



# PHYSICAL ACTIVITY:

# “THE MAGIC PILL”

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**I**f there were a single medication you could take – a pill that is free, with no side effects – that helped reduce your risk of developing or dying from many chronic diseases, would you take it? Daily physical activity is that magic pill. Getting people to take that pill is easier said than done. Everyone can gain health benefits and pleasure by being physically active – at home, at work, in school, and at leisure. It's never too early or too late to start living actively or to increase your activity level if you're already an active person. Everyone benefits from regular physical activity: young and old, men and women, boys and girls; black, white, Hispanic, Native American, Asian; disabled or not; overweight or underweight; athletic or not.

### Health Benefits of Physical Activity

Even if you don't like vigorous exercise, even if you've found that sticking to a regular workout program is hard to do, you can still improve your health substantially by building moderate activity into your daily life. It takes only small steps to make great changes to your health. The Centers for Disease Control and Prevention (CDC) and the American College of Sports Medicine (ACSM) recommend that adults get at least 30 minutes of moderate physical activity on most (preferably all) days of the week to improve health. Moderate physical activity helps lower cholesterol, blood sugar, and blood pressure. It helps protect against osteoporosis by improving the health of bones and relieves the symptoms of arthritis by strengthening muscles and improving flexibility and range of motion in joints. Physical activity helps reduce the symptoms of anxiety and depression. Young people need more activity than adults to be healthy. From infancy through high school, children need to move their bodies using their large muscles to accumulate 60 minutes of activity a day.

Here's some more good news: You can start slowly and build on the duration or intensity of your activity. Any

activity helps. It all adds up to better health. More vigorous exercise that gets your target heart rate up for 20 minutes at least three times a week, plus strength training to build muscle and stretching for increased flexibility, offer added health benefits.

### How Much Physical Activity?

Guidelines vary based on age, health status, and goals.

### Children

Infants and toddlers benefit from physical activity through the development of fundamental motor skills. Being physically active on a regular basis is a great thing to instill in young children, as it may help them with educational and social pursuits and help them maintain a healthy weight as they grow. This is particularly important since overweight children risk becoming overweight adults.





The National Association for Sport and Physical Education (NASPE) recommends that small children get several hours of unstructured movement every day. For a newborn, this is as simple as letting him lay on a clean, safe surface and move his arms and legs freely. Small children should never be inactive for more than 60 minutes at one time (except when sleeping). Toddlers (children 18-36 months) need at least 30 minutes of structured activity (activities with a designated movement or goal) and preschoolers (3-5 years) need at least 60 minutes of structured activities.

Children aged 6-18 need to get at least 60 minutes of physical activity most (if not all) days of the week. Adequate physical activity for children and youth means that they move their bodies, including the large muscle groups, for at least 60 minutes a day.

### Adults

People over age 18 need at least 30 minutes of moderate physical activity on five or more days a week to be healthy. Anyone who has been sedentary for an extended period of time and is just beginning an activity program should start out slowly and build up to the recommended level. When inactive adults become active, they gain energy, and feel better.

### Older Adults

Older people suffer greatly from sedentary lives. Regular physical activity helps them carry out activities of daily living, such as getting dressed, bathing, and cooking meals by improving strength, flexibility, and balance. Being physically active can help older people increase their social interactions. Older adults benefit greatly from stretching every day and participating in strength-building activities (e.g., lifting weights, circuit training, or using exercise bands/balls) two to three days each week. Strength-building and stretching or flexibility exercises are included as a part of the recommended 30 minutes a day on five or more days a week.

### People with Disabilities

In general, adults and children with disabilities should follow the same physical activity recommendations as people without disabilities (30 to 60 minutes a day, five or more days a week). However, recognizing that many conditions may limit how active a person can be or the type of movement he or she is able to perform, it is recommended that you consult a healthcare provider or personal trainer who is

## PHYSICAL ACTIVITY AND WEIGHT CONTROL

For people seeking to lose weight or maintain weight loss, more than the minimum amounts of recommended physical activity may be necessary. For individuals who want to lose weight gradually, adding more physical activity or longer bouts of physical activity, combined with a healthy diet, helps facilitate weight loss goals and helps you keep the weight off once you've lost it.

Each pound of fat your body stores represents approximately 3,500 calories of unused energy. In order to lose one pound, you would have to create a deficit of 3,500 calories by either eating 3,500 fewer calories or by using 3,500 calories through physical activity.

Here's a quick example of the calories in/calories out concept using walking. Fifteen minutes of walking at a moderate pace (about 1 mile) uses about 100 calories (give or take a little depending on current weight and stride length). If you walked for 15 minutes every day for a week, you would use an extra 700 calories. Assuming that you keep your calorie intake at a steady level, it would take you about five weeks to lose one pound of fat. Over the course of a year, that adds up to 10 pounds. While that may seem like a long time to lose 10 pounds, think about the little effort it took to get there - you maintained your existing diet and added just 15 minutes of moderate walking every day.





## MODERATE OR VIGOROUS?

Activities are defined as moderate or vigorous based on the level of effort exerted while engaging in the activity. A general rule of thumb is that you should be able to talk while participating in moderate activity whereas talking may be difficult during vigorous activity.

### Sedentary

Watching TV  
Reading  
Eating  
Typing on computer  
Talking on the phone  
Standing in line  
Riding in a car  
General office work

### Light

Slow walking  
Cooking food  
Washing dishes  
Putting away groceries  
Child care  
Croquet  
Mild stretching  
Billiards

### Moderate

Brisk walking  
Weight lifting  
Tai chi  
Dancing  
Golf  
Cleaning house  
Gardening  
Softball

### Vigorous

Walking up stairs  
Jogging/running  
Bicycling (faster than 12 mph)  
Swimming  
Cross-country skiing  
Singles tennis  
Jumping rope  
Basketball



## Increasing Strength

### **Target: Your Muscles**

Movements or activities that increase strength are important for a variety of reasons. Strength-building exercises:

- improve your muscle-to-fat ratio, helping you burn calories more efficiently and lose weight;
- help you carry out activities of daily living more efficiently, such as carrying groceries, working in the yard, and picking up children or grandchildren;
- protect major muscles in the arms, back, and legs;
- give you a toned appearance and improve your posture, which can be good for your self-confidence.

Engaging in a weight- or resistance-training program is a little more technical than going for a walk or bike ride, which is why it is recommended that you consult with a certified trainer before beginning a routine. At the very least, do a little research on movements, number of repetitions, appropriate weight, and proper positioning, and take it slow. Of course, there are less-complicated movements you can do at home to help improve strength such as push-ups, squats, lunges or step-ups, and abdominal curls or leg raises. Even with these “at home” moves there are some positioning

qualified to develop an appropriate and attainable program of regular physical activity and/or sports. For information, consult the Web site of the National Center for Physical Activity and Disability ([www.ncpad.org](http://www.ncpad.org)).

## COMPONENTS OF PHYSICAL ACTIVITY AND FITNESS

### Improving Cardiovascular Endurance

#### **Target: Your Heart**

Any activity that moves your whole body or uses large muscle groups can improve cardiovascular endurance. Cardiovascular (cardio) activities exercise the heart by increasing your breathing and heart rate. They improve the ability of the circulatory and respiratory systems to supply oxygen during sustained physical activity. Examples of activities that build cardiovascular endurance include walking, running, riding a bicycle, swimming, aerobics classes, and using cardio equipment (treadmill, elliptical trainer).

## A BETTER FRAME OF MIND

Being physically active reduces the symptoms of anxiety and depression and makes you better equipped to handle stressors you encounter in everyday life. Being active and healthy while helping your community is a great way to feel good about yourself and to make friends. The Centers for Disease Control and Prevention suggests that individuals who volunteer have a higher likelihood of getting the recommended amounts of physical activity. So help yourself by helping your community.



## KEEPING IT SAFE

In order to help ensure your safety and the safety of others, keep the following in mind:

- Wear the appropriate protective gear, such as a helmet when biking, in-line skating, and skateboarding, as well as elbow, knee, and wrist guards, especially when in-line skating and skateboarding.
- Wear sunscreen regardless of whether it's 30 degrees or 80 degrees.
- Wear the right clothing. Dressing in layers is always best. Protective clothing such as a hat can also guard against sun exposure.
- When active for extended periods of time (45 minutes or more) or in very hot conditions, be sure to hydrate. Particularly during vigorous activity or activity performed in very hot weather, waiting until you are thirsty means you waited too long and you are probably a little dehydrated. Be sure to drink water when you are thirsty. The ideal is to balance fluid lost through sweating with fluid intake.
- Be properly equipped for any extended activity, such as a long hike, bike ride, or walk.
- Obey traffic laws and signals. Pedestrians may have the right of way, but drivers don't always follow that rule. Never count on a car stopping for you and never assume that a driver sees you. When walking or running, do so facing traffic so you can see cars as they approach you.
- When trying new pursuits such as downhill skiing or golf, be sure to read the rules and safety considerations associated with the sport. They will help keep you and others injury-free and enjoying the activity for a long time to come.
- When an injury has occurred, seek medical help if you experience any of the following:
  - Pain that is extreme or persistent
  - Severe trauma to any joint
  - Failure of the injury to heal in a reasonable amount of time
  - Development of an infection or fever
  - If you're unsure about the severity of the injury.

guidelines you need to be aware of to ensure you don't injure yourself and to make sure you get the most benefit out of each movement.

- Work all the major muscle groups:
  - Upper Body: shoulders, back, chest, abdominals
  - Arms: biceps, triceps, forearms
  - Legs: quadriceps, hamstrings, calves
- Work larger muscle groups (e.g., back, quadriceps) before smaller muscle groups (e.g., biceps, calves).
- Alternate between upper-body (shoulders), lower-body (quadriceps), and trunk (abdominal) exercises.

## BE A GOOD SPORT

Nothing ruins the fun of physical activity and sports participation faster than a poor sport. Practice the principles of good sportsmanship. Be courteous and show respect at all times, win or lose. That goes for players, parents of young players, and coaches.

- Take at least one day of rest between weight training sessions to allow muscles to recover. At the very least, don't exercise the same muscle groups two days in a row.
- Try to do weight or resistance exercises at least twice a week.
- If you can't do at least 10 repetitions, then you are probably lifting too much weight. Lighten your load and gradually increase the weight.

### Improving Flexibility

#### Target: Your Joints and Muscles

Being flexible means that you can move joints and use muscles through their full range of motion. This is important as you bend, reach, and twist in the movements you perform while engaging in your favorite activity, work, or tasks at home. Specifically, low back and upper leg flexibility is key to preventing low back pain.

Stretching is an activity you can do on a regular basis and provides many benefits. As with any activity, improperly performing a stretch can cause injury, so be sure to remember the following:

- Ease into a stretch and hold each stretch in a static position for 10-20 seconds.
- Never bounce.
- Stretch to the point of resistance, but not until it hurts. If it hurts, you've gone too far.
- Don't rush through a stretching routine. Five to ten minutes is all it takes before and after a workout. Use that time to prepare mentally for the activity ahead or to reflect on what you just accomplished!

### Getting Started

Generally, if you're under age 45 and in good health, you probably don't need to consult with your physician before you begin any type of exercise or physical activity program. If you are over 45 or have a serious health condition, it's best to consult your healthcare provider before beginning any regular physical activity program. Some inactive people begin an activity program by trying to do too much too soon. A good rule of thumb is to begin by adding about 10 percent to your current activity level. For instance, if you can walk for 10 minutes at a moderate pace before you become tired or it becomes uncomfortable, walk for 10 minutes two times a day. After a week, try 11 minutes



per session. In four weeks, you'll be up to 15 minutes. Soon you'll be able to walk for 30 minutes per session. Or, you might try adding in a five-minute resistance or strengthening session and gradually increasing the amount you lift or adding in new movements to ensure all major muscle groups get equal conditioning.

### What Kinds of Activities?

There are hundreds of activities you can do to meet your physical activity

goals, including increasing your cardiovascular endurance, strength, and flexibility. The President's Challenge Web site, [www.presidentschallenge.org](http://www.presidentschallenge.org), lists over 100 activities you can do to earn points toward either the Presidential Active Lifestyle Award (PALA) or the Presidential Champions Bronze, Silver, or Gold medal. Activities range from sports, running, swimming, and walking to shuffleboard, housework, gardening, tai chi, dancing, and yoga.



## FINDING TIME

Lack of time is the No. 1 excuse for not being active in our fast-paced, over-scheduled society. Here are some suggestions for helping you find the time you've been missing all these years. You may want to start off doing these lifestyle activities and gradually add in more dedicated activity time (e.g., building up to a 30-minute walk, a basketball game with friends twice a week, a 30-minute weight-training session at the gym three days per week).

### At home:

- In an apartment building, take the stairs.
- Instead of a lawn service, cut the grass yourself using a push mower. A reel mower is even better, and it's better on the environment because it's powered solely by you.
- Instead of sitting in the car waiting for your child's practice to be over or watching a game from the stands, pass the time or take in the action by walking around the playing field a few times.
- View yard work and household cleaning not as chores but as opportunities for some active time. That may motivate you to work a little harder and faster and leave you more free time to do what you please.
- Need to run an errand to a friend's house down the street or to a local store? Walk or ride your bike.
- Start a new walking routine with your best four-legged friend. Instead of letting him out the back door every morning or evening, put on his leash and take him for a walk.
- Have you tried yoga or Pilates? If you can't find a class you can take, there are numerous videos and books you can buy. The exercises from both disciplines are wonderful for people of all ages and abilities. Find one you enjoy and commit to going through a series of movements or a video with your child or spouse. It's a great activity to

learn together, and doing it with a buddy can be the motivation you need to stick with it.

- Take advantage of a weekend morning or afternoon. Take an early walk or bike ride in the morning. Plan to meet up with a friend and walk to get a cup of coffee. Turn off the TV for an afternoon picnic at a park where you and your family or friends can participate in a variety of activities: hiking, flying a kite, playing Frisbee or softball, or swimming.

### At work:

- If able, take the stairs. It may be quicker than standing in line waiting for the elevator and then waiting for everyone's stops. Like every suggestion, start by doing it two or three times each week. Or, if you work on the 35th floor, take the stairs up to the fifth floor and hop on the elevator there, gradually adding to the number of flights you take.
- Stretch at your desk a couple of times a day.
- More than likely, you are entitled to a 10-minute break. Take it and go for a walk around your floor or hike a few flights of stairs. You'll be amazed at the energy boost you get from that short jaunt.
- At lunch, commit to walking at least once a week during your break.
- Start for the office a few minutes early and get off the bus or subway a stop early. Do the same when going home at night. If you don't take public transportation, park your car farther away from the door to your office building. Better yet, help ease traffic congestion in your area and bike to work. Many major cities have resources for bicycle commuters to help you arrive at work safely. Don't dismiss the option if you can't bike every day. Remember, every little bit counts!

Some of the material in this article was taken from: "Health Fitness Instructor's Handbook" (4th ed.), by E.T. Howley and B. Don Franks; "Stay Active and Be Fit," a publication of the President's Council on Physical Fitness and Sports (PCPFS). Jane Wargo is a PCPFS program analyst; Russell Pate, Ph.D., is a member of the PCPFS Science Board.