Free**

Tell CHWs that they can give this handout to parents who have preteens or teens who are at risk for starting smoking.

3. Summary

► **Say:**

Healthy eating, physical activity, and not smoking aren't just for adults. They are just as important for children.

We need to focus on preventing of heart disease in younger children so that they don't develop it as adults.

We now know that heart disease can begin in childhood, especially in overweight children.

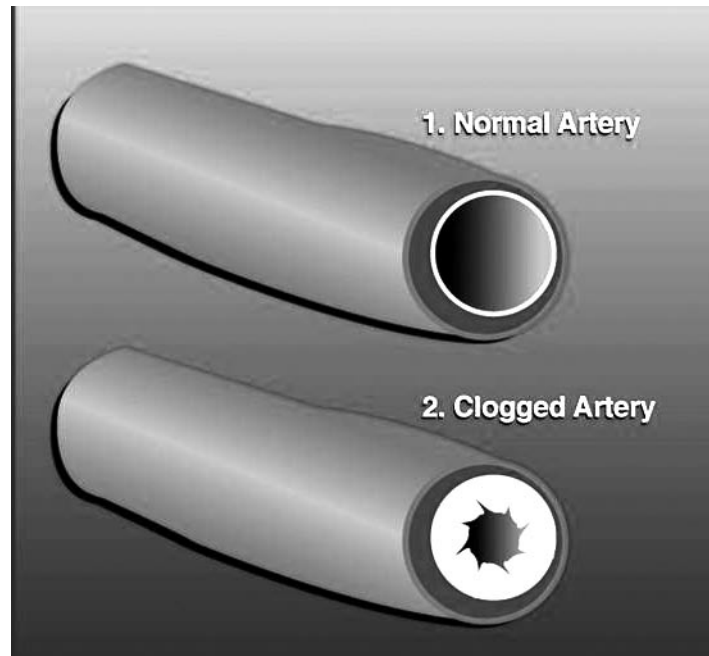
Children who have a strong family history of high blood pressure, high cholesterol, and diabetes, should have their blood pressure, cholesterol, and blood sugar levels checked.

Every state has a free or low-cost health insurance programs for infants, children, and teens. The State Children's Health Insurance Program (SCHIP) covers health and dental care for children from low-income families. Insure Kids Now offers insurance for children from working families, including immigrant families.

Parents can make a big difference in their children's lifestyle choices. Children look up to their parents as role models and copy their behavior. If parents make good food choices, stay physically active, and don't smoke, their children are more likely to do the same.

If CHWs see children and teens who are smoking, overweight, very inactive, eating unhealthy foods, and drinking sugary drinks they should take action by asking their parents questions and letting families know about places where children can play and be active safely, and how they can all eat more healthily. CHWs can help parents who want to keep their children and teens smoke-free or who want to help their children quit smoking.

Arteries



1. The top picture is a normal, healthy artery. Blood can flow through the opening easily.
2. The bottom picture is a clogged artery. The opening has been narrowed by plaque made up of fatty deposits, cholesterol, and possibly waste from tobacco smoke. Blood cannot flow easily through the opening and blood pressure against the artery walls is increased. Pieces of plaque can break off and form a blood clot that completely blocks the flow of blood in the artery.

Blood Cholesterol Levels in Children

Total Cholesterol Levels:	
Acceptable	Less than 170 mg/dl
Borderline	170 to 199 mg/dl
High	200 mg/dl or greater
LDL (“Bad”) Cholesterol Levels:	
Acceptable	Less than 110 mg/dl
Borderline	110 to 129 mg/dl
High	130 mg/dl or greater

HDL (“good”) cholesterol levels should be 35mg/dl or greater.

Triglyceride levels should be 150 mg/dl or less.



Normal Blood Pressure Levels in Children

BOYS		GIRLS	
Blood Pressure	Percentile for Height	Blood Pressure	Percentile for Height
Age 3 Years			
107/64	25th percentile	105/65	25th percentile
109/65	50th percentile	107/66	50th percentile
111/66	75th percentile	108/67	75th percentile
Age 7 Years			
113/75	25th percentile	112/73	25th percentile
115/76	50th percentile	113/74	50th percentile
116/77	75th percentile	114/75	75th percentile
Age 11 Years			
119/79	25th percentile	119/79	25th percentile
121/80	50th percentile	121/79	50th percentile
123/81	75th percentile	122/80	75th percentile
Age 15 Years			
129/83	25th percentile	126/83	25th percentile
131/83	50th percentile	128/83	50th percentile
133/84	75th percentile	129/84	75th percentile



What is Diabetes?

Diabetes means that your blood sugar, or glucose (GLOO-kos), is too high. Glucose comes from the food you eat and is also made in your liver and muscles.

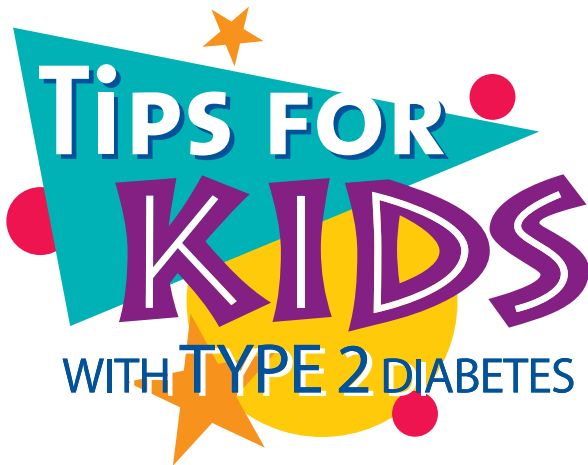
Your blood always has some glucose in it because your body needs glucose for energy. But too much glucose in the blood isn't good for your health.

An organ called the pancreas (PAN-kree-as) controls the amount of glucose in the blood. The pancreas makes insulin (IN-suh-lin) which helps glucose get from food into your cells. Cells take the glucose and make it into energy you need for life.

In a person with diabetes, the pancreas makes little or no insulin or the cells don't use insulin very well. So glucose builds up in the blood and can't get into your cells. Your blood glucose gets too high and diabetes can then damage your body.

What types of diabetes do kids get?

In **type 1 diabetes**, the pancreas stops making insulin. With type 1 diabetes, you need to get insulin from a shot or a pump. Type 1 used to be called "insulin dependent" or "juvenile diabetes."



TIPS FOR KIDS WITH TYPE 2 DIABETES


In **type 2 diabetes**, the pancreas still makes some insulin but the cells can't use it very well. Type 2 used to be called "adult onset diabetes" but now more kids are getting type 2.

How do you manage diabetes?

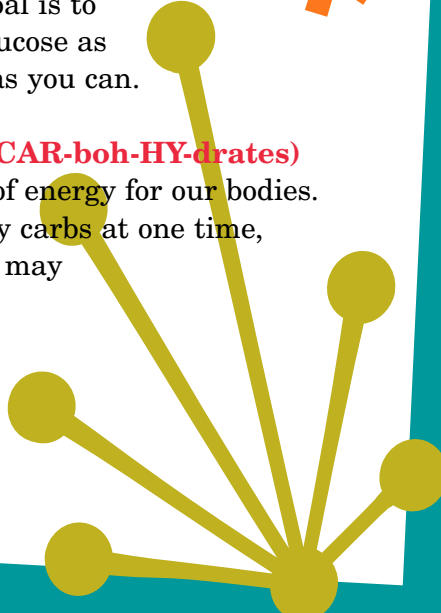



The key to taking care of diabetes is to keep your blood glucose as close to normal as possible. The best way is to **eat healthy foods, get exercise every day, stay at a healthy weight, take your medicine, and check your blood glucose** to see how you are doing. Kids with type 2 diabetes may need to take insulin or pills to help the body's supply of insulin work better.

Your doctor will tell you what blood glucose level is good for you and will teach you how to use a meter to check it. Your goal is to keep your blood glucose as close to this level as you can.



Carbohydrates (CAR-boh-HY-drates) are a good source of energy for our bodies. If you eat too many carbs at one time, your blood glucose may go up too high.





Many foods contain carbs. Whole grain foods, nonfat or low-fat milk, fresh fruits, and vegetables are better carb choices than white bread, whole milk, sweetened fruit drinks, soda pop, potato chips, sweets, and desserts. Learn to eat the right amount at meals and snack times to keep your blood glucose in balance.

Eat small servings of food and be active to prevent weight gain and to keep your blood glucose in a healthy range.

Illness and stress also can make your blood glucose go up. Things that make your blood glucose go down are insulin or pills and exercise.

Why do you get type 2 diabetes?

Being overweight increases the risk of getting type 2 diabetes. Kids who are not active or who have a family member with diabetes are more likely to get it. Some racial and ethnic groups have a greater chance of getting diabetes—American Indians, African Americans, Hispanics/Latinos, Asian Americans and Pacific Islanders. You do not get diabetes from eating too much sugar.



Why do you need to take care of your diabetes?

After several years, diabetes can lead to health problems. Blood vessels get damaged and cause heart attacks in young people. Damage to organs in your body can cause blindness, kidney failure, loss of legs or feet, and gum problems or loss of teeth.

The good news is that when you take care of your diabetes, you can avoid these problems. How? Eat healthy foods, be active every day, stay at a healthy weight, take your medicine, and check your blood glucose. Don't let diabetes stop you! You can do all the things your friends do and live a long and healthy life.



To learn more about diabetes

American Diabetes Association
1-800-DIABETES (1-800-342-2383)
www.diabetes.org/wizdom

Juvenile Diabetes Research Foundation International
1-800-223-1138 • www.jdrf.org



National Diabetes Education Program
1-800-438-5383 • www.ndep.nih.gov

National Diabetes Information Clearinghouse
1-800-860-8747 • www.niddk.nih.gov

To find a diabetes educator near you:
American Association of Diabetes Educators
1-800-338-DMED (1-800-338-3633)
www.diabeteseducator.org

To find a dietitian near you:
American Dietetic Association
1-800-366-1655 • www.eatright.org

Special thanks to the kids who helped us make this tip sheet.



The U.S. Department of Health and Human Services' National Diabetes Education Program (NDEP) is jointly sponsored by the National Institutes of Health (NIH) and the Centers for Disease Control and Prevention (CDC) with the support of more than 200 partner organizations.

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TIPS FOR KIDS

WITH TYPE 2 DIABETES



Be Active



Why is being active so important?

Exercise is good for everyone, whether you have type 2 diabetes or not. Being active keeps your body healthy and strong. It can help you stay at a weight that's right for you or help you lose weight slowly.

Physical activity can make you feel better if you're in a bad mood, relax you, and help you sleep well. If you have diabetes, exercise can help your body use glucose (GLOO-kos) for energy and lower your blood sugar (glucose).

What types of activity are good to do?

There are many ways you can stay active.

- ★ Walk the dog, take a hike, or ride a bike.
- ★ Roller skate, in-line skate, or ice skate.
- ★ Dance, swim, or jog.
- ★ Check out an aerobics tape from the library and work out at home.
- ★ You can play basketball, baseball, softball, golf, soccer, tennis, or volleyball.
- ★ Take the stairs instead of the elevator, skip rope, fly a kite, throw a disc, or play hopscotch.

Think of other things you can do and just move it! **Don't forget to have fun!**

Make exercise a part of your daily life. Be active with a friend or family member—it is easier and more fun when you have a buddy.

What should you do before exercising?

Talk to your doctor about what physical activity is good for you.

- ★ Ask if you need to check your blood glucose before starting any activity or after you are done.
- ★ Ask if the medicine you take can make your blood glucose get too low during exercise. If so, keep a snack with you when you exercise.

How much exercise do you need to do?

If you haven't been very active, start slowly. Try a few minutes each day. Slowly work up to 60 minutes almost every day. Pick an activity you like to do.



How can your family and friends help?

Ask your family members and friends to be active with you—it's good for everyone and helps to get rid of stress. **It's a great way for families to spend time together, too.**

Ask your family to take a walk after dinner, instead of watching TV. Instead of playing computer games, put on some music that everyone can dance to. Help your mom or dad carry groceries, clean the house, cut the grass, do garden work, rake leaves, or shovel snow.

What if you don't like to exercise?

There are a lot of things you can do to be more active. Try these: do sit-ups, lift light weights, or jump rope while you watch TV. Take the stairs when you can, run around during recess at school, or walk fast around the mall a few times when you go shopping. **You don't have to play a sport or go to a gym.**

Don't get upset if you can't do a lot or if you get out of breath at first—keep trying. Any amount of activity will help and you can add a little more each week. Make a list of some things you like to do. Hang it in your room as a reminder.

Take Charge of Your Diabetes

Remember, if you have type 2 diabetes, you need to choose healthy foods, be active every day, take your medicine, check your blood glucose as often as your doctor suggests, and stay at a healthy weight. Taking care of your diabetes will help you stay healthy, feel better, and keep your blood glucose where you want it to be.

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What are some things parents can do to help promote physical activity for kids in their community?

- ★ Talk to your child's school about having more active time for students.
- ★ Ask if the school can be used for physical activities during after-school hours.
- ★ Involve your child in active programs with the YMCA, 4H, the Scouts, or Boys and Girls Clubs.
- ★ Talk to community leaders about providing safe and active places for kids to play.
- ★ Volunteer to help create or fix up community playgrounds.



To learn more

American Diabetes Association
1-800-DIABETES (1-800-342-2383)
www.diabetes.org/wizdom

Kids Walk to School (CDC Program)
www.cdc.gov/nccdphp/dnpa/publicat.htm

National Association for Health and Fitness
(317) 955-0957 • www.physicalfitness.org

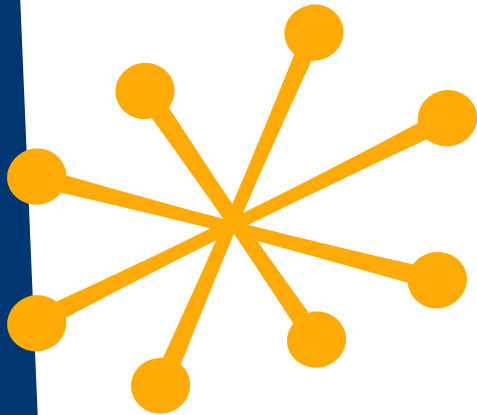
Parks and Recreation Youth Programs
Search online to find programs in your state

President's Council on Physical Fitness and Sports
(202) 690-9000 • www.fitness.gov

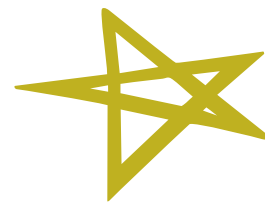
Walkability Checklist
www.walkinginfo.org/walkingchecklist.htm

YMCAs of the USA
1-800-872-9622 • www.ymca.net

TIPS FOR KIDS WITH TYPE 2 DIABETES



Eat Healthy Foods



Why do you need to eat healthy foods?

- ★ For energy to learn, play, and live.
- ★ To grow at a healthy rate.
- ★ To help keep your blood sugar or glucose (GLOO-kos) levels in balance—not too high or too low.
- ★ To help you lose weight slowly if you need to.
- ★ To keep your body working properly.
- ★ To help you avoid other health problems caused by diabetes.

Do kids with diabetes need special foods?

No, they don't! Meals that are healthy for kids with diabetes are great for everyone in the family.

How does food affect your body?

Food is the fuel that our bodies use for energy. The three main sources of fuel are carbohydrates (CAR-boh-HY-drate), protein, and fat. The body changes them into glucose for energy or stores them as fat. A car uses gas for energy—we use glucose! Eating a balance of foods that contain carbohydrate (carbs), protein, and fat every day will help your blood glucose stay in balance and keep your weight where you want it to be.

Carbs are a good source of energy for our bodies. Many foods contain carbs. Some are better for you than others. If you eat too many carbs at one time, your blood glucose may go up too high. Learn to eat the right amount at meal and snack times to keep your blood glucose in balance.



These are good carb choices. They have lots of fiber.

- ★ Whole grain foods
- ★ Fresh fruits and vegetables from every color of the rainbow—red, orange, yellow, white, green, blue, and purple.

Choose these carbs less often:

- ★ White bread
- ★ White rice
- ★ Sweetened fruit drinks
- ★ Sweets and desserts.

Protein foods help to build strong muscles and bones. Protein foods do not make

the blood glucose go up like some carbs do.

Having protein in your meal can help you feel less hungry

Foods that are a good source of protein include:

- ★ Meat and poultry without the extra fat or skin
- ★ Fish, low-fat cheese, and eggs
- ★ Dried peas or beans such as kidney, white, split, or blackeye
- ★ Soy products and nuts.

Fats are a good source of fuel for the body

and help you grow. Fat does not make blood glucose go up but too much fat can make you gain weight.

Choose fats that keep your heart healthy:

- ★ Small portions of salad dressing, low-fat mayonnaise, and margarine in a plastic tub
- ★ Nuts, olives, and vegetable oil
- ★ Avocados.

Choose these high fat foods less often.

They are not healthy for your heart:

- ★ Butter, stick margarine, and regular mayonnaise
- ★ Fried foods such as potato chips and french fries
- ★ Meats with fat on them, including bacon and lunch meats
- ★ Cakes, cookies, pies, and other desserts.



What about sugar, sweets, and desserts?

Everyone likes the taste of sweet foods!

Small amounts of foods that contain sugar can be part of a healthy meal plan. Sugary foods include soda pop, sweetened fruit drinks, syrup, honey, and candy.

Desserts such as cakes, muffins, pies, cookies, and ice cream contain a lot of fat as well as sugar. If you choose to eat any of these sweet foods, just have a small amount at the end of a healthy meal. Have a piece of fruit if you are still hungry.

Drink water, sugar-free soda pop, and sugar-free fruit drinks if you are thirsty—instead of regular soda pop, sweetened fruit drinks, and sports drinks that are all high in sugars.

How much should you eat?

Your height, weight, age, whether you are a boy or a girl, and how active you are will affect how much food you need to eat each day to stay at a healthy weight. Everyone is different. Talk to your doctor or dietitian about how much to eat, specially if you need to lose weight.

It's best to spread your food out over the day and eat breakfast, lunch, and dinner and a couple of snacks as well. You will have a ready supply of energy and you won't get too hungry.

If you take in more food than your body burns, you will gain weight.

If you take in less food than your body burns, you will lose weight. Being active and eating smaller amounts of food and fewer sweet or fatty foods can help overweight kids lose weight in a healthy way. You will keep your heart healthy, too.

For fun, take the “Portion Distortion Quiz” at <http://hin.nhlbi.nih.gov/portion/>. You will learn how today’s portions compare to the portions 20 years ago and how much physical activity you will need to do to burn up the extra calories in today’s food portions.

What should you eat?

Use the Healthy Food Guide below to make healthy choices. The amounts to eat will vary for different foods but these will give you an idea of the right amounts for most kids aged 9 to 13. If you are older than 13, go to www.mypyramid.gov to find the right amounts for you.

Your Healthy Food Guide

Vegetables



AIM FOR 2 to 2½ cups a day. Here are choices that equal 1 cup:

- 1 cup cut up cooked or raw vegetables
- 2 cups leafy salad greens
- 1 cup vegetable juice

Choose dark green and orange vegetables as often as you can.

Milk, Yogurt, and Cheese



AIM FOR 3 cups a day. Here are choices that equal 1 cup:

- 1 cup nonfat or low-fat milk or yogurt
- 1½ ounces cheese

AIM FOR 1½ cups a day. Here are choices that equal 1 cup:

- 1 cup cut up raw or cooked fruit
- 1 cup fruit juice
- 1/2 cup dried fruit

Choose fresh whole fruits as often as you can.



Fruits

AIM FOR 5 to 6 ounces a day. Here are choices that equal one ounce:

- 1/2 cup of cooked cereal
- 1/2 cup cooked rice or pasta
- 1 cup ready-to-eat cereal
- 1 slice of whole grain bread
- 1/2 small bagel or 1 small muffin

Choose whole grain foods for at least 3 of your 6 choices.

Breads, Cereals, Rice, and Pasta



AIM FOR 5 ounces a day. Here are choices that equal 1 ounce:

- 1 ounce lean meat, fish, or chicken
- 1 egg



Meat, Poultry, Fish, Dry Beans, Eggs, and Nuts

- 1 tablespoon peanut butter
- 1/4 cup cooked dry peas or beans such as kidney, white, split, or blackeye
- 1/4 cup tofu
- 1/2 ounce nuts

If you choose to eat these foods, have a very small amount and not every day.

Soda Pop, Candy, Cookies, and Desserts



One serving is

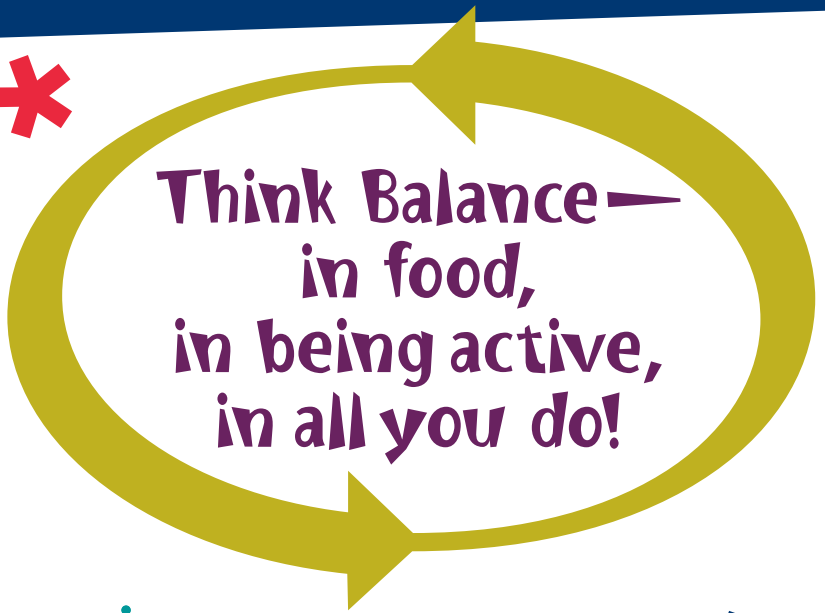
- 1 teaspoon vegetable, olive, or canola oil
- 1 teaspoon tub margarine
- 5 large olives or 1/8 avocado
- 1 tablespoon low-fat mayonnaise
- 2 tablespoons low-fat salad dressing

Heart-healthy Fats



How much should you eat?

You get most of the fat your body needs from other foods you eat—so choose only a few extra servings of these heart-healthy fats each day.



**Think Balance—
in food,
in being active,
in all you do!**

Putting it all together!

- ★ Eat meals and snacks at about the same time each day. Try not to skip meals.
- ★ Be physically active for at least 60 minutes almost every day
- ★ Drink more water instead of juice or soda.
- ★ Learn more about foods and how much you need to eat.
- ★ Ask your doctor or dietitian for help.
- ★ Take the right amount of insulin or pills at the right times if you need them to help manage your diabetes.

It's not always easy to eat healthy foods when others seem to eat whatever they want. Follow the tips in this brochure and know that it will make a difference in your life.



Special thanks to the kids who helped us make this tip sheet.



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NIH Publication No. 07-5295 Revised August 2005



To learn more

A registered dietitian or a diabetes educator can help you and your family make the best food choices.

To find a dietitian near you, contact the **American Dietetic Association**.
1-800-366-1655 • www.eatright.org

To find a diabetes educator near you, contact the **American Association of Diabetes Educators**.
1-800-832-6874 • www.diabeteseducator.org

Also check out:
American Diabetes Association
1-800-DIABETES (1-800-342-2383)
www.diabetes.org/wizdom



CDC's Nutrition and Physical Activity website for healthy eating tips and the Kids Walk to School Program
www.cdc.gov/nccdphp/dnpa/publicat.htm

The Dietary Guidelines for Americans that help promote health and reduce disease risk through diet and physical activity.
<http://www.health.gov/dietaryguidelines/dga2005/document/>

MyPyramid Plan to learn what and how much to eat.
<http://www.mypyramid.gov/>



TIPS FOR KIDS

WITH TYPE 2 DIABETES



Stay at a Healthy Weight



Why is staying at a healthy weight good for kids?

A healthy weight means you are not too fat or too thin. Your doctor may have said that you should not gain more weight or that you need to lose a few pounds. If you have diabetes and are overweight, you are not alone.

The steps you take to manage your weight will help you feel better and may improve your blood sugar or glucose (GLOO-kos) levels. Staying at a healthy weight when you are young can help you manage your weight for life. It also can help prevent problems like heart disease and high blood pressure.

How can you get to a healthy weight?

If your doctor says you need to lose some weight, **you need to eat fewer calories each day and be more active.** Here are some ways to succeed.

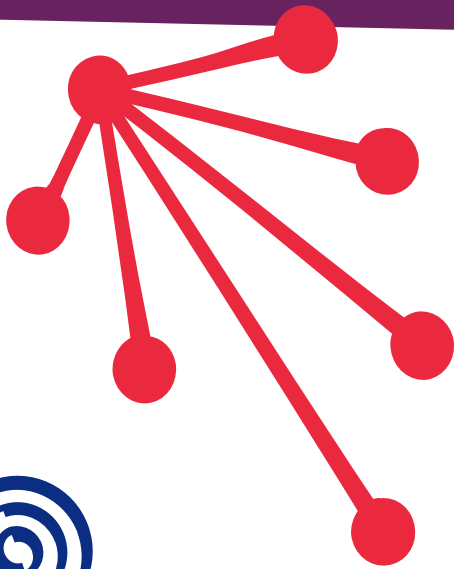
1. Be active almost every day for 60 minutes to burn up extra calories and get fit. Play tag or go for a bike ride instead of playing computer games. Ask a friend or family member to join you on a walk instead of watching TV.

2. Cut some calories. The number of calories in a food shows how much energy you can get from it. To lose weight, you need to eat about 200 to 300 calories less than usual each day.

Here are some simple ways to cut calories:

- ★ Drink water instead of a big glass of sweetened fruit drink or regular soda pop. You can cut about 150 calories!
- ★ Eat a small serving of french fries instead of a big one—and cut about 250 calories!
- ★ Eat a piece of fruit instead of a candy bar. You will cut about 200 calories!





3. Eat smaller portions of food and drink water at meals and snack time.

4. Drink lots of water. It has no calories! Sugar-free fruit drinks or sugar-free soda pop are also good choices when you are thirsty.

5. Ask your doctor to help you find a dietitian or a diabetes educator. He or she can help you and your family make the best food choices.

If you eat less and get more active, you should lose about one pound a month—and feel great. It's best to be slow and steady in your weight loss because you are still growing. Ask your doctor to help you.

Very low-calorie diets are not healthy for growing children and teens. Kids who do not eat enough food may not grow or develop the right way.



What are some healthy eating tips you can try?

- ★ Take your time when you eat. Wait 10 to 15 minutes before eating second helpings at mealtime. It takes about 15 minutes for your stomach to tell your head that you are full!
- ★ Ask if you can help plan, shop, or make the family meals sometimes. This can be fun for the whole family.
- ★ Fill up half of your plate with salad or vegetables. Use small amounts of butter, margarine, or salad dressing.
- ★ If you eat sugary foods, sweets, desserts, or candy, eat only a small serving at the end of a meal. Don't eat them very often.

What about breakfast?

One bowl of whole grain cereal, nonfat or low-fat milk, and a piece of fruit are a great way to start the day. You can do better at school when you eat breakfast!

When you don't have much time before school, try a couple of slices of whole grain toast with a tablespoon of peanut butter, or a hard-boiled egg, or a piece of low-fat cheese.

A small breakfast bar and a glass of nonfat or low-fat milk is another fast meal that can go a long way.





What about school lunches?

If you get your lunch at school, choose fried foods less often. Choose nonfat or low-fat milk instead of chocolate milk and a piece of fresh fruit instead of a cookie.

Many schools have salad bars. Choose high fiber vegetables and fruits and low-fat protein foods. Use a small amount of low-calorie dressing.

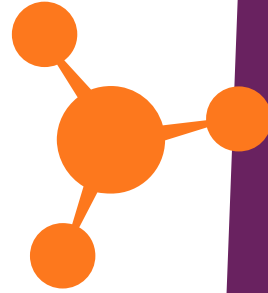
Small deli or sub sandwiches made with lean turkey or beef are healthy choices, too. Use mustard or a little low-fat mayonnaise.

If you have time in the morning, you could pack a lunch of healthy foods to take to school. Or you could make your lunch the night before.

What about after school snacks?

Most kids need an after school snack. Choose healthy snacks. The trick is not eating too much. **Use a small plate or a bowl for your snack instead of eating out of the bag or box.**

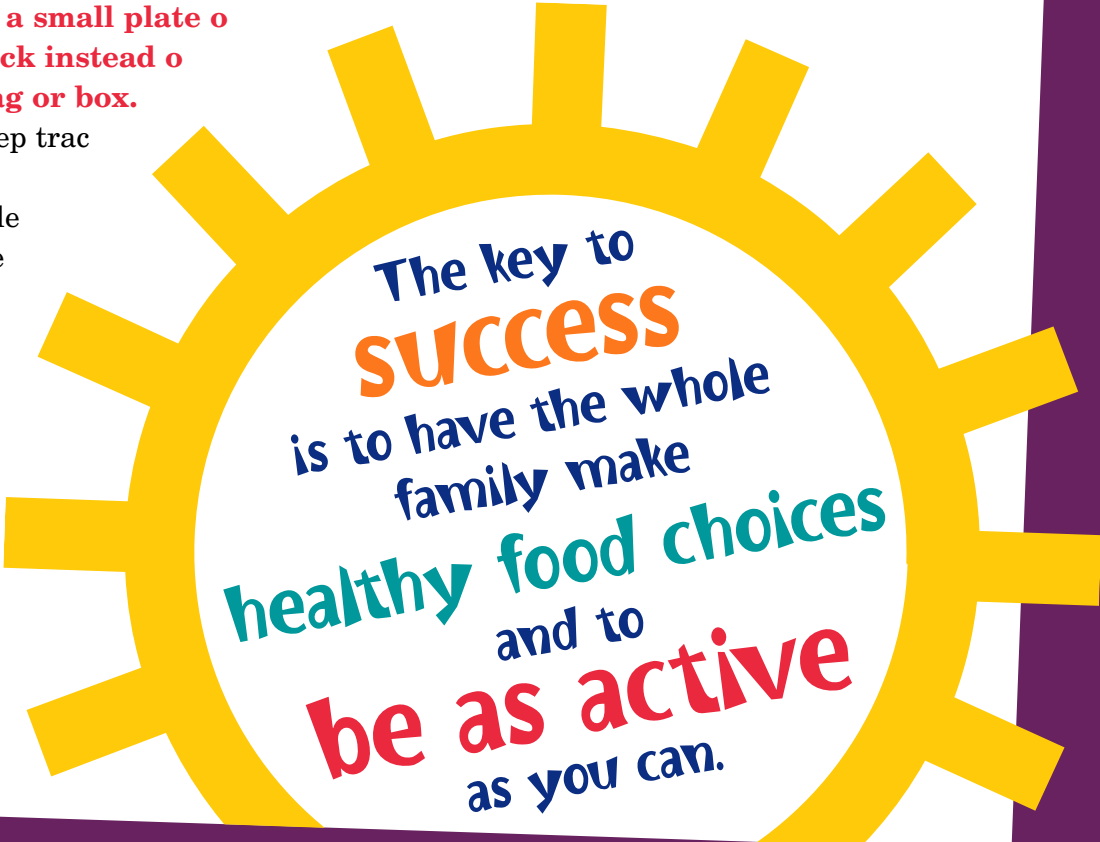
It will be easier to keep track of how much you eat. It's best not to snack while watching TV or at the computer—you may eat too much.



Snack ideas:

- ★ A piece of fresh fruit
- ★ Half a turkey or ham sandwich, easy on the mayo
- ★ A small bowl of whole-grain cereal with nonfat or low-fat milk
- ★ A small bowl of vegetable soup and a few crackers
- ★ One small tortilla with one or two slices of shredded low-fat cheese or turkey
- ★ 3 to 6 cups of low-fat microwave popcorn, one handful of pretzels, or a few rice cakes

Remember to drink a couple of glasses of water, too.



The key to
SUCCESS
is to have the whole
family make
healthy food choices
and to
be as active
as you can.



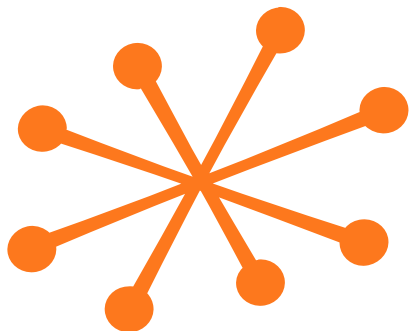
What about fast-food restaurants?

Try not to super-size your meals, unless you plan to share them with your family or a friend! Order smaller child-sized meals and drink water, nonfat or low-fat milk, or diet soda pop.

A grilled chicken sandwich or a simple hamburger is a better choice than a burger that is covered with secret sauce, cheese, and bacon. A baked potato with a little butter or sour cream is a good choice, too.

If you are eating pizza, order thin or medium crust instead of deep dish or stuffed crust pizzas. Eat only one or two slices and add a salad with a little dressing.

Try a small bag or a handful of baked chips or pretzels instead of the regular kind of chips.



Follow a healthy eating and exercise plan.

To learn more

To find a dietitian near you, contact the **American Dietetic Association.**
1-800-366-1655 • www.eatright.org



To find a diabetes educator near you, contact the **American Association of Diabetes Educators.**
1-800-832-6874 • www.diabeteseducator.org

Check out the **CDC's Nutrition and Physical Activity website** for healthy eating tips and the Kids Walk to School Program.
www.cdc.gov/nccdphp/dnpa/publicat.htm

Special thanks to the kids who helped us make this tip sheet.



The U.S. Department of Health and Human Services' National Diabetes Education Program (NDEP) is jointly sponsored by the National Institutes of Health (NIH) and the Centers for Disease Control and Prevention (CDC) with the support of more than 200 partner organizations.

NIH Publication No. 07-5295 Revised August 2005



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Helping the Student with Diabetes Succeed

A Guide for School Personnel

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U.S. Department of
Health and Human Services

June 2003



A Joint Program of the
National Institutes of Health and
the Centers for Disease Control
and Prevention

Dietary Recommendations for Children

Daily estimated calories (kcal/d) and recommended servings for grains, fruits, vegetables, and milk/dairy by age and sex.

Age	1 Year	2–3 Years	4–8 Years	9–13 Years	14–18 Years
Calories*					
Girls	900	1,000	1,200	1,600	1,800
Boys	900	1,000	1,400	1,800	2,200
Fat	30–40%	30–35%	25–35%	25–35%	25–35%
Milk/Dairy	2 cups	2 cups	2 cups	3 cups	3 cups
Lean Meat/Beans					
Girls	1.5 oz	2 oz	3 oz	5 oz	5 oz
Boys	1.5 oz	2 oz	4 oz	5 oz	5 oz
Fruits					
Girls	1 cup	1 cup	1.5 cups	1.5 cups	1.5 cups
Boys	1 cup	1 cup	1.5 cups	1.5 cups	2 cups
Vegetables					
Girls	$\frac{3}{4}$ cup	1 cup	1 cup	2 cups	2.5 cups
Boys	$\frac{3}{4}$ cup	1 cup	1.5 cups	2.5 cups	3 cups
Grains					
Girls	2 oz	3 oz	4 oz	5 oz	6 oz
Boys	2 oz	3 oz	5 oz	6 oz	7 oz

*Calorie estimates are based on a sedentary lifestyle (only the light physical activity that is part of the typical day-to-day life). If your child is very physically active (plays sports, runs, dances, or swims laps) he or she will need an extra 200–400 calories a day.

Milk listed is fat-free (except for children under the age of 2 years).

Children and teens should eat a variety of fruits and vegetables.

Half of all grains should be whole grains (foods made from the entire grain seed). Whole grains have more fiber, vitamins, and other nutrients than processed foods, such as white bread.

For children 2 years and older this table is adapted from Table 2, Table 3, and Appendix A-2 of the *Dietary Guidelines for Americans*. 2005. www.healthierus.gov/dietaryguidelines

To find out how many fruits and vegetables your children should have based on how physically active they are, go to www.fruitsandveggiesmatter.gov.




We Can! GO, SLOW, and WHOA Foods

Use this chart as a guide to help you and your family make smart food choices.

Post it on your refrigerator at home or take it with you to the store when you shop.

Refer to the *Estimated Calorie Requirements* to determine how much of these foods to eat to maintain energy balance.

- **GO Foods**—Eat almost anytime.
- **SLOW Foods**—Eat sometimes, or less often.
- **WHOA Foods**—Eat only once in a while or on special occasions.

Food Group	GO (Almost Anytime Foods)	SLOW (Sometimes Foods)	WHOA (Once in a While Foods)
			
Vegetables	Almost all fresh, frozen, and canned vegetables without added fat and sauces	All vegetables with added fat and sauces; oven-baked French fries; avocado	Fried potatoes, like French fries or hash browns; other deep-fried vegetables
Fruits	All fresh, frozen, canned in juice	100 percent fruit juice; fruits canned in light syrup; dried fruits	Fruits canned in heavy syrup
Breads and Cereals	Whole-grain breads, including pita bread; tortillas and whole-grain pasta; brown rice; hot and cold unsweetened whole-grain breakfast cereals	White refined flour bread, rice, and pasta. French toast; taco shells; cornbread; biscuits; granola; waffles and pancakes	Croissants; muffins; doughnuts; sweet rolls; crackers made with <i>trans</i> fats; sweetened breakfast cereals
Milk and Milk Products	Fat-free or 1 percent low-fat milk; fat-free or low-fat yogurt; part-skim, reduced fat, and fat-free cheese; low-fat or fat-free cottage cheese	2 percent low-fat milk; processed cheese spread	Whole milk; full-fat American, cheddar, Colby, Swiss, cream cheese; whole-milk yogurt
Meats, Poultry, Fish, Eggs, Beans, and Nuts	Trimmed beef and pork; extra lean ground beef; chicken and turkey without skin; tuna canned in water; baked, broiled, steamed, grilled fish and shellfish; beans, split peas, lentils, tofu; egg whites and egg substitutes	Lean ground beef, broiled hamburgers; ham, Canadian bacon; chicken and turkey with skin; low-fat hot dogs; tuna canned in oil; peanut butter; nuts; whole eggs cooked without added fat	Untrimmed beef and pork; regular ground beef; fried hamburgers; ribs; bacon; fried chicken, chicken nuggets; hot dogs, lunch meats, pepperoni, sausage; fried fish and shellfish; whole eggs cooked with fat
Sweets and Snacks*		Ice milk bars; frozen fruit juice bars; low-fat or fat-free frozen yogurt and ice cream; fig bars, ginger snaps, baked chips; low-fat microwave popcorn; pretzels	Cookies and cakes; pies; cheese cake; ice cream; chocolate; candy; chips; buttered microwave popcorn
Fats/Condiments	Vinegar; ketchup; mustard; fat-free creamy salad dressing; fat-free mayonnaise; fat-free sour cream	Vegetable oil, olive oil, and oil-based salad dressing; soft margarine; low-fat creamy salad dressing; low-fat mayonnaise; low-fat sour cream**	Butter, stick margarine; lard; salt pork; gravy; regular creamy salad dressing; mayonnaise; tartar sauce; sour cream; cheese sauce; cream sauce; cream cheese dips
Beverages	Water, fat-free milk, or 1 percent low-fat milk; diet soda; unsweetened ice tea or diet iced tea and lemonade	2 percent low-fat milk; 100 percent fruit juice; sports drinks	Whole milk; regular soda; calorically sweetened iced teas and lemonade; fruit drinks with less than 100 percent fruit juice

*Though some of the foods in this row are lower in fat and calories, all sweets and snacks need to be limited so as not to exceed one's daily calorie requirements.

**Vegetable and olive oils contain no saturated or *trans* fats and can be consumed daily, but in limited portions, to meet daily calorie needs. (See Sample USDA Food Guide and DASH Eating Plan at the 2,000-calorie level handout)

Lifestyle Recommendations for Children Aged 2 Years and Older

- Balance calories taken in with physical activity to keep growth normal.
- Eat a variety of vegetables and fruits daily, and limit juice drinks.
- Eat vegetable oils and soft margarines that are low in saturated fat and trans fats instead of butter or most other animal fats.
- Eat whole grain breads and cereals instead of refined grain products.
- Reduce the intake of sugar-sweetened drinks and foods.
- Have non-fat (skim) or low-fat milk and dairy products daily; they contain all the nutrition of whole milk without the extra fat
- Eat more fish, and have it broiled or baked instead of fried.
- Use less salt in cooking and on food. Eat fewer processed foods (such as chips and lunch meats), which are high in salt and fat.
- Limit snacks, especially sodas and other sweet drinks, chips, ice cream, and cookies.
- Portion sizes matter; give children food portions according to their age and size.
- Have regular family meals with parents modeling good eating habits.
- Limit the amount of time spent watching TV and playing video games to one to two hours a day, and don't allow TV sets or computers in children's bedrooms.
- Encourage children to get 60 minutes of moderate to vigorous physical activity every day; this activity does not all have to be done at one time.
- Encourage children to eat a healthy breakfast.
- Help children to not start smoking and to quit if they smoke.
- Make sure your children have regular medical check-ups, and ask that their blood pressure, blood cholesterol, and blood sugar be checked.
- Work with your doctor or nurse to improve your children's eating and physical activity habits and to help your children control weight and blood sugar levels.

Examples of Moderate Amounts of Physical Activity

Each of these activities burns approximately 150 calories:

Common Chores	Sporting Activities	Less Active, More Time
Washing and waxing a car for 45–60 minutes	Playing volleyball for 45–60 minutes	More Active, Less Time
Washing windows or floors for 45–60 minutes	Playing touch football for 45 minutes	
Gardening for 30–45 minutes	Walking 1½ miles in 30 minutes (20 minutes/mile)	
Wheeling self in wheelchair 30–40 minutes	Basketball (shooting baskets) 30 minutes	
Pushing a stroller 1½ miles in 30 minutes	Bicycling 5 miles in 30 minutes	
Raking leaves for 30 minutes	Dancing fast (social) for 30 minutes	
Shoveling snow for 15 minutes	Walking 2 miles in 30 minutes (15 minutes/mile)	
Stair-walking for 15 minutes	Doing water aerobics for 30 minutes	
	Swimming laps for 20 minutes	
	Basketball (playing game) for 15–20 minutes	
	Bicycling 4 miles in 15 minutes	
	Jumping rope for 15 minutes	
	Running 1½ miles in 15 minutes (10 minutes/mile)	

Adapted from: *Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity, 2001*.
www.surgeongeneral.gov/topics/obesity

WE CAN! Ways to Enhance Children's Activity and Nutrition. Families Finding the Balance—A Parent Handbook. U.S. Department of Health and Human Services. National Institutes of Health. National Heart, Lung, and Blood Institute. National Institute of Diabetes and Digestive Kidney Diseases. National Institute of Child Health and Human Development. National Cancer Institute. NIH Publication No. 05-

What Teens Should Know about Tobacco

Tobacco and Athletic Performance

- Don't get trapped. Nicotine in cigarettes, cigars, and spit tobacco is addictive.
- Nicotine narrows your blood vessels and puts added strain on your heart.
- Smoking can wreck your lungs and reduce the oxygen available for the muscles you use during sports.
- Smokers suffer shortness of breath (gasp!) almost three times more often than nonsmokers.
- Smokers run more slowly than nonsmokers and can't run as far; smoking affects overall athletic performance.
- Cigars and spit tobacco are **NOT** safe alternatives.



Tobacco and Personal Appearance

- Yuck! Tobacco smoke can make hair and clothes stink.
- Tobacco stains teeth and causes bad breath.
- Short-term use of spit tobacco can cause cracked lips, white spots, sores, and bleeding in the mouth.
- Surgery to remove oral cancers caused by tobacco use can lead to serious changes in a person's face.

So . . .

- Know the truth. Despite all the tobacco use you may see on TV, in movies, in music videos, on billboards, and in magazines, most teens, adults, and athletes **DON'T** use tobacco.
- Make friends, develop athletic skills, control weight, be independent, be cool ... play sports.
- Don't waste (burn) money on tobacco. Spend it on CDs, clothes, computer games, or movies instead, or save it for something special.
- Get involved: make your team, school, and home tobacco-free; educate others. Join community efforts to prevent tobacco use.

What Parents Should Know about Keeping Children Tobacco-Free

Parents—Help Keep Your Kids Tobacco-Free

- Kids who use tobacco—
 - May cough and have asthma attacks more often, and may develop respiratory problems that lead to more sick days, more doctor bills, and poorer athletic performance.
 - May be more likely to use alcohol and other drugs, such as marijuana and cocaine.
 - May become addicted to tobacco and may find it extremely hard to quit.
- Spit tobacco and cigars are not safe alternatives to cigarettes; low-tar and additive-free cigarettes are not safe either.
- Tobacco use is the single-most preventable cause of death in the United States; it causes heart disease, cancers, and strokes.

Take a Stand at Home—Early and Often

- Despite the impact of movies, music, and TV on children, parents can be the **GREATEST INFLUENCE** in their kids' lives.
- Talk directly to your children about the risks of tobacco use; if friends or relatives have died from tobacco-related illnesses, let your kids know.
- If you use tobacco, you can still make a difference. Your best move, of course, is to try to quit. Meanwhile, don't use tobacco in your children's presence, don't offer it to them, and don't leave it where they can easily get it.
- Start the dialog about tobacco use when your children reach age 5 or 6, and continue the dialog through their high school years. Many kids start using tobacco by age 11, and many are addicted by age 14.
- Know whether your kids' friends use tobacco. Talk about ways to refuse tobacco.
- Discuss with your kids the false glamorization of tobacco on billboards and in other media, such as movies, TV, and magazines.

Make a Difference in Your Community

- Vote with your pocketbook. Support businesses that don't sell tobacco to kids. Frequent restaurants and other places that are tobacco-free.
- Be sure your schools and all school events (such as parties and sports events) are tobacco-free.
- Partner with your local tobacco prevention programs. Call your local health department or your cancer, heart, or lung association to learn how you can get involved.

Resources¹

Act in Time to Heart Attack Signs. National Heart, Lung, and Blood Institute; National Institutes of Health; U.S. Department of Health and Human Services, in partnership with the American Heart Association. www.nhlbi.nih.gov/actintime/index.htm

Act in Time to Heart Attack Signs—Video. U.S. Department of Health and Human Services; National Institutes of Health; National Heart, Lung, and Blood Institute, in partnership with the American Heart Association. NIH Publication No. 56-042N, July 2005.

AED Implementation Guide. American Heart Association. www.americanheart.org/presenter.jhtml?identifier=3027225

Aim for a Healthy Weight. National Heart, Lung, and Blood Institute. www.nhlbi.nih.gov/health/public/heart/obesity/lose_wt/index.htm

American Diabetes Association. www.diabetes.org

American Heart Association. www.americanheart.org

American Stroke Association. www.strokeassociation.org

American Stroke Association Patient Information Sheets. www.strokeassociation.org/presenter.jhtml?identifier=3018561

Atrial Fibrillation: Resources for Patients. www.a-fib.com

CDC Salsa Aerobics. For information about design, training, and implementation of similar programs, contact Elizabeth Cartwright, PhD, RN, Idaho State University. Phone: 208-282-2529. E-mail: carteliz@isu.edu.

The Salsa Aerobics Program at the Hispanic Health Projects, Department of Anthropology, Idaho State University, has been in existence since 2001. The program was developed and implemented as a result of community-based participatory research and intervention practices designed to address the health concerns of women in the Hispanic agricultural communities of southeast Idaho.

¹ The Sourcebook references the Web sites and products of other federal agencies and private or not-for-profit organizations. A reference in the Sourcebook to any specific Web site, commercial product, process, service, or company does not constitute its endorsement or recommendation by the U.S. Government or CDC.

Centers for Disease Control and Prevention (CDC) Web sites:

- Adolescent and School Health. www.cdc.gov/healthyyouth/index.htm
- Heart Disease and Stroke <http://www.cdc.gov/dhdsp/>
- Diabetes. www.cdc.gov/diabetes/index.htm
- Nutrition and Physical Activity. www.cdc.gov/nccdphp/dnpa/index.htm
- Overweight and Obesity. www.cdc.gov/nccdphp/dnpa/obesity/index.htm
- Tobacco. www.cdc.gov/tobacco
- WISEWOMAN (Well-Integrated Screening and Evaluation for Women Across the Nation). www.cdc.gov/wisewoman

Channing Bete Company® Distributor of American Heart Association Products. Contact: One Community Place, South Deerfield, MA 01373. Phone: 800-611-6082. Fax: 800-499-6464. E-mail: aha@channing-bete.com.

The Community Health Advisor Network training programs.

- Workshop I: This session demonstrates methods used to determine which communities have the greatest potential for success for the Community Health Advisor program and defines the role and selection of a Community Facilitator. Techniques to identify and recruit Community Health Advisors are also explained in detail in this workshop.
- Workshop II: This session deals with the actual Community Health Advisor training, the monitoring and evaluation process, support, and linkage.
- Contact: Center for Sustainable Health Outreach
University of Southern Mississippi
118 College Drive, #10015
Hattiesburg, MS 39406-0001
Phone: 601-226-6266

Community Health Advisor Physical Activity Manual. University of Alabama at Birmingham, Center for Health Promotion. In Press.

Community Health Workers Curricula Resources. www.famhealth.org/CHWRResources/curricula.htm

Community Health Worker Evaluation Tool Kit. The University of Arizona, College of Public Health. www.publichealth.arizona.edu/chwtoolkit/

The Core Curriculum Guidebook for a Community Health Worker Basic Certificate Program. Available for purchase for \$95.00 each. Contact: Nancy Collyer, University of Arizona, Arizona AHEC Program. Phone: 520-629-4300 ext. 121121. E-mail: collyer@u.arizona.edu.

Through a U.S. Department of Education grant to the University of Arizona Rural Health Office, this project created a partnership among four community colleges, three rural Area Health Education Centers and multiple community health and human service agencies to establish and evaluate a competency-based, college credit-bearing core curriculum for community health workers. The project considered many of the guidelines for core roles and competencies, evaluation, and career progression recommended by *The Final Report of the National Community Health Advisor Study*. The resulting 16-credit basic certificate program was approved and adopted by the Arizona Board of Directors for Community Colleges. This core competency-based curriculum covers 6 content areas with 29 competency statements.

The Dash Diet. <http://dashdiet.org>

The DASH Eating Plan. U.S. Department of Health and Human Services, National Institutes of Health. NIH Publication No. 03-4082. Reprinted 2003. www.nhlbi.nih.gov/health/public/heart/hbp/dash/index.htm

Dietary Guidelines for Americans, 2005. Sixth Edition. U.S. Department of Health and Human Services and U.S. Department of Agriculture. Washington (DC): U.S. Government Printing Office, January 2005. www.healthierus.gov/dietaryguidelines

The Eagle Books: Stories about Growing Strong and Preventing Diabetes. www.cdc.gov/diabetes/pubs/eagle.htm

Empowerment Skills for Family Workers: A Worker Handbook. New York State College of Human Ecology at Cornell University.

This interagency training and credentialing program is available in communities across the state and country to frontline workers from all public, private, and nonprofit service systems (e.g., home visitors, case managers, family resource center workers, community health workers, and teacher aides). It provides frontline workers with skills and competencies they need to empower families to attain a healthy self-reliance and interdependence with their communities. Fourteen states have adapted or replicated the Family Development Credential (FDC) and have established training and credentialing systems. For information about where FDC programs are being offered, contact Georgia Howe at Cornell University. Phone/fax: 607-272-1552. E-mail: ggh2@cornell.edu.

Family Health Foundation. www.famhealth.org

Fast Food Guide. BD Getting Started™. www.bddiabetes.com/us/main.aspx?cat=1&id=294

Finding Your Way to a Healthier You: Based on the Dietary Guidelines for Americans. U.S. Department of Health and Human Services, U.S. Department of Agriculture. HHS Publication No. HHS-ODPHP-2005-01-DGA-B. USDA Publication No. Home and Garden Bulletin No. 232-CP. www.health.gov/dietaryguidelines/dga2005/document/pdf/brochure.pdf

Getting to the Heart of Diabetes, Our Guide to Understanding CVD, Diabetes, and Insulin Resistance. American Heart Association, 2001.

Girlshealth.gov is sponsored by The National Women's Health Information Center. U.S. Department of Health and Human Services, Office on Women's Health. www.girlshealth.gov

Heart Attack Survival Discussion Kit in Spanish and English. <http://emall.nhlbihin.net/product2.asp?source=&sku=KT-025>

The Heart of Diabetes: Understanding Insulin Resistance. American Heart Association, 2003. www.s2mw.com/heartofdiabetes/index.html

The Heart Truth for Women Video. U.S. Department of Health and Human Services; National Heart, Lung, and Blood Institute. www.nhlbi.nih.gov/health/hearttruth/index.htm

Helpful Health Fair Items from NHLBI. <http://emall.nhlbihin.net/product2.asp?source=&sku=KT-025>

Honoring the Gift of Heart Health: A Heart Health Educator's Manual for American Indians and Alaska Natives. National Heart, Lung, and Blood Institute and Indian Health Service; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov/health/prof/heart/other/aian_manual/index.htm

How to Use Fruits and Vegetables to Help Manage Your Weight. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Nutrition and Physical Activity. www.cdc.gov/nccdphp/dnpa/nutrition/pdf/CDC_5-A-Day.pdf

Know Stroke. Know the Signs. Act in Time. www.ninds.nih.gov/disorders/stroke/knowstroke.htm

Indian Health Service. U.S. Department of Health and Human Services. www.ihs.gov

Indian Health Service. U.S. Department of Health and Human Services, Division of Diabetes Treatment and Prevention. www.ihs.gov/MedicalPrograms/Diabetes/index.asp

International Society on Hypertension in Blacks. www.ishib.org

Living with Atrial Fibrillation: Our Guide to Managing a Key Stroke Risk Factor. American Heart Association/ American Stroke Association. www.americanheart.org/presenter.jhtml?identifier=9

Marcus BH, Simkin LR. The stages of exercise behavior. *J Sports Med Phys Fitness* 1993;33:83–88.

Migrant Health Promotion. www.migranthealth.org

Minnesota Community Health Worker curriculum. www.heip.org

The Minnesota 11-credit, 6-course component curriculum was developed to reflect the core competencies of the role of community health workers. This curriculum has been published and is available for sale through Healthcare Education Industry Partnership. Purchase it at www.heip.org. Contact: Anne Willaert. Phone: 507-389-2590. E-mail: anne.willaert@mnsu.edu.

A Minute for Your Health, the ABC's for Improved Health & Longevity (updated 2006); *Seven Steps to a Healthy Heart*; *The African American Woman's Guide to a Healthy Heart*; *Heart Health for the Generations: A Guide for African-American Women.* Association of Black Cardiologists. www.abc cardio.org

Movimiento Por Su Vida. A music CD created to help everyone incorporate more movement into their lives. National Diabetes Education Program. www.cdc.gov/diabetes/ndep/movimiento.htm

My Pyramid—Steps to a Healthier You. www.mypyramid.gov

National Diabetes Education Program, National Institutes of Health, Department of Health and Human Services. www.ndep.nih.gov. Clearinghouse phone: 800-438-5383.

National Health and Nutrition Examination Survey. National Center for Health Statistics, Centers for Disease Control. www.cdc.gov/nchs/nhanes.htm

National Heart, Lung, and Blood Institute; National Institutes of Health; Department of Health and Human Services. www.nhlbi.nih.gov

National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), National Institutes of Health. www.niddk.nih.gov. Information Clearinghouse: 1-800-352-9424.

National Institute of Mental Health publications on depression. www.nimh.nih.gov/health/publications/depression/summary.shtml

National Institute of Neurological Disorders and Stroke. www.ninds.nih.gov/disorders/stroke/stroke.htm

National Institutes of Health. Phone: 301-496-4000. www.nih.gov and www.nih.gov/about/contact.htm

National Stroke Association. www.stroke.org

NIH SeniorHealth Web site. National Library of Medicine. <http://nihseniorhealth.gov>

Partnership for Clear Communication—AskME3™. www.askme3.org

Pathways to Freedom: Winning the Fight against Tobacco. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. www.cdc.gov/tobacco/quit/pathways.pdf

Patient Handouts and Operation Stroke (community education and community-wide events): American Stroke Association. Phone: 888-478-7653. www.strokeassociation.org

Patient Information Sheets. American Stroke Association, a division of American Heart Association. www.strokeassociation.org/presenter.jhtml?identifier=3018561

Physical Activity: Your Heart, Your Life—A Lay Educator's Program. <http://hp2010.nhlbihin.net/salud/pa/index.htm>

Prescription Medicine Help:

- *Medicare Prescription Drug Program*. www.medicare.gov/prescription/home.asp
- *RxAssist*. www.rxassist.org
- *Volunteers on Healthcare*. www.volunteersinhealthcare.org
- *Needy Meds*. www.needymeds.com
- *Helping Patients.org*. www.helpingpatients.org
- *RxHope*. www.rxhope.com

Prevent and Control America's High Blood Pressure: Mission Possible. National Heart, Lung, and Blood Institute. <http://hin.nhlbi.nih.gov/mission>

Put Prevention into Practice. Agency for Healthcare Research and Quality, United States Department of Health and Human Services. www.ahrq.gov/clinic/ppipix.htm#features

Recipe and Meal Planner Guide. National Diabetes Education Program (NDEP), National Institutes of Health, Department of Health and Human Services. <http://ndep.nih.gov/diabetes/MealPlanner/index.htm>

Shape Up America! www.shapeup.org

"Small Steps. Big Rewards." Your Game Plan for Preventing Type 2 Diabetes: Health Care Provider Toolkit. U. S. Department of Health and Human Services, National Institutes of Health and Centers for Disease Control and Prevention, National Diabetes Education Program. NIH Publication No. 03-5334. February 2003. www.ndep.nih.gov/diabetes/pubs/GP_Toolkit.pdf

Stroke Connection Magazine. Free from American Stroke Association, a division of American Heart Association. www.strokeassociation.org/presenter.jhtml?identifier=2533

Stroke: Patient Education Toolkit. American Stroke Association. www.strokeassociation.org/presenter.jhtml?identifier=3018490

Survivor and Caretaker Resources. National Stroke Association. www.stroke.org/HomePage.aspx?P=9884845087ac4d57b877d43145da2084

Take Charge of Your Diabetes. 3rd edition. Atlanta (GA): U.S. Centers for Disease Control and Prevention, Department of Health and Human Services, 2003. www.cdc.gov/diabetes/pubs/tcyd/index.htm

Talking with Your Doctor: A Guide for Older People. National Institute on Aging. National Institutes of Health. www.nia.nih.gov/HealthInformation/Publications/TalkingWithYourDoctor/

Trainer's Guide for Cancer Education. This guide covers adult learning principles and training methods among other topics. www.cancer.gov/clinicaltrials/resources/trainers-guide-cancer-education/.

Your Guide to Lowering Blood Pressure. U. S. Department of Health and Human Services; National Institutes of Health; National Heart, Lung, and Blood Institute. NIH Publication No. 03-5232. Reprinted 2003. www.nhlbi.nih.gov/hbp/index.html

Your Heart Your Life: A Lay Health Educator's Manual. U.S. Department of Health and Human Services; National Institutes of Health; National Heart, Lung, and Blood Institute; Office of Prevention, Education, and Control.
www.nhlbi.nih.gov/health/prof/heart/latino/lat_mnl.htm

What's Up Doc?—A Guide to Communicating with Your Doctor. A Curriculum for Teachers of Adult Literacy. Contact: Kara Jacobson MPH, CHES, Emory University Center on Health Outcomes and Quality. Phone: 404-712-8530. E-mail: kljacob@sph.emory.edu.

The purpose of this curriculum is to provide adult learners with easy-to-read information that will increase their confidence to take a more active role in their health care by asking questions and engaging in proactive discussions with their health care provider. Several student exercises are included.

Medicines for Preventing First and Repeat Strokes

What You Should Know:

- People who have atrial fibrillation are at increased risk for a first or repeat stroke.
- Medicines that prevent blood from clotting (anticoagulants and antiplatelet drugs) can reduce the risk for stroke.
- Some medicines can cause side effects, or reactions. If you have a reaction, talk to your doctor.
- Always ask your doctor or pharmacist if you do not understand how much medicine to take, when to take it, or how often to take it. Take all medicines as your doctor advises.
- People may need to take more than one medicine to help prevent a first or second stroke.
- Always tell your doctor if you think you are pregnant.
- Always tell your doctor about other medicines you are taking.
- Check with your doctor before taking over-the-counter medicines (from the drugstore, or grocery store, and other stores), vitamins, and herbs.
- Do the following to help your medicines work better: eat fruits and vegetables, grains, lean meat, and low-fat dairy foods; cut back on salt, sodium, saturated fats, oils, and store-bought baked goods and snacks; lose weight; quit smoking; and be physically active.

Medicines for Preventing Stroke:

Type:	How it works:	What you need to know:
<p>Anticoagulants (blood thinners), such as warfarin.</p>	<p>Prevents blood from clotting and causing strokes.</p>	<p>Take after eating to reduce stomach problems. Eat a balanced diet, and do not eat very large amounts of food that are high in vitamin K in one meal or in one day. (These foods include broccoli, cabbage, lettuce, collard and turnip greens, and spinach.)</p> <p>Your doctor will need to check the clotting time of blood regularly.</p> <p>Let your dentist and other health care workers know you take blood thinners.</p> <p>Do not take aspirin unless your doctor tells you to.</p> <p>Tell your doctor if you have—</p> <ol style="list-style-type: none"> 1. Stomach pain. 2. A very bad headache that doesn't go away. 3. Frequent bruising. <p>If you miss a dose, let your doctor know rather than trying to make up the missed dose.</p>
<p>Antiplatelet agents (such as aspirin).</p>	<p>Prevents blood cells from clumping and producing clots that cause strokes.</p>	<p>Eat before taking, or use a coated aspirin to reduce stomach problems.</p> <p>Only take aspirin the way your doctor tells you and not any other way.</p> <p>This medicine should not be taken by people who are allergic to aspirin.</p>

Type:	How it works:	What you need to know:
Blood pressure–lowering medicines.	See blood pressure medicine sheet.	See blood pressure medicine sheet.
Cholesterol-lowering medicines.	See cholesterol-lowering medicine sheet.	See cholesterol-lowering medicine sheet.
Diabetes medicine, if you have diabetes.	See diabetes medicine sheet.	See diabetes medicine sheet.

Other Types of Medicine:

There are many other medicines available to prevent and treat stroke. Also, if you have high blood pressure, high blood cholesterol, or diabetes, you will need medications to keep these diseases under control to lower your risk of stroke. Talk to your doctor to learn more about a treatment plan.

Table format adapted from *Honoring the Gift of Heart Health: A Heart Health Educator’s Manual for American Indians and Alaska Natives*. National Heart, Lung, and Blood Institute and Indian Health Service; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov/health/prof/heart/other/aian_manual/index.htm

Resources: *The Merck Manual of Medical Information: 2nd Home Edition*, Beers, Mark H. (Simon and Schuster, Inc., New York, NY, 2003); National Stroke Association, www.stroke.org; American Stroke Association, www.strokeassociation.org.

Medicine for Coronary Artery Disease, Including Heart Attack and Angina

What You Should Know:

- Coronary artery disease is the result of cholesterol and other fats building up in the arteries. When blood clots in a blocked artery, blood and oxygen can't get to the heart and the person has a heart attack. *Angina* is the term for the chest pain or pressure that is felt when the damaged area of the heart is not getting enough oxygen.
- Some medicines can cause side effects, or reactions, such as dizziness, which may bother you. If you have a reaction, talk to your doctor or nurse and he or she will help you.
- Be sure to take all medicines as your doctor advises. Always ask your doctor or pharmacist if you do not understand how much medicine to take, when to take it, or how often to take it.
- People may need more than one medicine to treat heart attack, angina, or blood vessel disease. Sometime several drugs must be tried.
- Always tell your doctor if you think you are pregnant.
- Always tell your doctor about other medicines you are taking.
- Check with your doctor before taking over-the-counter medicines (from the drugstore, grocery store, and other stores), vitamins, and herbs.
- Do the following to help your medicines work better: eat more fruits and vegetables, grains, lean meat, low-fat dairy foods; cut back on salt, sodium, saturated fats, oils, and store-bought baked goods and snacks; lose weight; quit smoking; and be physically active.

Coronary Artery Disease Medicines:

Type:	How it works:	What you need to know:
Anticoagulants (blood thinners), such as warfarin.	Prevents blood from clotting and causing heart attacks.	Take after eating to reduce stomach problems. Limit eating foods high in vitamin K (such as broccoli, kale, collard and turnip greens, and spinach). Your doctor will need to check the clotting time of your blood regularly. Let your dentist and other health care workers know you take blood thinners. If you miss a dose, let your doctor know rather than trying to make up a missed dose. Do not take aspirin unless your doctor tells you to. Tell your doctor if have a) stomach pain, b) a very bad headache that doesn't go away, or c) frequent bruising.
Antiplatelet, such as aspirin.	Prevents blood particles called platelets from clumping and producing clots, which cause heart attacks.	Eat before taking this medicine, or use a coated aspirin to reduce stomach problems. Only take aspirin the way your doctor advises and not in any other way. This medicine should not be taken by people who are allergic to aspirin.
Beta blockers.	Makes the heart beat slower and with less force.	Take continuously after a heart attack. Make sure your doctor or nurse knows if you have asthma or a problem with your lungs, or if fluid builds up in your body. Do not stop the beta blocker medicine all at once. Doing so can lead to a very large rise in blood pressure and can increase your chance of a heart attack.

Type:	How it works:	What you need to know:
Calcium channel blockers.	Makes the heart beat slower, keep blood vessels open, and reduce angina.	Talk to your doctor before taking any allergy medicine. Tell your doctor if you are dizzy or have abnormal heartbeats.
Nitroglycerin.	Relieves angina and reduces risk of heart attack and sudden death.	Take only as your doctor advises.
Thrombolytic.	Dissolves blood clots and prevents heart attacks.	Tell your doctor about any unusual bleeding after you have an injury. People should not take this if they have had strokes or have uncontrolled blood pressure.
ACE* inhibitors.	Keeps the heart from enlarging.	Your doctor will check your kidneys and watch your blood pressure closely. Do not take if you are pregnant. Take continuously after a heart attack.
Blood pressure–lowering medicines.	See blood pressure medicine sheet.	See blood pressure medicine sheet.
Cholesterol-lowering medicines.	See cholesterol-lowering medicine sheet.	See cholesterol-lowering medicine sheet.
Diabetes medicine, if you have diabetes.	See diabetes medicine sheet.	See diabetes medicine sheet.

*ACE = angiotensin-converter enzyme.

Other Types of Medicine:

There are many other medicines available to prevent and treat stroke. Also, if you have high blood pressure, high blood cholesterol, or diabetes, you will need medications to keep these diseases under control to lower your risk of heart disease and heart attack. Talk to your doctor to learn more about a treatment plan.

Table format adapted from *Honoring the Gift of Heart Health: A Heart Health Educator's Manual for American Indians and Alaska Natives*. National Heart, Lung, and Blood Institute and Indian Health Service; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov/health/prof/heart/other/aian_manual/index.htm

Resources: *The Merck Manual of Medical Information: 2nd Home Edition*, Beers, Mark H. (Simon and Schuster, Inc., New York, NY, 2003); American Heart Association. www.americanheart.org

Medicine for Heart Failure

What You Should Know:

- Persons whose hearts have been damaged by high blood pressure, heart attack, or clogged blood vessels in the heart (coronary heart disease) or lungs are at risk for heart failure. (When a person has heart failure, the heart is too weak to pump enough blood to the rest of the body, and the blood builds up in the veins and lungs.) Heart failure starts slowly and gets worse over time.
- Regularly taking medicines to treat heart failure helps people live longer, breathe easier, have more energy, be more active, have less swelling, and stay out of the hospital. It can also reduce the risk of death.
- Some medicines can cause side effects, or reactions (such as dizziness), which may bother you. If you have a reaction, talk to your doctor or nurse and he or she will help you.
- Be sure to take all medicines as directed. Always ask your doctor or pharmacist if you do not understand how much medicine to take, when to take it, or how often to take it.
- People may need more than one medicine to treat heart failure. Sometimes several drugs must be tried.
- Always tell your doctor if you think you are pregnant.
- Always tell your doctor about other medicines you are taking.
- Check with your doctor before taking over-the-counter medicines (from the drugstore, grocery store, and other stores), especially decongestants (cold and sinus medicines), anti-inflammatory medicines such as ibuprofen (pain medicine similar to aspirin), vitamins, or herbs.
- It is very important to follow your doctor's direction on the amount of salt and sodium you can have.
- It is very important that you quit smoking, stop drinking alcohol, and lose weight, if needed.

- Do the following to help your medicines work better: eat fruits and vegetables, grains, lean meat, and low-fat dairy foods; cut back on salt, sodium, saturated fats, oils, and store-bought baked goods and snacks; lose weight; quit smoking; and be physically active.

Heart Failure Medicines:

Type:	How it works:	What you need to know:
ACE* inhibitors and ARBs.**	Causes blood vessels to widen and decrease the amount of work the heart has to do. These are the main drugs that help people who have heart failure.	<p>Your doctor will check your kidneys and watch your blood pressure closely.</p> <p>Do not take this medicine if pregnant.</p> <p>You may develop a cough while on this medicine. If so, tell your doctor or nurse. The coughing could be due either to the medicine or to worsening heart failure.</p>
Beta blockers.	Makes the heart beat slower and with less force, which lowers blood pressure.	<p>Make sure your doctor or nurse knows if you have asthma or a problem with your lungs, or if fluid builds up in your body.</p> <p>Ask your doctor or nurse how often you should have your blood pressure and heart rate checked.</p> <p>Do not stop the beta blocker medicine all at once. Doing so can lead to a very large rise in blood pressure and can increase your chance of a heart attack.</p>
Other vasodilators (such as nitroglycerin and digoxin).	<p>Causes the blood vessels to relax, allowing the blood to flow easier.</p> <p>Increases the force of each heartbeat and slows a fast heart rate.</p>	<p>These medicines are for people who cannot take ACE inhibitors.</p> <p>Your doctor will check your kidneys and your potassium levels if you are taking both digoxin and a diuretic (water pill).</p> <p>Never take more digoxin than directed by your doctor.</p>

Type:	How it works:	What you need to know:
Diuretics, or “water pills.”	Helps your kidneys get rid of extra fluid and sodium as urine, reducing swelling in your lungs and other parts of your body.	<p>The doctor may give you potassium pills to make up for the loss of potassium.</p> <p>Take the medicine as your doctor advises. Tell the doctor or nurse if you feel dizzy. Your doctor may want you to weigh yourself every day to make sure you are not losing too much fluid.</p>
Anticoagulants (blood thinners), such as warfarin.	Helps prevent blood clots in the legs, lungs, and heart.	<p>Take after eating to reduce stomach problems. Do not eat very large amounts of foods that are high in vitamin K in one meal or in one day. (These foods include broccoli, kale, cabbage, lettuce, collard and turnip greens, and spinach.)</p> <p>If you take a multivitamin, ask your pharmacist to help you find one that does not have vitamin K. Ask about herbal products you are using.</p> <p>Your doctor will need to check the clotting time of your blood regularly.</p> <p>Let your dentist and other health care workers know you take blood thinners.</p> <p>If you miss a dose, let your doctor know rather than trying to make up the missed dose.</p> <p>Do not take if you have uncontrolled high blood pressure or bleeding disorders.</p> <p>Do not take aspirin unless your doctor tells you to. Tell your doctor if you have (a) stomach pain, (b) a very bad headache that doesn’t go away, or (c) frequent bruising.</p>

* ACE = antiogtensin-converter enzyme. **ARBs = antiogtensin-receptor blockers.

Other Types of Medicine:

There are other medicines available to treat heart failure. Talk to your doctor to learn more about a treatment plan.

Table format adapted from *Honoring the Gift of Heart Health: A Heart Health Educator's Manual for American Indians and Alaska Natives*. National Heart, Lung, and Blood Institute and Indian Health Service; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov/health/prof/heart/other/aian_manual/index.htm

Resources: *The Merck Manual of Medical Information: 2nd Home Edition*, Beers, Mark H. (Simon and Schuster, Inc., New York, NY, 2003); American Heart Association. www.americanheart.org; The Heart Failure Society of America at www.hfsa.org.

Medicine for Atrial Fibrillation

What You Should Know:

- People who have atrial fibrillation (irregular and fast heartbeats) are at a greatly increased risk for heart failure, stroke, and sudden cardiac death.
- Taking medicines that treat atrial fibrillation can reduce the risk of having heart failure, stroke, and sudden cardiac death.
- Some medicines can cause side effects, or reactions, such as dizziness, which may bother you. If you have a reaction, talk to your doctor or nurse and he or she will help you.
- Be sure to take all medicines as directed. Always ask your doctor or pharmacist if you do not understand how much medicine to take, when to take it, or how often to take it.
- People may need to take more than one medicine to control atrial fibrillation. Sometimes several drugs must be tried.
- Always tell your doctor about other medicines you are taking.
- Check with your doctor before taking over-the-counter medicines (from the drugstore, grocery store, and other stores), vitamins, and herbs.
- Do the following to help your medicines work better: eat fruits and vegetables, grains, lean meat, and low-fat dairy foods; cut back on salt, sodium, saturated fats, oils, and store-bought baked goods and snacks; lose weight; quit smoking; and be physically active.

Atrial Fibrillation Medicines:

Type:	How it works:	What you need to know:
Digoxin.	Makes the heart beat slower.	Monitor your pulse regularly.
Beta blockers.	Makes the heart beat slower and with less force.	<p>Make sure your doctor knows if you have asthma or a problem with your lungs.</p> <p>Ask your doctor or nurse how often you should have your blood pressure and heart rate checked.</p> <p>Do not stop the beta blocker medicine all at once. Doing so can lead to a very large rise in blood pressure and may increase your chance of a heart attack.</p>
Calcium channel blockers.	Makes the heart beat slower.	Talk to your doctor before taking any allergy medicine.
Sodium channel blockers.	Makes the heart beat normally.	Tell the doctor if you have glaucoma.
Potassium channel blockers.	Makes the heart beat slower.	Make sure your doctor knows if you have asthma or a problem with your lungs.

Type:	How it works:	What you need to know:
<p>Anticoagulants (blood thinners), such as warfarin.</p>	<p>Prevents blood from clotting and causing strokes</p>	<p>Take after eating to reduce stomach problems. Do not eat very large amounts of foods that are high in vitamin K in one meal or in one day. (These foods include broccoli, kale, cabbage, lettuce, collard and turnip greens, and spinach.)</p> <p>If you take a multivitamin, ask your pharmacist to help you find one that does not have vitamin K. Ask about herbal products you are using.</p> <p>Your doctor will need to check the clotting time of your blood regularly.</p> <p>Let your dentist and other health care workers know you take blood thinners.</p> <p>Do not take aspirin unless your doctor tells you to.</p> <p>Tell your doctor if you have—</p> <ol style="list-style-type: none"> 1. Stomach pain, 2. A very bad headache that doesn't go away, or 3. Frequent bruising. <p>If you miss a dose, let your doctor know rather than trying to make up the missed dose.</p>

Other Types of Medicine:

There are other medicines available to treat atrial fibrillation. Talk to your doctor to learn more about a treatment plan.

Table format adapted from *Honoring the Gift of Heart Health: A Heart Health Educator's Manual for American Indians and Alaska Natives*. National Heart, Lung, and Blood Institute and Indian Health Service; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov/health/prof/heart/other/aian_manual/index.htm

Resources: *The Merck Manual of Medical Information: 2nd Home Edition*, Beers, Mark H. (Simon and Schuster, Inc., New York, NY, 2003); American Heart Association. www.americanheart.org

Medicine for High Blood Pressure

What You Should Know:

- Many people with high blood pressure may take more than one medicine to keep their blood pressure under control. Take all medicines even if you feel fine.
- Some medicines can cause side effects, or reactions, such as dizziness, which may bother you. If you have a reaction, talk to your doctor or nurse and he or she will help you.
- Be sure to take all medicines as directed. Always ask your doctor or pharmacist if you do not understand how much medicine to take, when to take it, or how often to take it.
- Always tell your doctor if you think you are pregnant.
- Always tell your doctor about other medicines you are taking.
- Check with your doctor before taking over-the-counter medicines (from the drugstore, grocery store, and other stores), vitamins, and herbs.
- Do the following to help your medicines work better: eat more fruits and vegetables, cut back on salt and sodium, lose weight, and be physically active.

High Blood Pressure Medicines:

Type:	How it works:	What you need to know:
Diuretics, or “water pills.”	Helps your kidneys flush excess fluid and sodium from your body through urine. This reduces the amount of fluid in your blood and decreases blood pressure. Some diuretics can also cause blood vessels to widen and can reduce your blood pressure.	<ul style="list-style-type: none"> • The doctor may give you potassium pills to offset the loss of potassium through your urine. Take the medicine as your doctor advises. • The doctor may give you a diuretic alone or with another blood pressure–lowering medicine.
Beta blockers.	Makes the heart beat slower and with less force, which helps the blood pressure go down.	<ul style="list-style-type: none"> • Make sure your doctor knows if you have asthma or a problem with your lungs. • Do not stop the beta blocker medicine all at once. Doing so can lead to a very large rise in blood pressure and can increase your chance of a heart attack.
ACE* inhibitors and ARBs.**	Blocks a substance in the blood that causes your blood vessels to tighten, thus relaxing the blood vessels and lowering blood pressure.	<ul style="list-style-type: none"> • Your doctor will check your kidneys and watch your blood pressure closely. • Let your doctor know if this drug makes you cough. • Not to be taken if you are pregnant.
Calcium channel blockers.	Prevents calcium from entering the muscle cells of the heart and blood vessels. This action causes the blood vessels to relax and open wider, lowering blood pressure.	<ul style="list-style-type: none"> • Talk to your doctor before taking any allergy medicine.
Other vasodilators.	Causes the blood vessels to relax, allowing blood to flow easier.	These drugs may be combined with other drugs or used by people who can’t take ACE inhibitors.

* ACE = angiotensin-converting enzyme; ** ARBs = angiotensin-receptor blockers.

Other Types of Medicine:

There are many other medicines available to control your high blood pressure. Talk to your doctor to learn more about your high blood pressure treatment plan.

Table adapted from *Honoring the Gift of Heart Health: A Heart Health Educator's Manual for American Indians and Alaska Natives*. National Heart, Lung, and Blood Institute and Indian Health Service; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov/health/prof/heart/other/aian_manual/index.htm

Resources: *Your Guide to Lowering Blood Pressure*. National Heart, Lung, and Blood Institute. National Institutes of Health Publication No. 03-5232. May 2003.

American Heart Association, www.americanheart.org.

The Merck Manual of Medical Information: 2nd Home Edition, Beers, Mark H. (Simon and Schuster, Inc., New York, NY, 2003)

Medicine for High Blood Cholesterol

What You Should Know:

- Do the following to help your medicines work better: eat fruits and vegetables, grains, lean meat, and low-fat dairy foods; cut back on salt, sodium, saturated fats, oils, and store-bought baked goods and snacks; lose weight; quit smoking; and be physically active.
- People who have high blood cholesterol are at increased risk for heart disease, stroke, and diabetes.
- Medicines that reduce the amount of cholesterol in the blood can reduce the risk of heart disease, stroke, and diabetes.
- Some medicines can cause side effects, or reactions, which can be taken care of. If you have a reaction, talk to your doctor.
- Be sure to take all medicines as directed. Always ask your doctor or pharmacist if you do not understand how much medicine to take, when to take it, or how often.
- People may need more than one medicine to help prevent a first or second heart attack and stroke.
- Always tell your doctor if you think you are pregnant.
- Always tell your doctor about other medicines you are taking.
- Check with your doctor before taking over-the-counter medicines (from the drugstore, grocery store, and other stores), vitamins, and herbs.

High Blood Cholesterol Medicines:

Type:	How it works:	What you need to know:
Statins.	Blocks cholesterol from being made and removes LDL cholesterol from the blood.	You may have some constipation, loose stools, or muscle pain.
Other cholesterol-lowering medicines.	Removes LDL cholesterol from the blood faster; reduces the amount of LDL that is made; speeds up the breakdown of cholesterol.	Tell your doctor if you have diabetes or a history of gallstones.
Niacin.	Causes less LDL cholesterol to be made.	You may have some constipation or loose stools.

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Resources: *The Merck Manual of Medical Information: 2nd Home Edition*, Beers, Mark H. (Simon and Schuster, Inc., New York, NY, 2003); American Heart Association. www.americanheart.org

Medicine for Diabetes

What You Should Know:

- Diabetes is too much glucose, or sugar, in the blood. If diabetes is not controlled, it can cause other serious health problems, such as blindness, kidney and heart failure, heart attack, and stroke.
- There are three main types of diabetes: **type 1, type 2, and gestational**.
- The pancreas of a person with **type 1 diabetes** produces little or no insulin. People usually develop type 1 diabetes when they are children or young adults. **People with type 1 diabetes must use insulin every day to stay alive.**
- Most people have **type 2 diabetes**. The pancreas can make insulin, but it is either not enough or the body isn't able to use it very well.
- Some women have diabetes only when they are pregnant. This is called **gestational diabetes**. It is important for these women to check for diabetes regularly for the rest of their lives.
- Some medicines can cause side effects, or reactions, such as dizziness, which may bother you. If you have a reaction, talk to your doctor or nurse and he or she will help you.
- Be sure to take all medicines as your doctor advises. Always ask your doctor or pharmacist if you do not understand how much medicine to take, when to take it, or how often to take it.
- People may need more than one medicine to treat diabetes. Sometime several drugs must be tried.
- Always tell your doctor if you think you are pregnant.
- Always tell your doctor about other medicines you are taking.
- Check with your doctor before taking over-the-counter medicines (from the drugstore, grocery store, and other stores), vitamins, and herbs.
- Do the following to help your medicines work better: eat fruits and vegetables, grains, lean meat, and low-fat dairy foods; cut back on salt, sodium, saturated fats, oils, and store-bought baked goods and snacks; lose weight; quit smoking; and be physically active.

Diabetes Medicines:

Type:	How it works:	What you need to know:
Sulfonylureas.	Helps your pancreas make more insulin, which lowers your blood sugar.	Sulfonylureas are the diabetes medicine prescribed most often. They are not expensive and have few side effects. They can be taken alone or with another diabetes medicine. If you are allergic to sulfa, you can't take a sulfonylurea.
Metformin.	Decreases the amount of blood sugar produced by the liver; improves insulin sensitivity.	Metformin may be prescribed for people with diabetes who are overweight, because it may help with weight problems. It helps the body use insulin better. Do not drink grapefruit juice or eat grapefruits while taking this medicine.
Alpha glucosidase inhibitor.	Works in the stomach and intestines to slow down the absorption of sugar.	If another medicine doesn't control your blood sugar, your doctor might start you on this kind. This medicine can cause stomach or bowel problems, so let your doctor know if you have any.
Repaglinide.	Taken before meals, stimulates insulin production in the pancreas.	Take this medicine with meals to control blood sugar. Your doctor can tell you how many pills to take depending on the number of meals you eat.
Thiazolidinediones.	Decreases insulin resistance.	These medicines help your body respond better to insulin. If you take this medicine, your doctor will have your liver tested every few months.
Nateglinide.	Taken before meals, stimulates rapid insulin secretion after eating.	Take this medicine with meals to keep your blood sugar level and from getting too high after you eat.
Insulin.	Controls blood sugar levels.	This medicine is injected under the skin, by spray, or by automatic pump. Work with your doctor to get the right dosage of insulin for you.

Other Types of Medicine:

There are other medicines available to prevent and treat diabetes. If you have high blood pressure or high blood cholesterol, you will need medications to keep these conditions under control to lower your risk of heart disease and heart attack. Talk to your doctor to learn more about a treatment plan.

Table format adapted from *Honoring the Gift of Heart Health: A Heart Health Educator's Manual for American Indians and Alaska Natives*. National Heart, Lung, and Blood Institute and Indian Health Service; National Institutes of Health; U.S. Department of Health and Human Services. www.nhlbi.nih.gov/health/prof/heart/other/aiian_manual/index.htm

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