

3. BE ACTIVE— YOU OWE IT TO YOURSELF

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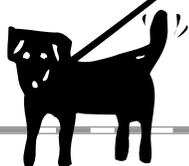
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OBJECTIVES

Complete this lesson and you will be able to

- tell someone three benefits of regular physical activity;
- find your target heart rate for exercise;
- locate where to check your pulse;
- tell a friend how to start a walking program;
- describe the three parts of an effective exercise session;
- demonstrate stretching exercises that improve flexibility.

INTRODUCTION

Regular physical activity is the foundation of a wellness program. You don't have to be a jock to be healthy, but you do need to place regular activity high on your list of things to do.

Being physically active helps you feel good about yourself. It can increase your muscle tone, reduce your body fat, and improve your fitness. It can also reduce your risk of developing heart disease, high blood pressure, and diabetes.

Lesson 3 explains how you benefit from moderate activity, how to get started, and how to move up to a regular exercise program.

RECIPE NOTES

When you're active, you get hungry, right? Actually, most people find that physical activity makes them less hungry. But there will be times when you get hungry or need more to eat. If you are fit enough to be walking, cycling, or hiking, you will need more energy.

The recipes in this lesson are for low-fat, high-carbohydrate snacks. Your body breaks these down and digests them more quickly than high-fat foods. You get the quick energy you need.

The recipes range from nibbles to breads. Prepare them before you exercise. Then they will be ready when you are hungry. Give them a try on the weekend when you have more time.

These recipes support the following healthful eating rule:

Find your balance between food and physical activity.

They will help you maintain or improve your weight.

PHYSICAL ACTIVITY AND WELLNESS

When Alice asked for advice on wellness, I told her that the most important thing was to start moving. Even if she has time for nothing else, she



should make physical activity her first priority. Being inactive is one of the greatest risks for developing high blood pressure, cardiovascular disease, and diabetes. Studies show that physically active women and men have a much lower risk for these diseases.

After the shock of their parents' illnesses, Harry and Pat again began walking twice a week. Also, Harry plans to spend more time outdoors scouting the areas he and his dad use for hunting. He would enjoy doing this, and he might get his dad involved. Whatever you decide to do, look at these benefits of regular physical activity or exercise:

Exercise helps reduce the risk of heart disease.

Regular exercise can raise levels of the good blood cholesterol (HDL) and lower levels of triglycerides (another fat in the blood, different from cholesterol, that increases heart disease risk). People with higher HDL and lower triglyceride levels are less likely to develop heart disease.

It prevents or delays the development of high blood pressure.

People with high blood pressure who do moderate regular exercise lower their blood pressure and can reduce the amount of their medication.

It appears to protect against or delay the development of type II diabetes.

This is especially true of people who have a family history of the disease or who are overweight.

It helps control your weight.

If you are lean, exercise can help you maintain your weight. If you are overweight, exercise can help you lose weight. Exercise burns calories. You burn more calories walking around the block than you do sitting and watching TV. Look at the following list. See how many calories different activities burn.



| Activity | Calories used in 30 minutes of activity |
|--------------------------------------|---|
| Sleeping..... | 40 |
| Sitting..... | 50 |
| Standing..... | 70 |
| Housework..... | 90 |
| Walking at 2.5 miles per hour..... | 105 |
| Bicycling at 5.5 miles per hour..... | 105 |
| Gardening..... | 110 |
| Golf..... | 125 |
| Swimming (1/4 mile per hour)..... | 150 |
| Dancing (slow step)..... | 150 |
| Softball..... | 162 |
| Ice skating (10 mph)..... | 200 |
| Tennis, singles..... | 210 |
| Jogging..... | 292 |
| Soccer..... | 300 |

It reduces body fat and increases muscle.

Muscle burns more calories than fat. As you exercise, you increase your muscle. Then you burn more energy when resting. It takes more energy to keep muscle alive than it does to keep fat tissue alive.

You are more likely to keep weight off if you are active.

Research shows that combining a reduced-calorie diet with exercise is the most effective way to lose weight. If only dieting is used for weight loss, most of the weight is regained within a year or two. Weight lost by dieting alone tends to come from both body fat and muscle. This reduces the number of calories you burn because active muscle tissue is lost. Exercise plus dieting results in losing body fat while keeping muscle.

Regular activity helps people cope with stress and reduces tension.

You have more energy to do your work and to have fun.

It builds self-confidence.

Even if you don't think of yourself as athletic, you learn you can be active and enjoy it.

If you have impaired glucose tolerance or type 2 diabetes, exercise itself can lower your blood glucose levels. A single exercise session makes muscle cells more insulin sensitive. In addition, muscle cells use and store more glucose than fat cells do. So exercise lowers both insulin and glucose levels in the blood.

Exercise is most effective for diabetics who have mild disease and are not taking medications. For these people, exercise combined with the proper diet can often control type 2 without the need for oral hypoglycemic agents or insulin therapy. If you are taking insulin, always check with your doctor before starting an exercise program.

THE FIRST STEP

Now that you've read about the benefits of regular physical activity, it's time to start. Where do you begin? At your doctor's office. If you're over age 40 or have a history of diabetes, heart disease, or high blood pressure, visit your doctor for a checkup. Ask for advice on how often and how long to exercise. If you have health problems, your doctor's advice for you might differ from the advice for those with no health problems.

Alice visited her doctor before beginning her own exercise program. Her family health history indicated she was at high risk for heart disease and diabetes. Her doctor approved her exercise plan and conducted some laboratory tests. Now Alice will be able to see the effects of her physical activity. She

can compare future test results to those taken before she began her exercise plan.

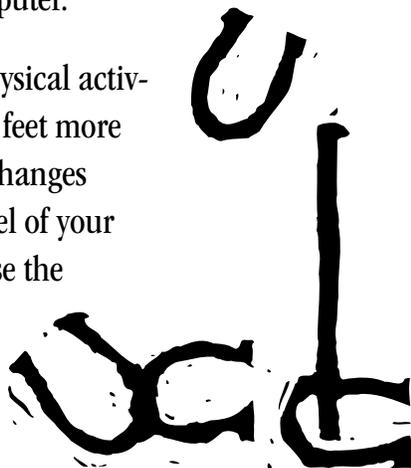
WHAT ARE YOU ALREADY DOING?

Most of us are not completely inactive. You may mow the lawn, rake the leaves, wash and wax the car, clean the house, repair the car, and haul the groceries. All of these things count as physical activity. According to the *1996 Surgeon General's Report on Physical Activity and Health*, people benefit from any moderate activity that uses muscle. This activity doesn't have to be done all at once. Shorter spurts of activity that add up over the day count too. But, you need to do it for at least 30 minutes total every day; being active for 60 minutes is better for weight control.

If you don't seem to have time for a formal exercise program, think of what you can do during a normal day that could count toward a physical activity goal of 30 minutes per day. Most of us work. At work you can:

- climb stairs. Start with one flight every other day.
- walk across parking lots. Park far from your building, not close, and walk in.
- get up and walk at breaks. Even 10 minutes of walking helps.
- move heavy equipment, carry books or boxes, push carts, load and unload files.
- walk to deliver a message instead of using the telephone or computer.

To increase your physical activity, start using your feet more often. Make small changes over time in the level of your everyday activity. Use the Activity Calendar to



record your pattern of activity. When you have done this for awhile, then consider moving to an exercise program.

Changing from physical activity to an exercise program means committing some of your time to exercising. You are ready to do more than the activities created by your job or family responsibilities. The choices for an exercise program range from joining a line-dancing class, a bowling league, or a swimming class at the YMCA, to enrolling in a health club. But one of the most convenient ways to exercise is to start walking regularly.

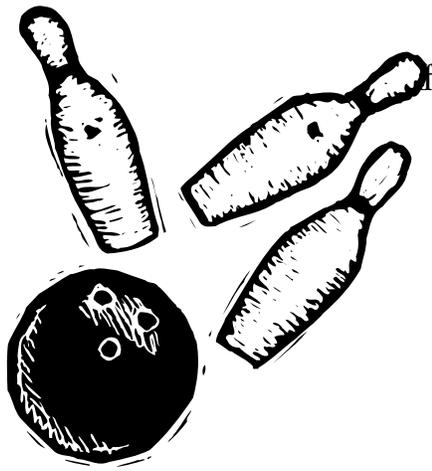
WHAT ABOUT WALKING?

Walking is easy to do, either as a beginner or as an old hand. If you haven't walked in a while, you will be out of breath at first. Stop when you get tired, but go back and walk again the next day. After a month or so, you will be more fit and walking will be easier. If you walk fast, swing your arms, and climb some hills, you have probably become an aerobic walker. Read fact sheet 1 in this lesson for more information on starting a walking program.

If walking doesn't challenge you, try swimming, bicycling, or an exercise class. Choose something you enjoy. Regardless of what you choose, start slowly and build up your endurance. Going slowly helps prevent sore muscles and injury. Waking up stiff and sore the morning after exercise is discouraging. It's important to exercise at a level of effort that will improve fitness without overdoing. There are several ways to determine what level of effort is best for you.

1. Monitor your heart rate as you exercise. There is an appropriate heart rate at which you build your strength without causing exhaustion. This lesson's worksheet explains how to figure your target heart rate for exercise.

2. Use the talk test. you can't talk while exercising, you are working too hard. You should be able to count out loud, talk to a buddy, or recite a nursery poem at any point during your exercise period.



MAKING THE COMMITMENT

Once you start exercising, practice it regularly. There will be times you can't get to class or out to walk. Sickness, family, or job will interfere. Even if you miss a few exercise sessions, start again next week. Don't blame yourself for missing sessions. Everyone does. Return to your exercise pattern as soon as possible. Reward yourself for continuing your exercise sessions. Keep exercising regularly and soon you will be hooked on it.

Once you establish your commitment to regular exercise, consider adding variety to your program.

- Read fact sheet 2 to learn about the three parts of a good exercise session and the importance of muscle-strengthening exercises.
- Read fact sheet 3 to learn some simple stretching exercises that prevent soreness.

Starting an exercise program is easy. Continuing it may be harder. But better health is the reward. Here are steps for building an exercise program using walking as the example:

- Consult your doctor.
- Find your target heart rate.
- Choose a time of day and start walking twice a week.

- Gradually increase the number of times you walk per week, then the distance.
- When you can walk several miles without feeling tired, start adding some warm-up and cool-down exercises to your routine.
- Gradually add some muscle-strengthening activities to your routine.

Sometimes the first step in an exercise program is to find a buddy. Buddies offer moral support and companionship. Look around and find one if this is important to you. Sometimes all it takes is putting on your walking shoes and taking the first step. Good luck.

Thanks for completing this lesson!

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College of Agricultural Sciences • Cooperative Extension

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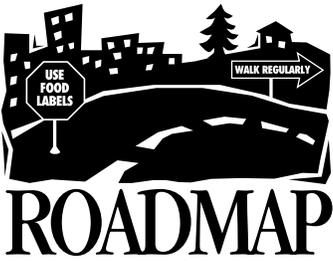
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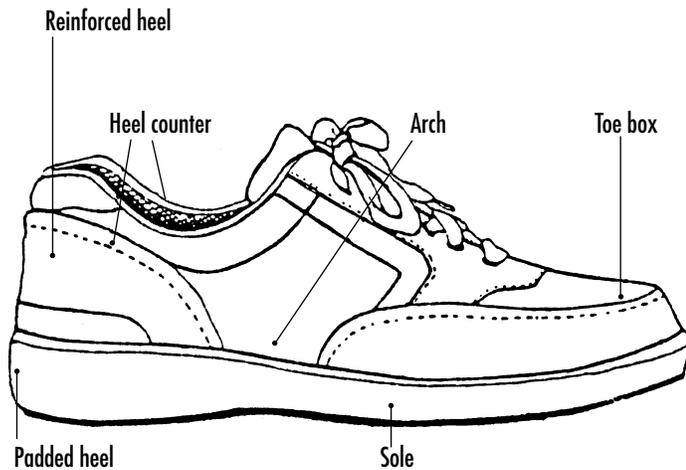


INFORMATION SHEET:

Some common questions and their answers

1. HOW CAN I FIND THE RIGHT EXERCISE SHOE?

Today there are as many athletic shoes as sports stars. Finding the right shoe can be a challenge. Price is not the only thing to consider when buying an exercise shoe. Look for a shoe that's properly designed for your foot. The shoe should distribute your body weight evenly over your foot. It should have plenty of cushioning for comfort and shock absorption, and it should provide support for proper movement. Choosing a shoe involves a trade-off between cushioning and support.



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A soft, cushioned shoe doesn't control motion, and a rigid shoe is hard on your foot. The shoe's insole and midsole provide cushioning. If the insole is removable, take it out. It should be firm but not rigid. Look for a heel cup (a padded area inside the shoe that holds the heel in place).

Support means that your foot is guided through proper walking motion. A shoe with support will help keep you from twisting an ankle or suffering other injury if you place your foot in an unstable position. The pattern from which the shoe is shaped as well as the density of the midsole contribute to support. You can determine support by twisting the shoe in your hands and by walking in the shoe. If the shoe twists out of shape easily, your foot will have less support on uneven surfaces.

The support you require depends on how your foot pronates or supinates. If your feet roll inward when walking, you pronate. A small percentage of the population supinates—their feet roll toward the outside. To discover whether you pronate or supinate, look at the soles of your old shoes. Are they more worn on the outside of the heel and the inside of the forefoot? If so, you pronate. If the wear is on the outside of the whole shoe, you supinate.

According to podiatrists, pronators need a more rigid shoe with a firm heel counter. Supinators need more flexibility. If you feel you don't pronate or supinate too much, look for a combination of support and cushioning.

Also consider some other important features.

- To test a shoe for flexibility, make sure the forefoot, or front of the shoe, allows the foot to rock from heel to toe.
- The shoe should have a wide toe box (the part that encloses your toes).
- Well-designed arch supports are usually found in more expensive shoes.
- The inner side of the shoe, which holds the arch support, should be made of a firm material to prevent the foot from collapsing inward.
- The tongue of the shoe should be well padded to prevent irritation of the tendons on top of the foot.

Finally, the right shoe for you is one that fits *your* foot. Try on several pairs of shoes by various manufacturers. Then walk around on concrete, not carpet. The shoe should feel comfortable yet supportive. If the shoe causes any discomfort, don't buy it. *You will not "break in" an exercise shoe.* Shoes are the most basic piece of equipment for any type of exercise. Make sure you will want to wear the shoe you select.

2. HOW DO I EXERCISE DURING BAD WEATHER?

Don't use bad weather as an excuse to stop exercising. Instead, try some of these ideas:

Go to the mall for a walk. Malls are heated in winter and air-conditioned in summer. Some malls even open early for mall walkers and have organized walking clubs. You can window shop and burn calories at the same time.

Consider joining a YMCA or health club for a limited period of time. Check with the manager to see if 3-month or 6-month memberships are available. This adds variety to your exercise program and allows you to decide if you want to join the health facility on a permanent basis.

Rent or purchase exercise videos. Videos are available for all levels of physical fitness. You can exercise in the privacy of your home at a time that is convenient for you.

Investigate exercise programs on cable TV and the major television networks. Programs for aerobic exercise, strengthening, and toning are available.

3. DOES JOGGING BURN MORE CALORIES THAN WALKING?

The number of calories you burn during exercise is usually determined by how far you go, not by how fast you go. This is true as long as your heart rate is at least 70 percent of your maximum rate while you are exercising. (See the worksheet to learn how to find your maximum heart rate.) It is not the rate of calorie burning that is important for weight loss, but the total number of calories burned. If you prefer to walk instead of run, you will need to walk *longer* to burn the same number of calories as running a particular distance.

The list below gives examples of activities that use 150 calories. The more vigorous activities are at the end of the list. Burning 150 calories takes less time when you work harder.

- Wheeling self in wheelchair for 30–40 minutes
- Walking 1 3/4 miles in 35 minutes (20 minutes per mile)
- Bicycling 5 miles in 30 minutes
- Walking 2 miles in 30 minutes (15 minutes per mile)
- Water aerobics for 30 minutes
- Swimming laps for 20 minutes
- Wheelchair basketball for 20 minutes
- Bicycling 4 miles in 15 minutes
- Running 1 1/2 miles in 15 minutes (10 minutes per mile)
- Stair walking for 15 minutes

4. HOW CAN I LOSE FAT IN SPECIFIC PARTS OF MY BODY? CAN I "SPOT REDUCE"?

Unfortunately, spot reduction just doesn't work. The way your body adds and removes fat is guided by genetic and hormonal factors. You must burn more calories than you eat to lose weight. When you do this, you reduce body fat all over. Unfortunately, you cannot control which areas will lose the fat. Toning exercises can help you tighten specific muscles.

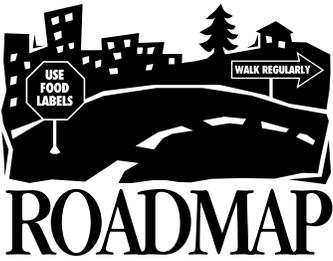
5. HOW DO I STAY COMMITTED TO REGULAR EXERCISE?

Exercise psychologists suggest you do the following:

- Plan for the long haul. Choose activities that can become lifetime habits. Make sure your exercise program has variety, flexibility, and fun. If you enjoy it, you will keep it up.
- Watch for danger signals. Watch out for overconfidence and self-blame. Overconfidence leads to disappointment if exercising is harder than you expected. Blaming yourself if you miss a session or don't perform well can be demoralizing. Instead focus on your successes—getting back to class after missing some sessions.

- Check your thinking. Don't look for perfection. Missing one session won't ruin your exercise program. Just go to the next session.
- Reward yourself. Sometimes exercise is inconvenient and downright hard. Set up a system to reward yourself. After walking a total of 25 miles, go out to breakfast with friends. Be proud of your progress.
- Solicit support. Let your family and friends know their support means a lot to you. Ask them to help you keep your commitment. Then support them in what they do.





WORKSHEET:

Finding your target heart rate

Exercise at a level that will improve your fitness. Your heart can serve as a monitor to tell you how hard you're working. Your heart rate, or pulse, tells you how many times your heart is beating per minute. Each of the throbs you feel when checking your pulse is one heartbeat. Heart rate monitoring lets you know if you're exercising at the appropriate level.

Your target heart rate is the number of times your heart should beat per minute during exercise. You should exercise at a level high enough to improve your fitness without causing extreme tiredness or soreness. Your target heart rate should be about *60 to 85 percent* of your maximum heart rate—the fastest your heart can beat during very hard exercise. The rate goes down as you age.

Maximum heart rate varies from person to person. You can estimate yours by subtracting your age from 220. Multiply this number by 0.60 and 0.85 to get 60 to 85 percent of your target heart rate (THR). Divide this number by 6 to get your target heart rate for 10 seconds.

Here is how a 40-year-old person determines their target heart rate:

$$220 - 40 (\text{age}) = 180 \text{ beats (maximum heart rate)}$$

$$180 \times 0.60 = 108 \div 6 = 18 \text{ beats (lower THR)}$$

$$180 \times 0.85 = 153 \div 6 = 26 \text{ beats (upper THR)}$$

Forty-year-olds should keep their heart rate between 18 to 26 beats during exercise to strengthen their heart and lungs (aerobic activity). Heart rate is measured by counting your pulse beats for 10 seconds.

Let's determine your target heart rate. Follow these steps:

a. Subtract your age from 220 to find your maximum heart rate.

$$220 - \underline{\hspace{2cm}} (\text{your age}) = \underline{\hspace{2cm}} (\text{your maximum heart rate})$$

b. Multiply your maximum heart rate by 0.60 and 0.85 to find your target heart rate range.

$$\underline{\hspace{2cm}} \times 0.60 = \underline{\hspace{2cm}} \quad (\text{your lower THR})$$

(maximum heart rate)

$$\underline{\hspace{2cm}} \times 0.85 = \underline{\hspace{2cm}} \quad (\text{your upper THR})$$

(maximum heart rate)

c. To determine your target heart rate for 10 seconds, divide both THR numbers in step b by 6.

$$\underline{\hspace{2cm}} \div 6 = \underline{\hspace{2cm}} \quad (\text{THR for 10 seconds})$$

(lower THR)

$$\underline{\hspace{2cm}} \div 6 = \underline{\hspace{2cm}} \quad (\text{THR for 10 seconds})$$

(upper THR)

The two numbers you have calculated are your THR range. When you take your pulse for 10 seconds, it should fall between those two numbers.

In **beginning** an exercise program, aim for a target heart rate at the 60 percent level. (For a person 40 years old, this is 18 pulse beats for 10 seconds.)

An **intermediate level** is a target heart rate of 75 percent.

An **advanced level** is a target heart rate of 85 percent.

Check your pulse during the intense (aerobic) portion of your workout. If your pulse is less than the number you calculated for 10 seconds at the 60 percent level (less than 18 in our example), you are not exercising hard enough. If your pulse is greater than the number you calculated for 10 seconds at the 85 percent level (greater than 26 in our example), you are exercising too hard. Slow down and check your pulse the next time you exercise.

CHECKING YOUR PULSE

You can easily feel your pulse in two places: the radial artery, located in each wrist, and the carotid artery, located in your neck.

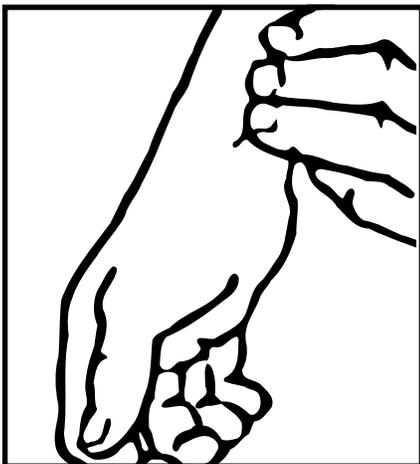
To take your **radial pulse**, place your index and middle finger at the base of your thumb and move them down toward your wrist. Press gently. You

should be able to feel your pulse. Another way is to wrap your hand around your wrist. Use your fingers to find the pulse about an inch down from your wrist under the base of your thumb.

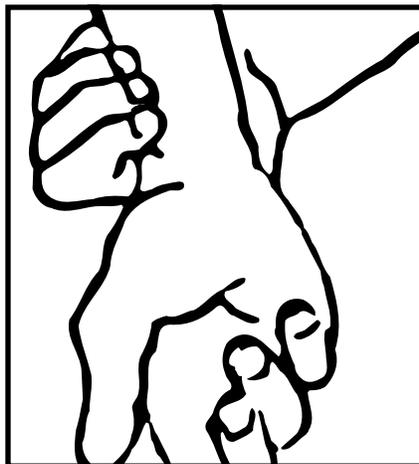
To take your **pulse at your carotid arteries**, located just under the jaw on either side of the windpipe: Find your “Adam’s apple” with your first two fingers. Slide your fingers to one side, about halfway around your neck. Press in gently. You should be able to feel your pulse. Press lightly. *Never press both carotid arteries at the same time.*

Be sure to use your fingers, not your thumb, to find your pulse. Your thumb has a pulse of its own, which will confuse you. Count your pulse for 10 seconds, counting the *first beat as zero*. Multiply that number by 6 to get a 1-minute pulse. When you exercise, count for only 10 seconds. Your heart rate slows down quickly after 15 seconds. You will need a watch with a second hand to check your pulse.

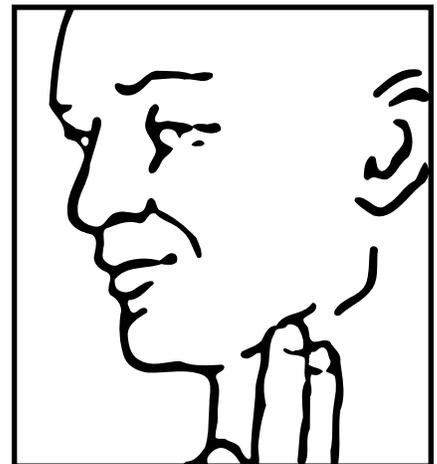
If you can’t find your pulse immediately during exercise, keep trying. Eventually you will be able to locate your pulse quickly. Remember, checking your heart rate is the best way to determine if you’re exercising at the appropriate level for you.



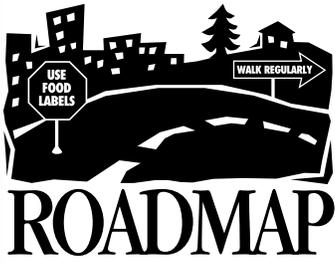
Radial



Radial



Carotid

Your **WELLNESS**

FACT SHEET 1:

Start with walking

The surgeon general recommends activity that burns at least 150 calories a day, or 1000 calories a week. Walking is an easy way to do this. You burn calories because walking uses the big muscles of your legs.

GETTING STARTED

Practice taking a walk several times a week. Use these walks to learn where you can walk safely and how far you can walk comfortably. You can walk outdoors or indoors. School tracks, local roads with good shoulders, parks, neighborhood streets, or even shopping malls are possibilities.

Find a place to walk a mile on flat ground. Measure how long it takes you to walk the mile at a comfortable pace. This is your starting time or baseline value.

Identify several walking routes. Measure their distance using a car odometer. If you decide to walk in a mall, its business office may be able to provide the distance for you. A mile is 5,280 feet. Select two routes and alternate using them.

This will keep you from getting bored.



WHAT TO WEAR OUTSIDE

Wear clothes that are loose and comfortable. Use layers, such as the following:

- a light t-shirt (closest to your skin), then
- a light long-sleeved shirt, then
- a light jacket that opens down the front, and finally, if necessary,
- a heavier jacket that opens down the front.

It helps if all the layers “breathe,” or pass water vapor from the skin outward. Having layers that open the full length at the front allows you to vent body heat and not overheat. If you are walking outside, begin by wearing all the layers needed for the temperature. As you warm up, open the top layer. You can take this layer off and open the next as you continue to warm. Open and remove layers before the shirt against your skin becomes wet.

Your head radiates a lot of heat. Remove your hat or cap to avoid overheating.

Wear shoes that support your foot and ankle and that have plenty of room for your toes (see Common Questions, #1). Consider where you are walking. If you walk outdoors on uneven ground or sidewalks, you may want shoes that provide more support for your ankles so they don’t twist easily. If you walk in a mall or on an even, hard, concrete surface, you will want shoes with more cushioning in the sole. Concrete does not give and will tire your feet.

WALKING TIPS

All of us walk, but some of us walk more comfortably than others. Here are some suggestions for making your walks more enjoyable:

- Use good posture. Keep your head, chin, and chest up. Learn to keep your abdominal muscles slightly tight. If you lean forward, do so from the ankles, not the waist. Leaning too far forward will tire your back.
- Swing your arms as you walk. This makes walking a total body activity. Move the opposite leg and arm forward at the same time.
- Place the heel first, roll onto the full foot, and then push off with your toes. If you walk planting your feet flat footed, you may increase your chances of injury. Practice the rolling motion suggested.
- Always set a pace that allows you to talk. This may be slow at first, but it will pick up as you practice.
- Use a stride (distance you cover between steps) that is comfortable. As you practice, your stride should become a long, smooth, swinging motion.
- Always carry identification in case of emergency.

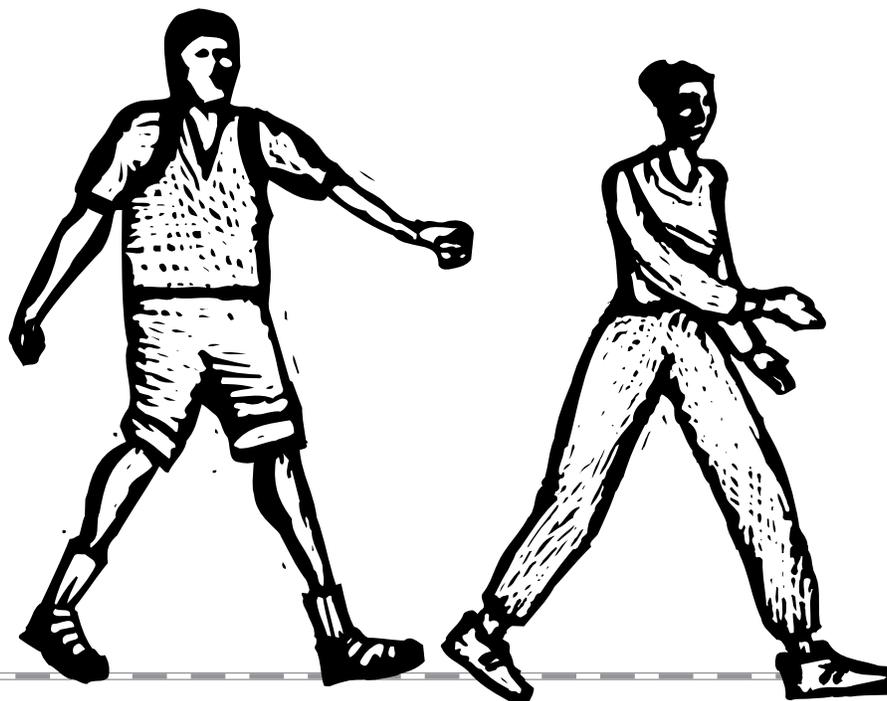
BUILDING THE INTENSITY OF YOUR WALK

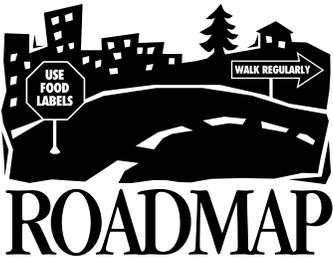
After you've walked for awhile, it will get easier. Your body gets used to the routes you use. Monitor your heart rate. When you start to stay below your target heart rate during your walk, you will need to increase the intensity of your walking program. Here are some ideas for doing this:

- Walk faster over the same distance.
You burn 150 calories by:
 - walking 1.75 miles in 35 minutes (20 minutes per mile), or
 - walking 2 miles in 30 minutes (15 minutes per mile).

You can also keep the same intensity and walk a longer distance.

- Reverse your usual route.
- Find a new route that includes more hills. If you walk faster or go uphill, you burn calories more quickly.
- Add some stair climbing to your route. You burn 150 calories by stair walking for 15 minutes.
- Start carrying a knapsack that holds two full water bottles.





FACT SHEET 2:

Putting together an exercise program

COMBINE SEVERAL TYPES OF EXERCISE

There are different kinds of physical activity: aerobic, muscle strengthening, and flexibility. Each is described below.

Aerobic exercise

Strengthens the heart and lungs
Uses lots of oxygen and burns many calories
Can be done for long periods of time

Examples

Walking, jogging, swimming, jumping rope, cycling, skiing, square dancing, and step or regular aerobic classes

Muscle strengthening

Makes it easier for you to lift, move, or carry things
Burns fewer calories
Uses the large muscles of the legs, arms, chest, and stomach

Examples

Floor exercises like curl-ups, push-ups and leg raises, weight lifting, and resistance training using rubber bands

Flexibility exercises

Helps you reach, stretch, and bend
Burns fewer calories
Increases muscle length of and movement of joints

Examples

Stretching exercises, yoga

A well-rounded program should include all three exercise types each week. Do different types on alternate days. Generally, you want to begin and end with stretching activities any time you exercise. Aerobic exercise should be the center of your program—it keeps your heart and blood vessels in good shape. First, establish the habit of doing aerobic exercise along with stretching exercises several times a week. (Walking can be an aerobic exercise.) Then gradually work muscle-strengthening exercises into your routine.

THE PARTS OF AN AEROBIC EXERCISE SESSION

Each aerobic session should include a warm-up, continuous exercise, and a cool-down. All three parts are important.

1. The warm-up period prepares the body for exercise. Begin by walking for 5–10 minutes, followed by stretching for 5 minutes. See Fact Sheet 3 in this lesson for some stretching exercises. Gradually increase your activity during the warm-up period. This allows your heart to prepare for aerobic activity.

Continuous or aerobic activity is the main part of your exercise session. For it to be effective, you must commit to following three things:

- **Intensity** describes how hard you work while exercising.

During aerobic exercise your heart rate should be 60–85 percent of your maximum heart rate. This is the target heart rate you determined when you completed the worksheet in this lesson. To improve fitness, your heart rate must be kept within your target heart rate range for 20–30 minutes. Don't exercise at an intensity higher than your target heart rate or you raise your chances of muscle injury or heart problems.

- **Duration** is how long the aerobic exercise should last.

The session should gradually increase from 5–10 minutes to 20–30 minutes. Increase the duration

of your sessions before you increase the intensity. (Exercise longer before you exercise harder.)

- **Frequency** is how many times per week you complete an exercise session.

To strengthen your heart and lungs, do aerobic exercise at least three to four times per week. Do other types of exercise on alternate days. This way exercise becomes a part of your normal routine.

2. The cool-down is the period following aerobic exercise when activity slows down.

Your heart rate gradually returns to a normal level. The cool-down period should last 10–12 minutes. If you have been doing aerobic walking, slow your walk but keep your feet moving. Keep your head above your waist until your pulse is below your target heart range.

Complete the cool-down with stretching exercises. This is the time stretching does you the most good. Your muscles are “warmed up” and at their most flexible. Regular stretching will reduce muscle tightness and help prevent injuries. It will also increase your flexibility.

FOLLOW A WEEKLY SCHEDULE

Fitness requires regularity. You will be happier doing a variety of activities to get fit. Make an aerobic activity the centerpiece of your program. Muscle

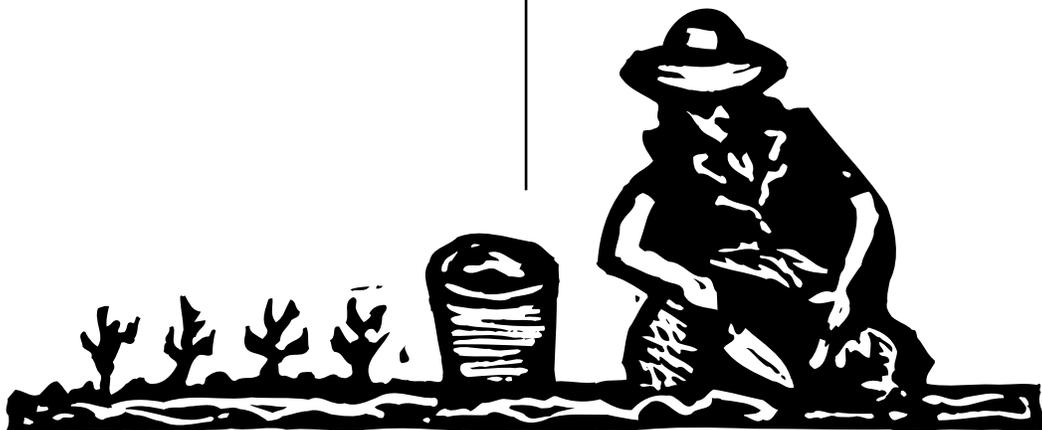
strengthening, flexibility exercises, or other activities can be done on alternate days. Establish your own pattern of activities that are fun for you.

You may find that regular walking, weekly bowling, and two sessions per week with a video doing floor exercises are just right for you. Others may find they want to combine walking with weekly yoga or Tai Chi classes. Swimming, tennis, a community basketball or volleyball league, step aerobic classes, and square, ballroom, or folk dancing all offer opportunities to make you fit.

The surgeon general recommends regular activities that use about 150 calories a day or 1,000 calories a week. Here are some activities that use 150 calories:

- Playing volleyball for 45 minutes
- Gardening for 30–45 minutes
- Shooting baskets for 30 minutes or playing a game for 20 minutes
- Bicycling 5 miles in 30 minutes
- Dancing fast (social) for 30 minutes
- Raking leaves for 30 minutes
- Walking 2 miles in 30 minutes
- Water aerobics for 30 minutes

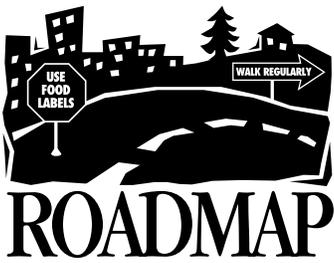
Establish a weekly pattern combining what you enjoy. Look at the examples on the next page.



Make exercise a priority. It's the foundation of your wellness program.

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|-------------------------------|-------------------|---------------------------|-------------------|---------------------------|-----------|--------------|
| <i>Example 1</i> Walk | Bowl with league | 30 minutes weight lifting | Walk | 30 minutes weight lifting | Walk | (day off) |
| <i>Example 2</i> (day off) | Swim laps | 30 minutes exercise video | Swim laps | 30 minutes exercise video | Swim laps | Square dance |
| <i>Example 3</i> | Volleyball league | | Volleyball league | | Walk | |

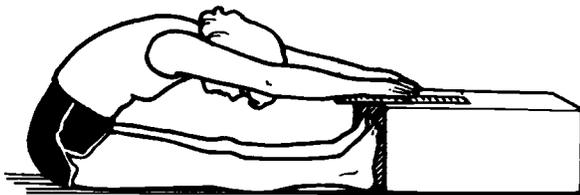




FACT SHEET 3: *Stretching for flexibility*

It's important to stretch during the warm-up and cool-down portions of your exercise session. Stretching increases your flexibility and range of motion around a joint.

Try this test to determine the flexibility of the muscles in your back and the back of your legs. Sit on the floor with your legs straight out in front of you. Keep your knees slightly bent. Slowly stretch forward to see if you can touch your toes. Do not bounce, but stretch slowly. Repeat the movement a few times. Can you touch or nearly touch your toes? If you cannot, you need to do some flexibility exercises.



The exercises shown here will help improve your flexibility. They can be done as part of your exercise routine or anytime you feel stiff. Remember a few simple rules while stretching:

- Stretch slowly. Fast movements are more likely to cause injury.
- Don't stretch too far. When you stretch you should feel tension in the muscle but not pain. The tension should subside as you hold the stretch. Hold each stretch for 10–20 seconds.
- Don't bounce while you are holding the stretch. Bouncing tightens the muscle you are trying to stretch.

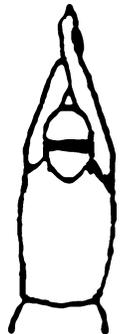
- Don't hold your breath. Breathe slowly and naturally while you are stretching.
- Relax, enjoy, and feel good about yourself!

STRETCHING EXERCISES

Try the following stretches during your warm-up and cool-down sessions. Use the picture and description of each stretch as a guide.

Stand Up—Stretch Overhead

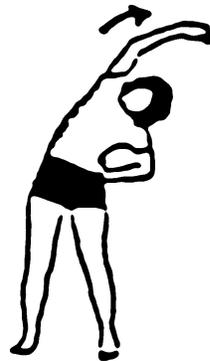
Stand with your arms at your side and your feet about 6 inches apart. Bring your arms up over your head while rising on your toes. Stretch your arms as high as possible. Hold for a count of 5 and relax. Repeat three to five times.



Side Stretch

Stand with your feet about shoulder width apart and toes pointed straight ahead. Keeping your knees slightly bent (1–2 inches), place one hand on your hip for support while you extend your other arm up and over your head.

Now slowly bend at your waist to the side, toward the hand on your hip. Move slowly; feel a good stretch. Hold for 10–15 seconds and relax. Repeat the stretch on the other side. Repeat stretch to both sides several times.



One-Legged Knee to Chest

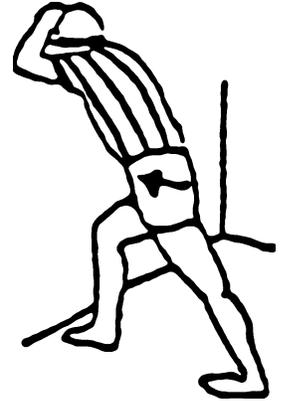
Lie on your back, legs extended straight. Grasp one leg just below the knee and pull your knee slowly toward your chest, keeping your head down. Then slowly curl your head up toward your bent knee. Hold the stretch for 15 seconds. Repeat with your other leg.

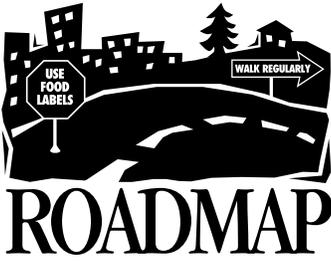
**Quadriceps Stretch**

Lie on your left side and rest the side of your head in the palm of your left hand or lay your head on your outstretched arm. Hold the top of your right foot with your right hand between the toes and ankle joint. Gently pull the right heel toward the right buttock to stretch the ankle and quadriceps. Hold the stretch for 10 seconds. Repeat on the other side.

**Calf Stretch**

Stand a little way from a solid support and lean on it with your forearms, head resting on your hands. Bend one leg and place your foot on the ground in front of you, with the other leg straight behind. Slowly move your hips forward, keeping the lower back flat. Be sure to keep the heel of the straight leg on the ground, with toes pointed straight ahead or slightly turned in as you hold the stretch. Hold the stretch for 30 seconds. Repeat stretch with the other leg back.





RECIPES:

Energy snacks

PIZZA SNACKS

Makes 2 pizzas

One serving (1 pizza) contains:
 133 calories
 14.5 g carbohydrate
 8 g protein
 5 g fat
 280 mg sodium
 15 mg cholesterol
 1 g dietary fiber

Ingredients:

1 English muffin, split and
 toasted
 2 Tbsp pizza sauce
 3 Tbsp cooked lean ground
 beef, seasoned with ground
 pepper and onion
 3 Tbsp shredded part-skim
 mozzarella cheese

Procedure:

Spread each muffin half with a tablespoon of pizza sauce, 1 1/2 Tbsp cooked ground beef, and 1 1/2 Tbsp cheese. Broil until cheese melts. Serve immediately. Best if baked in a toaster oven.

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ENERGY TREATS

Makes 24 balls

One serving (1 ball) contains:
 56 calories
 7 g carbohydrate
 2 g protein
 3 g fat
 73 mg sodium
 0 mg cholesterol
 0.5 dietary fiber

Ingredients:

2 Tbsp honey
 1/2 cup chunky peanut butter
 1/3 cup raisins
 1/3 cup instant nonfat dry
 milk powder
 1/4 cup crisp rice cereal
 1/3 cup crushed pretzel sticks

Procedure:

Mix together honey and peanut butter; add raisins and dry milk. Stir in rice cereal. Form into 24 small balls. Roll in pretzel crumbs. Store in refrigerator.

Optional: roll in oatmeal instead of pretzel crumbs.

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FRUIT KABOBS AND DIP

Makes 6 kabobs

One serving (1 kabob, 2 Tbsp. dip) contains:
60 calories
13 g carbohydrate
2 g protein
1 g fat
21 mg sodium
1.5 mg cholesterol
1 g dietary fiber

Ingredients:

12 fresh strawberries
12 unsweetened canned pineapple chunks
12 honeydew melon balls
Dip:
1/2 cup fresh strawberries
1/2 cup lite cream cheese
1 tsp honey

Procedure:

Place fruit on cocktail swords or toothpicks, alternating two strawberries, two pineapple chunks, and two melon balls on each. To prepare dip, whirl all ingredients in blender until smooth. Try the kabobs in the fruit dip and enjoy!

Store dip in the refrigerator.

Time-saving tip:

- Dip may be made a day before and chilled until needed.

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PINEAPPLE HONEY LOAF

Makes 1 loaf (10 slices)

One serving (1 slice) contains:
197 calories
34 g carbohydrate
3.5 g protein
5 g fat
251 mg sodium
21 mg cholesterol
1.4 g dietary fiber

Ingredients:

1/4 cup margarine, softened
1/3 cup brown sugar
1 egg
2 cups all-purpose flour
1 tsp baking soda
1/2 tsp salt
1/4 cup unsweetened orange juice concentrate
1 8-oz can unsweetened crushed pineapple, drained; reserve juice
1 Tbsp honey

Procedure:

Cream together margarine and brown sugar. Add egg and beat well. Combine flour, soda, and salt. Combine orange juice concentrate, reserved pineapple juice, and honey. Alternately add dry ingredients and juice mixture to creamed mixture, beginning and ending with dry ingredients. Fold in crushed pineapple. Spread in oiled 9-by-5-by-3-inch loaf pan. Bake at 350°F for 20–30 minutes.

Optional: use pineapple sauce instead of crushed pineapple and honey.

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