



X-Plain™

Cardiac Rehabilitation Reference Summary

Introduction

Experiencing heart disease should be the beginning of a new, healthier lifestyle.

Cardiac rehabilitation helps you in two ways. First, it helps your heart recover through exercise programs.

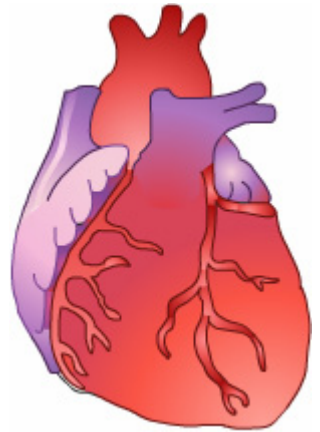
Second, it provides you with information about lifestyle changes that can result in a healthier heart.

This reference summary summarizes some of the information that is presented to you during your cardiac rehabilitation program.

The Heart

The heart is the most important muscle in the body. It continuously pumps blood throughout the body. Blood carries nutrients and oxygen.

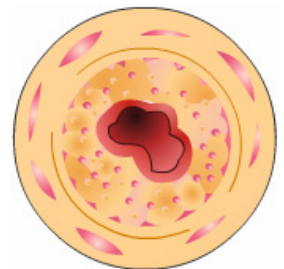
The heart also needs nutrients and oxygen. The heart pumps blood to itself through arteries. The arteries that supply blood to the heart are called “coronary arteries.”



Narrowing Of the Coronary Arteries

Healthy coronary arteries have smooth linings, allowing blood to flow smoothly. This is a normal artery.

Damage to the lining of the coronary arteries makes them rough. Fatty substances such as cholesterol can stick to the rough lining and collect in the arteries. As a result, plaque is formed on the inner walls of the arteries.



Plaque and deposits of cholesterol in the walls of the coronary arteries usually cause them to narrow. This is known as arteriosclerosis.

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Angina, Heart Attack, and Stroke

Narrowing of the arteries can lead to a decrease in blood supply to the heart.

When blood flow decreases to the heart, people may feel chest pain, heaviness, and shortness of breath. This is also known as “angina.”

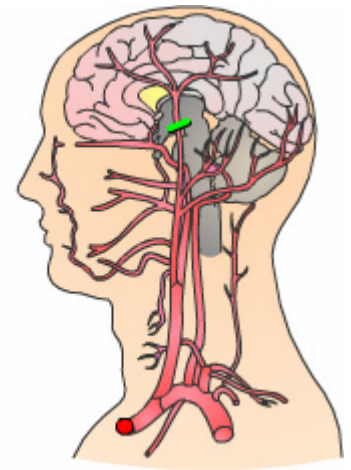
The pain can sometimes be located in the stomach area, the middle of the back, the left arm, or the jaw.

When the narrowing is severe enough, blood flow may be totally blocked. This causes a heart attack.

During a heart attack, the part of the heart that does not receive blood dies. The heart will then have difficulty in pumping blood to the rest of the body.

A heart attack may occur without any exertion. Its symptoms are similar to those of angina.

Sometimes, a piece of plaque from a narrowed artery can detach and move up to an artery in the brain. It blocks the artery and stops the blood supply to that part of the brain. This is known as a brain attack or a stroke.



A stroke could lead to coma or death. The signs of a stroke include the following:

1. A sudden numbness or weakness of the face, arm, or leg, especially on one side of the body.
2. Sudden confusion, trouble speaking, or understanding.
3. Sudden trouble seeing in one or both eyes.
4. Difficulty walking, dizziness, or loss of balance and coordination.
5. A severe headache with no known cause.

If you see or have any of these symptoms, call 911. Treatment can be more effective if given quickly. Every minute counts.

Fortunately, lifestyle changes can prevent further damage to the coronary arteries. A cardiac rehabilitation program will help you understand and prevent coronary artery diseases.

Monitored Exercise

Exercising under your physician’s supervision improves the functions of your heart.

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You may be asked to use a heart monitor to measure your heart rate during exercise.

Patients who had heart surgery may feel discomfort from the incision during exercise. They need to learn to distinguish this discomfort from other pain caused by over-exertion.

You should slow down and notify your doctor or care manager if you feel:

- Heart palpitations
- Dizziness
- Nausea
- Excessive fatigue
- Chest pain

Preventing Coronary Artery Disease

Your cardiac care manager will explain and answer questions about risk factors for coronary artery disease. A “risk factor” is something that increases your chance of having heart disease.

Fortunately, you can control many of the factors that contribute to the narrowing of the coronary arteries.

The major risk factors for arteriosclerosis are:

1. High cholesterol
2. High blood pressure
3. Smoking
4. Lack of exercise
5. Stress
6. Obesity
7. Diabetes

The following sections will explain how you can prevent coronary artery disease through diet, exercise, and avoiding risky behaviors.



Eating Healthy

Eating food low in cholesterol helps to decrease the cholesterol and fat levels in the blood.

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The food we eat can contain saturated fats and unsaturated fats. Unsaturated fats are healthier than saturated fats.

Saturated fats are present in dairy products such as whole milk products, butter, and cheeses.

Eat more white meat and white fish instead of red meat and shellfish. Red meat, egg yolk and shellfish are very high in cholesterol and fat.

Controlling Blood Pressure

High blood pressure, also called hypertension, contributes to the narrowing of the blood vessels of the heart, brain, and kidneys. It can lead to heart attacks, strokes, and kidney failure.

Hypertension may not have any symptoms. It is important to have your blood pressure checked frequently.

Patients with high blood pressure should limit their salt intake. Salt tends to increase blood pressure, which increases the chance of narrowing of the arteries. There are many salt substitutes that can provide excellent taste without harmful salt. You should have your doctor's okay to use a salt substitute.



Quitting Smoking

Smoking is a major risk factor causing heart disease, as well as lung cancer, emphysema, and strokes.

Quitting is difficult. Fortunately, many programs have been developed to help you stop smoking. Your cardiac care manager will work with you to help you stop smoking.

Exercising

Exercising leads to weight loss, which may lower your total cholesterol levels and blood pressure.

Your cardiac care manager will help you build a fitness program into your daily or weekly schedule to help you continue to exercise on a regular basis.

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Obesity

Obesity can also contribute to heart disease as well as diabetes and hypertension.

A well balanced diet and exercise can help you lose unwanted pounds.

Losing weight should be done slowly, not in a “crash diet.” For example, it is better to lose 20 pounds in a year and keep it off than lose weight very quickly and gain it back.

Your cardiac rehabilitation specialist and nutritionist can help you achieve this goal. However, it is up to you to implement it.

Knowing Your Other Risk Factors

Other risk factors can also contribute to heart disease. Family history of heart disease increases a person’s chance of having heart problems.

People with diabetes also have higher risk of having heart diseases. Diabetes is a disease where the body is unable to handle sugar adequately in the blood, causing a rise in blood sugar levels.

The causes of diabetes are not known. However, by knowing that it is a risk factor for narrowing of the coronary arteries, you can diagnose it early and control it. Diabetes can be controlled through diet, medication, exercise, and weight loss.

Summary

Experiencing a heart attack or having heart problems should be the beginning of a new, healthier lifestyle.

The key to a healthier lifestyle is eating healthy, exercising, quitting smoking, and relieving stress. These lifestyle changes are necessary to help prevent further heart problems.

In addition to lifestyle changes, the right combination of medications can lower your risk of future heart attack and stroke:

- **Vasodilators**, which lower blood pressure by causing the blood vessels to relax and widen
- **Aspirin**, which reduces the chances of the blood forming clots
- **Statins**, which lower your LDL, the “bad” cholesterol which can build up in your arteries
- **Beta blockers**, which relax the heart muscle and allows the heart to pump more easily

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It is easier to make these changes with the help of family members, friends, or support groups.

Your cardiac rehabilitation support team is also available to answer your questions and to plan exercise and diet programs that fit your needs.

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