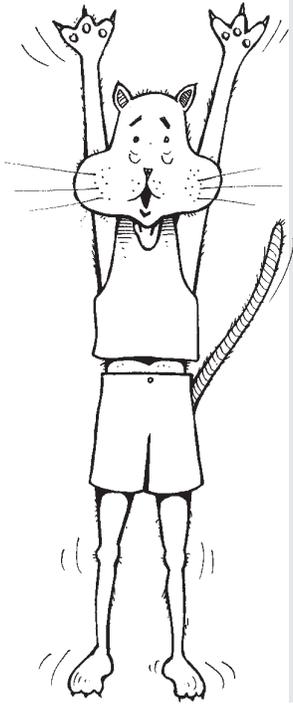


# Exercise For Your Health



*"Fitness" means having a body that is ready for the physical demands of daily life. The fit body requires different types of physical activities. Major fitness goals include the following:*

- \* flexibility*
- \* strength*
- \* endurance*

Only a varied routine of activities will help you achieve all the benefits of exercise and enjoy life more. In addition to the major goals of exercise, other expected benefits include better sleep, improved mental outlook, and easier control of cholesterol, high blood pressure, weight, and diabetes.

Even if you cannot do a particular exercise completely, make an effort to do as much movement as your body will allow without pain. If exercises cause pain or discomfort or if you do not experience benefits after the recommended time, a physical therapist or exercise physiologist may provide needed assistance.

In your exercise program, observe these exercise safety factors:

- Avoid exercising outdoors in extreme heat or cold.
- Maintain proper hydration:
  - o Drink 17 to 20 ounces of water 2 to 3 hours before you exercise.
  - o Drink 7 to 10 ounces of water 10 to 20 minutes before you exercise.
  - o Drink 7 to 10 ounces every 10 to 20 minutes during exercise.
  - o Drink more water if you sweat heavily.
- Avoid exercise for 30 minutes to allow for digestion, depending on the sport. The bigger the meal, the longer you need to wait.
- Dress for comfort and avoid overheating -- exercise generates extra body heat. Rubberized clothing or sweat-suits, which don't permit cooling through the evaporation of perspiration, may cause heat illness.

In addition, outdoor exercisers should use these common-sense precautions:

- Run, walk, or bicycle with a partner when possible.
- Avoid isolated and poorly-lit areas.
- Carry phone change.
- Carry identification – it's very important if you meet with an accident.
- Don't wear headphones – they make you less aware of traffic sounds, dogs, and approaching strangers.
- Dress to be seen by traffic. Follow pedestrian laws. Wear your bike helmet.
- Avoid heavy traffic areas – car exhaust is not a good thing to inhale, especially while exercising.



Contact a doctor before starting to exercise if you are over age 35 and have not been physically active. In addition, see a doctor soon if you exercise regularly and experience a sudden decrease in the amount of exercise you can perform comfortably. It is a medical emergency if you experience arm, chest, neck, or jaw pain that cannot be linked to an injury, even if it gets better with rest.

All forms of exercise should include at least 5 minutes of gradually increased exertion called warm-up. Warm-up allows you to avoid stressing your muscles, joints, heart, and lungs. Likewise, a gradual decrease in work – called a cool-down – will allow your body to adjust to less blood flow.

### General Guidelines

1. Get your doctor's OK.
2. Take it "slow and steady."
3. Plan for strength, flexibility, and endurance exercise.

## WISE EXERCISE

Wise exercise for all age groups involves a gradual increase in the time spent exercising. Exercise training cannot be hurried! The goal is to become more active and promote good health -- for a lifetime. The Surgeon General recommends 30 minutes of moderate exercise every day.

# 1 Plan One: Flexibility

*...to reduce chances of injury, aches, and strains and to increase ease of movement...*

The only way to become more flexible is regularly to stretch all the muscles and joints through their natural ranges of motion. Daily stretching improves flexibility. Don't be discouraged if results are slow. Often it takes 6 months or more to see results. The effort is worth it, however, to avoid exercise injuries caused by moving a stiff muscle or joint.

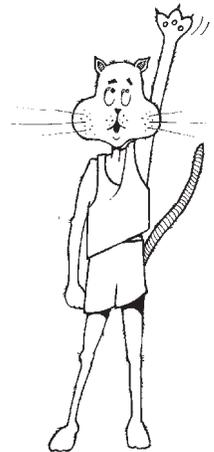
Stretch the muscle to be used during other types of more vigorous activities as part of warming-up to that exercise. After exercise, when the body is warm and blood is flowing, stretching is particularly effective. Stretching occurs naturally after waking from sleep or after riding in a car. Take advantage of the urge to stretch!

#### Important points:

- Move slowly.
- Do NOT bounce.
- Do NOT stretch to the point of pain.
- Repeat each stretch several times, and HOLD for a slow count of 8-15 seconds.
- Breathe deeply.

#### Standing stretches

Reach above the head as far as possible with one hand, then repeat with the other hand.



Circle the head forward, chin to shoulder, chin to chest, then chin to other shoulder.

Shrug shoulders up toward ears, then relax shoulders.

Make large arm circles, forward and backward.

With elbows at shoulder height, hug yourself.

With elbows at shoulder height, clasp hands and twist at the waist to one side, keeping hips forward. Repeat on the other side.

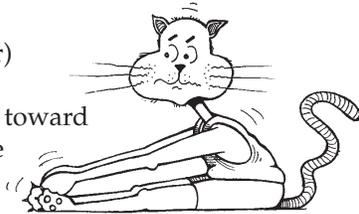


Stand facing a wall 3 feet away. Place palms on the wall and keep feet flat on the floor. Slowly lean forward toward the wall.

Stand facing a chair or wall. Hold on with the left hand while grasping above the right ankle with the right hand, and pull right heel toward the right buttocks. Do not bend over to do this. If you cannot reach the ankle, lift the foot toward the buttocks as far as possible. Repeat with left hand and left ankle.

### **Sitting stretches** (in a chair or on the floor)

Legs together, point toes toward the floor then toward the ceiling.



Legs together, reach the hands toward the toes.

Legs apart, reach both hands toward one foot then the other.

### **Lying-down, knees-bent stretches**

Pull knee to chest, using hands behind the thigh; while knee is bent, make circles with the ankle; reverse the direction. Repeat knee to chest and ankle circles on the other leg.



Push the lower back to the floor, tilting the hips forward.

## **2 Plan Two: Strength**

*...to walk faster, climb easier, and lift heavier objects...to build bone density...to firm and build muscle mass that burns calories...*

Strength training, otherwise known as weight training or resistance training, is quite different from the just-

as-important stretching or aerobic exercises. No matter what your age or physical condition, strength training is recommended as part of a wise approach to fitness. Strength training involves activities performed while sitting or standing in one place, such as lifting the leg, bending the arm, or working the stomach muscles; it involves any movement you can repeat 8-10 times in a row that pushes a muscle or set of muscles to exhaustion. The resistance to movement may be from weights of different sizes, from gravity, or from daily work.

When lifestyles were more physical, the need for regular strength-training exercise was not recognized. Most people who are not performing heavy physical work throughout the day need at least 30 minutes of strength-producing exercise three times a week to remain active and healthy.

Although some strength-training exercises can be recommended, using weights for resistance can be tricky. With good posture and form, most people can use the exercise examples below. Begin with 1 pound of weight and gradually add 1-pound increases in the amount of weight. You should be able to lift the weight easily the first seven times. If the movements are not easy to do, begin with 2 weeks of movement without weights, using gravity as the resistance. Increases should be made no more than once each week up to a maximum of 5 pounds total weight.

Heavier weights should be used under the guidance of fitness professionals and are not recommended for those under age 16. A hospital-based rehabilitation program, a health club, or a "Y" may have an American College of Sports Medicine-certified professional (an exercise physiologist or specialist or a physical therapist) who is a resource for those needing individual guidance in strength training.

All strength training should be done in a slow, controlled manner to build strength. At first, repeat each movement 8-12 times for one set of exercises. After 6 weeks or so, you may repeat the set if your muscles don't feel exhausted.

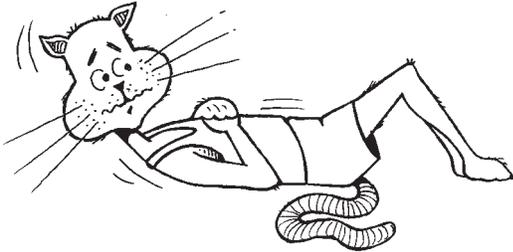
### **Important points:**

- Use slow, controlled movement, with good posture and relaxed joints...no jerky movements...no "locked joints."
- Do a maximum of four workouts each week... skip every other day.
- Breathe in and out... your muscles, not you, should feel exhausted!
- Do not increase weight more than once each week.

### Lying-down, knees-bent, abdominal curl-ups

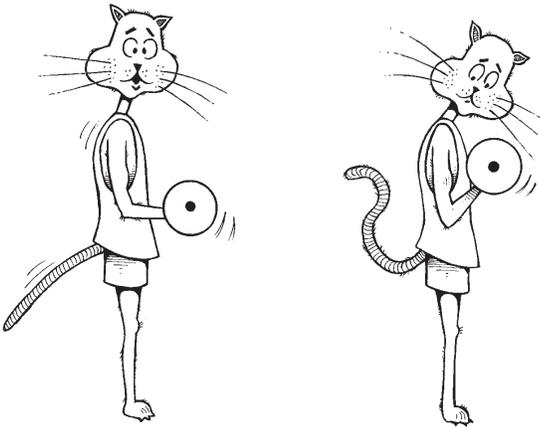
No weights! But this one is vital for the abdominal muscles that support your stomach and lower back.

Place your arms across your chest and raise shoulders off the floor using the stomach muscles. Relax slowly to the floor.



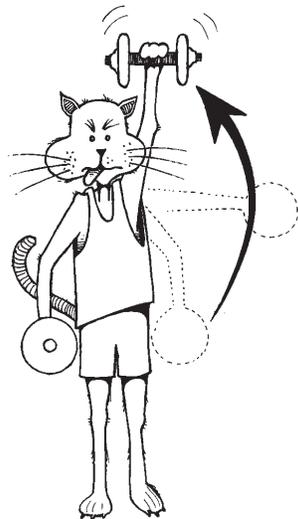
### Standing or sitting strength exercises

Hold lower upper arms level with the floor, with palms up, holding weights. Keep upper arms at the side, raising weights slowly to shoulders. Return to the start position slowly.



With arms at side and both hands holding weights, raise one arm above the head and return slowly to side without other movement of the body. Repeat with other arm.

Hold arms at side with both hands holding weights and palms facing back. Raise arms backwards as far as comfortable.



Hold weights in each hand, touching the middle of the chest. Push one arm out straight at chest height and return. Repeat with other arm.

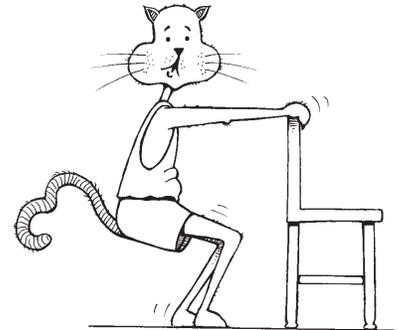
Hold weights in both hands at shoulder height and raise both arms overhead. Return to shoulder height slowly.



### Standing strength exercises

With arms at side and both hands holding weights, raise body on tiptoe and hold.

Return heels to floor slowly.



Without weights and holding onto wall or chair for balance, lower your hips into a squatting position.

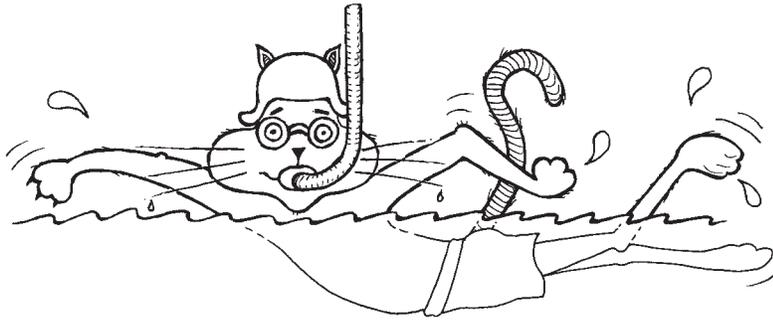
## 3 Plan Three: Endurance

*...to make the heart and lungs work better and with less effort...to improve sleep and mental health...to reduce the effects of stress...to use more calories and burn extra fat...*

To improve your endurance, otherwise known as cardiovascular fitness or exercise tolerance, exercise must use oxygen or be "aerobic."

### Important Points:

- It must use the large muscles of the arms or legs.
- It must feel like moderate work, with faster breathing and more heartbeats each minute.\* (see last page)
- It must occur regularly at least three times each week.
- It must be continuous for 20 minutes, not including warm-up and cool-down.

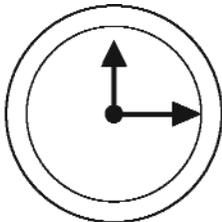


## Endurance exercise

Choose an exercise that is convenient and enjoyable, and start now.

A good 6-week starter program of aerobic exercise is described here that will work for dancing, walking, biking, swimming, stepping, or whatever you choose. Remember to warm up and cool down, and don't increase your level more than once each week to allow the body to adapt to your new level of activity.

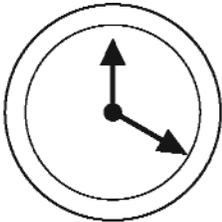
### Weeks 1 and 2



**15**

Exercise continuously for 15 minutes three times each week, not focusing on distance or speed. Simply work on getting your time in while maintaining a steady pace and breathing deeply.

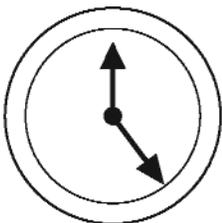
### Week 3



**20**

Exercise for 20 minutes, three times this week. The exercise should feel like mild work, making you breathe deeply and feel warm. After 10 minutes, check your pulse if you can. It should be at about 60 percent of your predicted maximum heart rate.\* Speed up or slow down if necessary to keep your heart rate at this level.

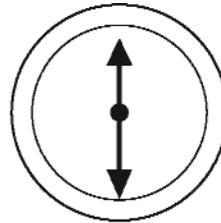
### Week 4



**25**

Exercise for 25 minutes, three times this week. The exercise should feel like moderate work and make you feel warm. You should be able to carry on a conversation without becoming more than slightly short of breath. Slow down if you cannot. Aim for 60-70 percent of your maximum predicted heart rate.\*

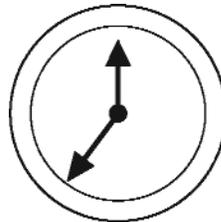
### Week 5



**30**

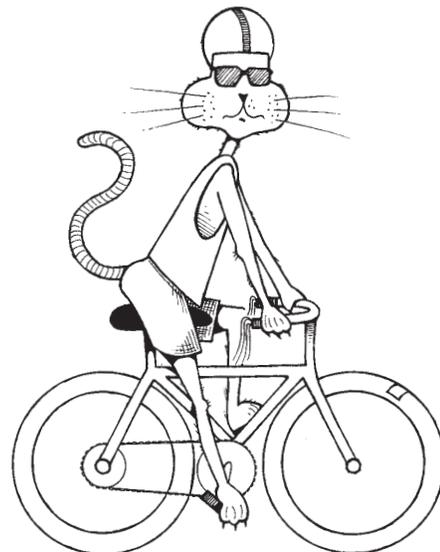
Exercise for 30 minutes, three times this week. The exercise should feel like moderate work, as described previously. Aerobic activity begins to burn fat and cholesterol after 20 minutes.

### Week 6



**35**

Exercise for 35 minutes, three times this week. The exercise should feel like moderately heavy work, and you can aim for 70-75 percent of your maximum predicted heart rate if it feels good. After 6 weeks, you can either gradually increase exercise time to 45 or 60 minutes or increase the pace within the 35-minute time frame.



\* A target heart range is a **guide** for some people to check the effect of endurance exercise. It is 50-75 percent of the **predicted (average, usual) maximum heart rate** of people in a certain age group. You can use a chart to find a target heart range for your age group, unless you are taking heart or blood pressure medication or have other health problems. Remember, the best guide is how you feel!

Age	Target Heart Range for Exercise 50-75%	Predicted Average Maximum Heart Rate 100%
20 years	100 – 150 beats per minute	200
25 years	98 – 146 beats per minute	195
30 years	95 – 142 beats per minute	190
35 years	93 – 138 beats per minute	185
40 years	90 – 135 beats per minute	180
45 years	88 – 131 beats per minute	175
50 years	85 – 127 beats per minute	170
55 years	83 – 123 beats per minute	165
60 years	80 – 120 beats per minute	160

Source: American Heart Association. <http://www.americanheart.org>

To determine your heartbeats per minute, you will have to find and count your pulse. Stop exercise briefly, and quickly follow these instructions. It will take some practice!

To find your heart rate (beats/minute):

1. Immediately after exercising, place the tip of your third finger lightly over the blood vessel in your neck located to the left or right of your Adam's apple, or place it on your wrist just below the base of your thumb.
2. Count the beats you feel for 10 seconds.
3. Multiply the number of beats by 6 to determine beats per minute.
4. If your pulse is below your target heart range, exercise a little harder next time. If you are above your target heart range, exercise a little less vigorously.



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**Publication 1993**

Extension Service of Mississippi State University, cooperating with U.S. Department of Agriculture. Published in furtherance of Acts of Congress, May 8 and June 30, 1914. Vance H. Watson, Interim Director