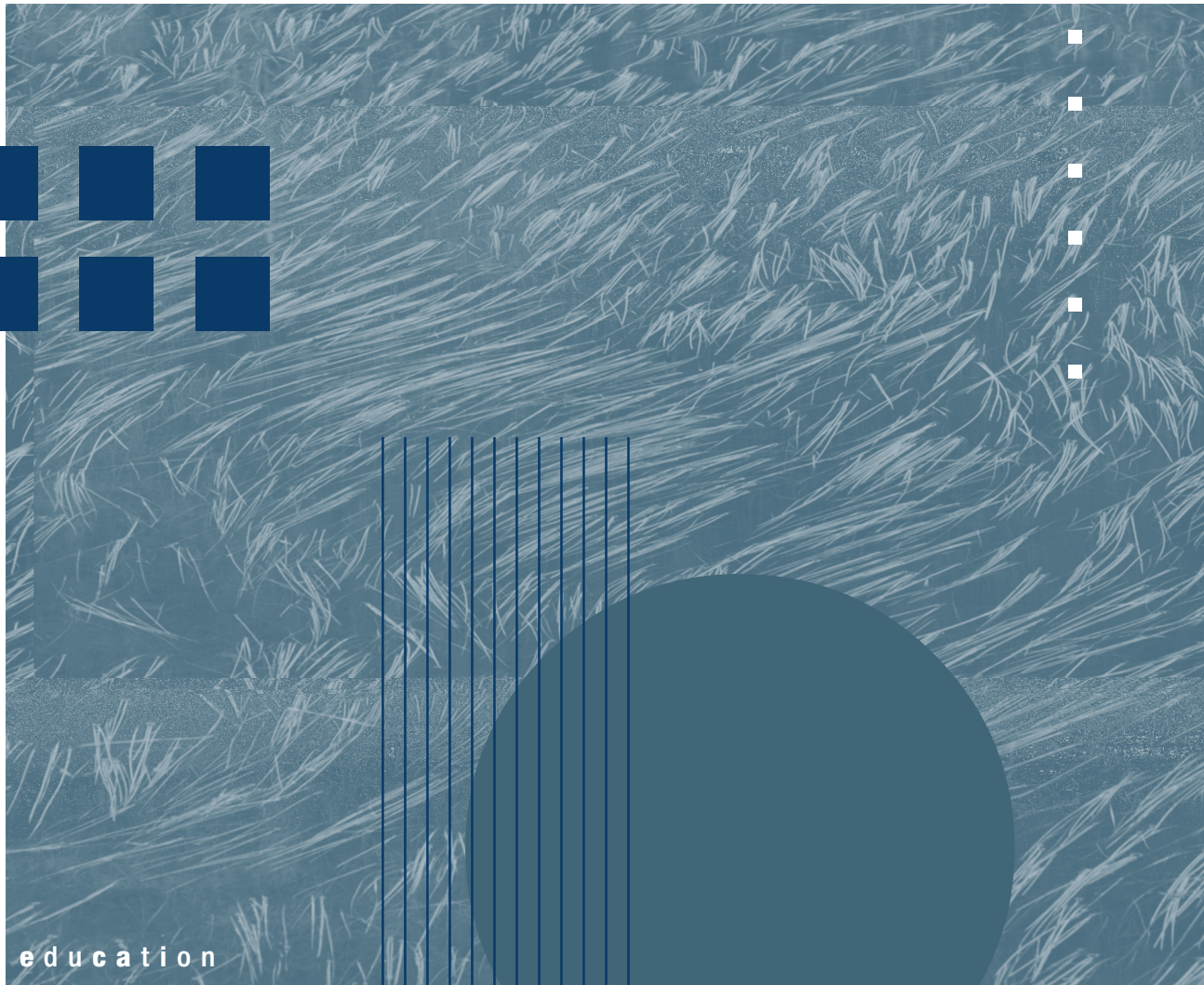


Exercise Program Guidelines



patient education

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Name: _____

Introduction

Most people do not do much physical activity as part of their daily routines. However, regular physical activity is necessary in order for people to achieve the best possible health and physical fitness.

A sedentary (inactive) lifestyle is a major modifiable risk factor for heart disease. Unfortunately, approximately 70 percent of the adults in the United States are sedentary or underactive, and almost one-half of America's young people (ages 12 to 21) are not physically active on a regular basis.

If you are not physically active, as you age you will have less capacity to do work. Consistent exercise will help prevent, or at least slow, age-related loss of exercise capacity. Exercise, especially when combined with healthful eating habits, also can result in permanent loss of body fat in people who are overweight.

Benefits of exercise

With regular exercise, you can improve your fitness and ability to exercise, even in old age. You can become stronger and more flexible and have improved stamina. In addition, exercise may give you these important health-related benefits:

- Fewer symptoms of fatigue and shortness of breath
- Weight loss (particularly if you combine exercise with healthful eating habits)
- Decreased stress, anxiety and depression
- Reduced cardiovascular disease risk factors, such as high blood pressure, obesity, high blood cholesterol and triglycerides, and high blood sugar
- Reduced risk for some diseases such as coronary artery disease, diabetes, osteoporosis and some kinds of cancer
- Improved sense of well-being
- Improved quality of life
- Better balance and coordination, less risk of falls
- Improved sleep

Incorporating Exercise Into Your Life

Informal physical activity

Health-related benefits, particularly a reduced risk of coronary heart disease, are partly available with **informal physical activity** that can become part of your daily routine. Examples of informal physical activity include the following:

- Walking short distances several times during the day
- Taking the stairs
- Doing household chores such as vacuuming, shopping, gardening and yard work
- Participating in sports such as golf (walking rather than riding a cart), tennis, etc.

A reasonable goal is to accumulate **at least** 30 minutes of informal physical activity most days of the week. To benefit from informal physical activity, you do not need to do continuous activity. A few minutes here and there throughout the day are beneficial.

Formal exercise program

However, you are more likely to receive both fitness- and health-related benefits from a formal exercise program that includes the following parts:

- Aerobic exercise for the cardiovascular system
- Resistance exercise to improve strength and muscle endurance as well as bone health
- Flexibility exercise (stretching) to improve muscle and joint range of motion

An ideal lifestyle includes both informal physical activity and a formal exercise program.

Starting a Formal Exercise Program

If you increase your level of physical activity gradually, your body responds by improving its capacity for exercise. Over a period of eight to 12 weeks, if you increase the amount of exercise you do, you may notice an improvement in your fitness levels.

It is not necessary to do very strenuous exercise to improve fitness. Moderate exercise is enough and is more enjoyable for most people. Start with small amounts of exercise, especially if you have not been active in recent months. **Before you begin an exercise program, talk with your health-care provider.**

Warning symptoms

You should not have discomfort with your exercise program. **Stop** your exercise session and consult your physician if you have any of the following symptoms:

- Severe shortness of breath
- Pain, pressure or aching in the chest, arms, jaw, neck, shoulders or back
- Unusual, extreme fatigue (You should feel recovered within 30 to 60 minutes after exercising.)
- Light-headedness, near fainting or fainting
- Excessive heart palpitations or heart fluttering (very rapid or very slow heart rate or a very irregular heart rate)
- New or increased significant joint or muscle pain

Parts of an exercise program

An ideal formal exercise program has the following parts:

- Warm-up
- Aerobic exercise to condition your heart, lungs and blood vessels
- Cooldown
- Muscle-strengthening activities

Stretching, to help improve flexibility, is incorporated into both the warm-up and cooldown. Strengthening exercises may be done immediately after the cooldown or at a different time.

All of the following exercises may not be appropriate for everyone. Ask your health-care provider any questions you have about specific exercises.

Warm-Up

Your warm-up is meant to do the following:

- Gradually increase the amount of air you breathe
- Gradually increase the amount of blood pumped by the heart (to provide more oxygen for the exercising muscles)
- Increase blood flow to the muscles (to actually warm the muscles and joints)
- Develop and maintain adequate muscle and joint flexibility

Do the following stretching exercises. After the stretching do five minutes of easy-paced aerobic exercise (the same activity you will perform for aerobic conditioning). Ease into the aerobic conditioning phase of your program. Following these guidelines for warm-up and cooldown may help you avoid after-exercise muscle stiffness and soreness.

Basic stretching exercises for warm-up and cooldown

Do the exercises on pages 6 to 13 slowly and gently. You should not have pain with these exercises. For all of the stretching exercises, except ankle rotations, stretch to the point that you feel a definite pulling sensation in the muscle group being stretched but do not strain. Stretching should not cause pain. Do not bounce. Hold the position without movement for 30 seconds. As you hold each stretch, consciously try to relax the muscles being stretched. These exercises may be done twice for maximum benefit.

If you have pain while doing one of these exercises, stop the exercise immediately. Relax and repeat the exercise with reduced speed and intensity. If pain persists after you've stopped exercising, speak with your health-care provider before resuming the exercise.

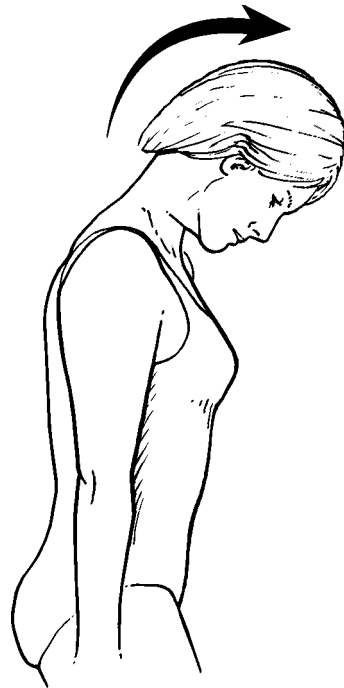


Figure 1. Neck/shoulder stretch (to the front)

Stand in a comfortable position. Slowly lower your head to your chest until you feel a gentle stretch. Maintain a constant, gentle stretch.

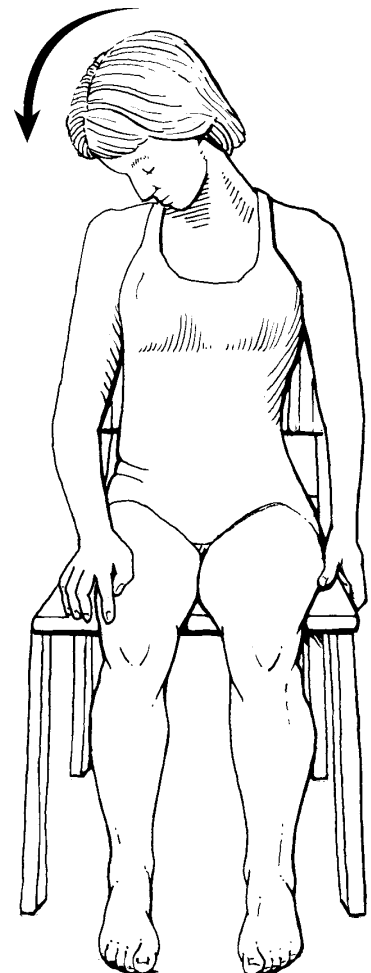


Figure 2. Neck/shoulder stretch (to the side)

Sit in a comfortable position and grasp the seat of the chair with your left hand. With your chin slightly tucked, slowly lean your head to the right until you feel a gentle stretch.

Maintain a constant, gentle stretch. If the stretch lessens, continue to gently lean your head until you feel the stretch again. Repeat the stretch to the left side (grasp the seat of the chair with your right hand).

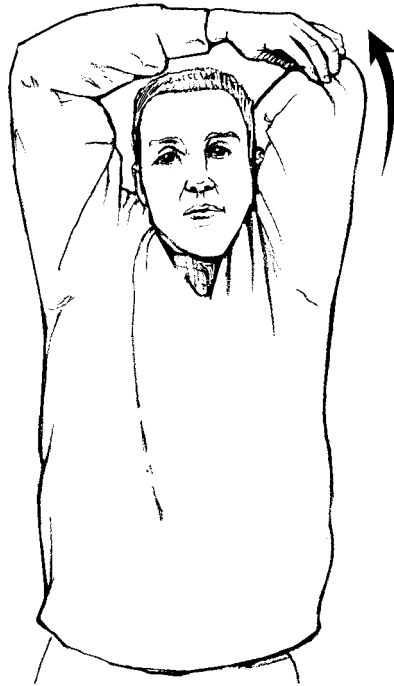


Figure 3. Triceps stretch

Place your left hand between your shoulder blades. Use your right hand to push your left elbow up and back. Repeat with opposite arm.

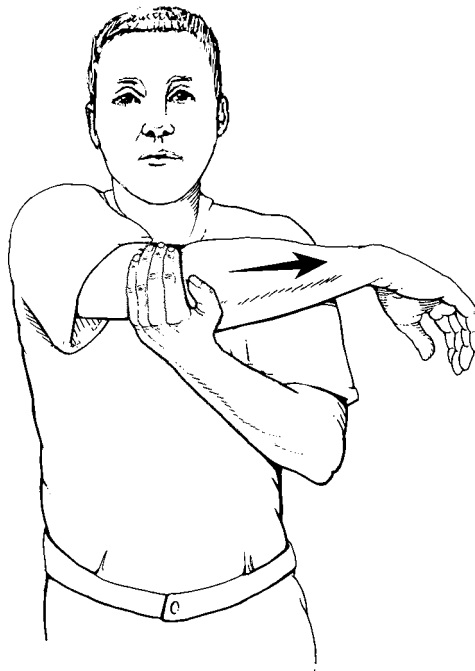


Figure 4. Shoulder stretch

Lift your left arm to the level of your heart. Place the right hand on the left elbow and gently pull your left arm across the chest. Repeat with your right arm.

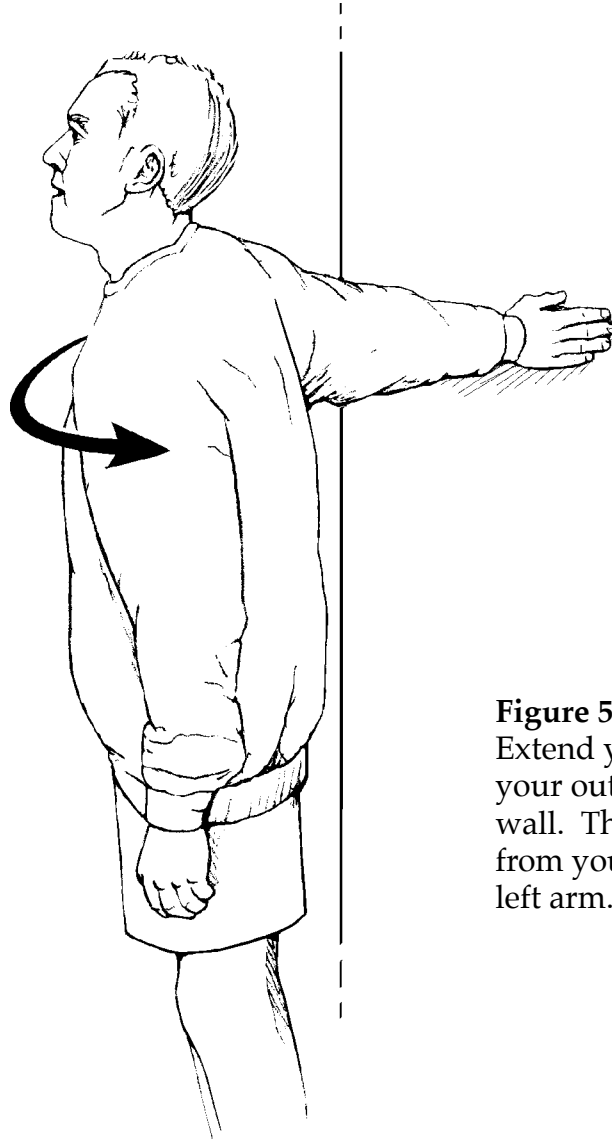


Figure 5. Chest stretch

Extend your right arm and place your outstretched palm against the wall. Then turn your body away from your arm. Repeat with your left arm.

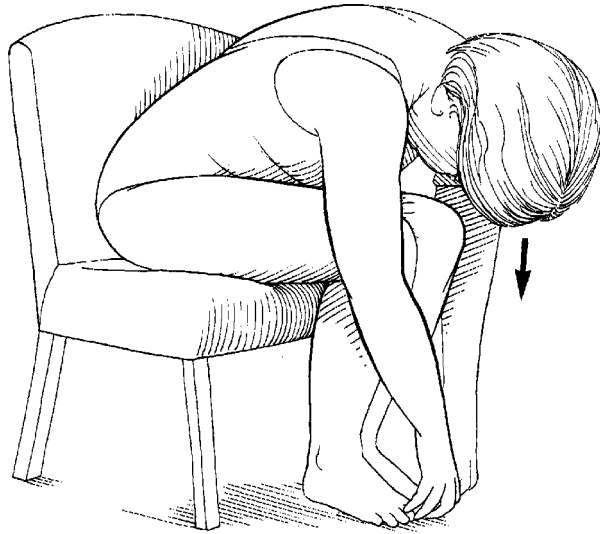


Figure 6. Low back stretch
While sitting in a chair, tuck your chin toward your chest and slowly bend forward toward the floor until you feel a mild stretch in your back.



**Figure 7. Lower back/
standing cat stretch**
Stand with your feet shoulder-width apart. Bend at your hips, with your knees slightly bent, supporting your torso with your hands on your thighs. Round your back by tightening your abdomen and then straighten it.

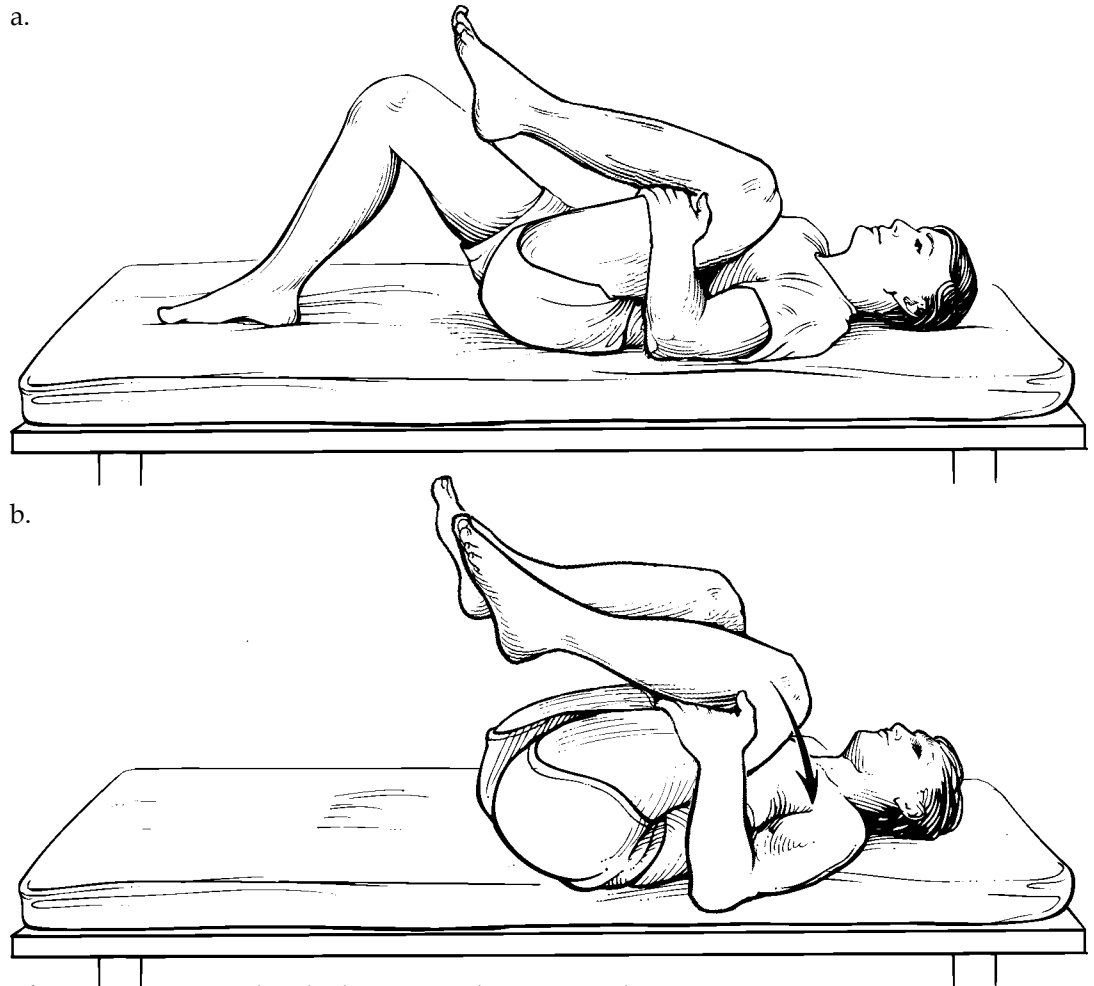
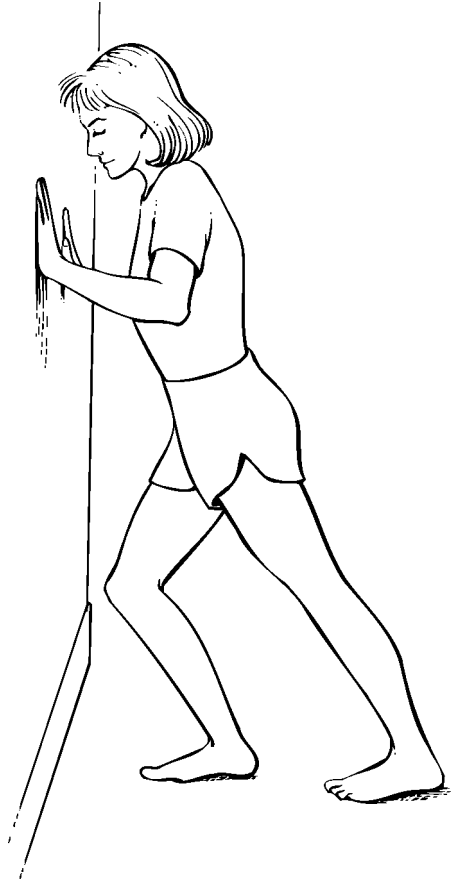


Figure 8. Lower back, knee-to-chest stretch

Lie on your back on a firm surface with your hips and knees bent and feet flat.

a. Pull your left knee toward your left shoulder by placing your hands behind your knee under your thighs. Pull gently until you feel a stretch in your lower back. Repeat with your right knee (keeping your left foot flat).

b. Finally, bring both knees towards your shoulders.

**Figure 9. Calf stretch**

Stand an arm's length from a wall, then with your palms on the wall, bend your arms and lean forward. Point your toes straight ahead. Bend your right knee and bring it toward the wall. Keep your left leg straight with your heel on the floor or ground. Move your hips forward, keeping your back straight until you feel a stretch in your left calf muscle. Repeat, stretching your right calf muscle.

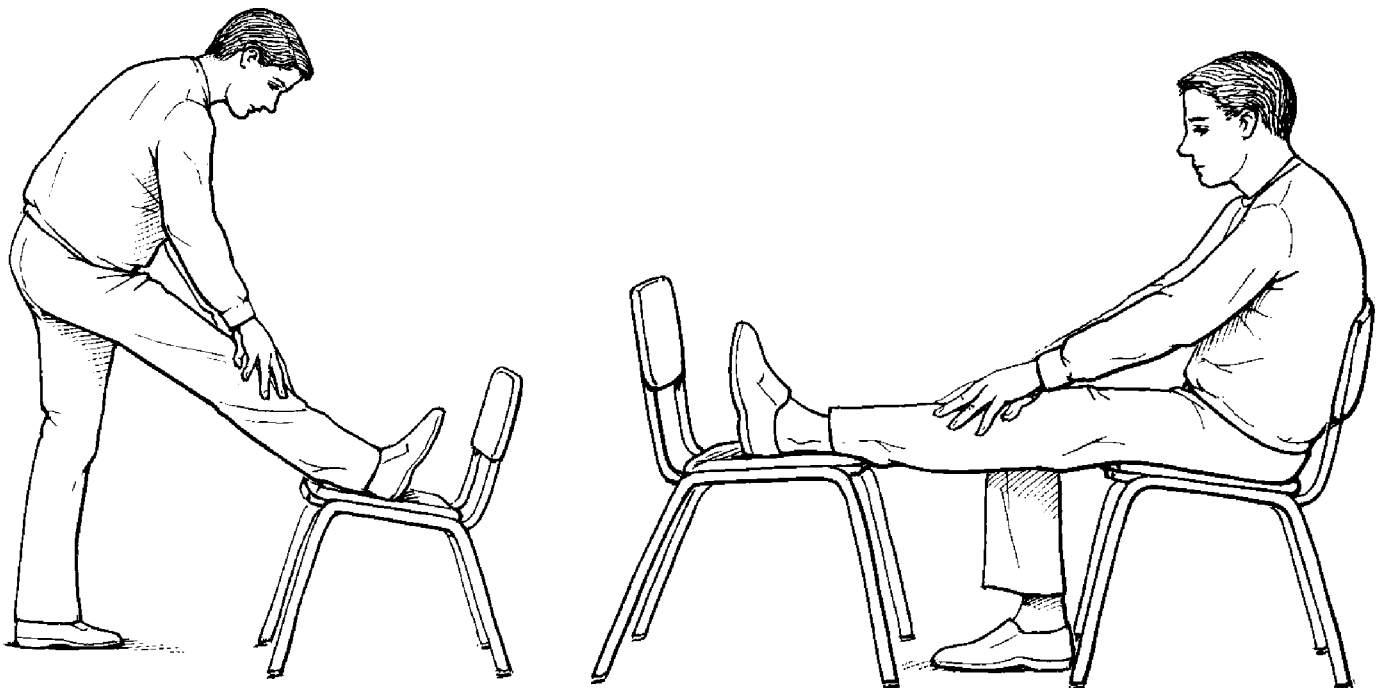


Figure 10. Hamstring stretch

This stretch can be done while sitting in a chair or on the floor or standing.

Sitting position: Sit on the floor with your left leg extended straight forward with your toes pointing toward the ceiling. Bend your right knee and place the sole of your right foot on your inner left thigh.

Lean forward from your hips and slowly move both hands down your left leg until you feel a stretch in the back of your thigh muscles (hamstrings). Repeat using your right leg.



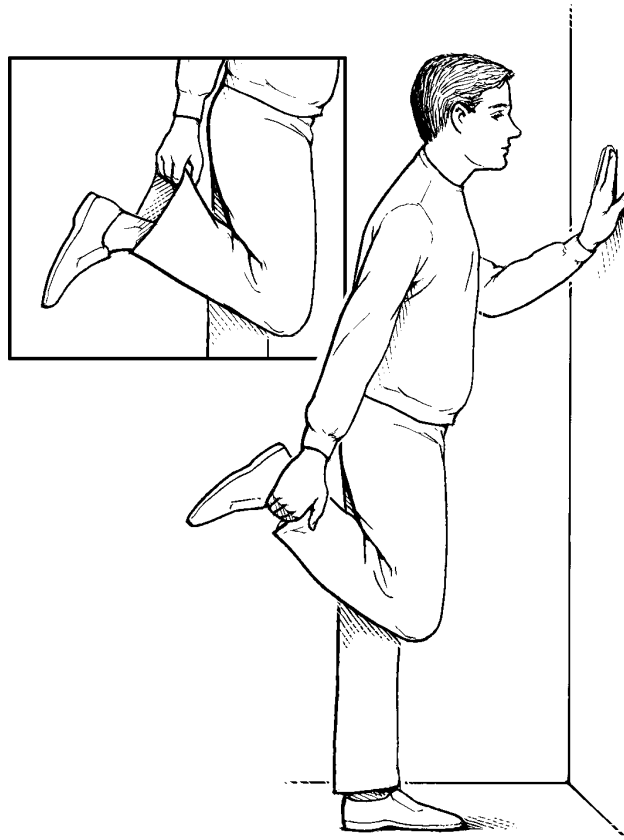


Figure 11. Quadriceps and hip flexor stretch

Stand and place your left hand on a wall or a sturdy piece of furniture to help you balance. Grasp your right foot or ankle with your right hand. Tighten your abdominal muscles. Slowly pull your right leg back until you feel a stretch in the muscles in the front of your right thigh and hip. Repeat using your left leg.

The alternative method is to pull the cuff of your pants, as shown.

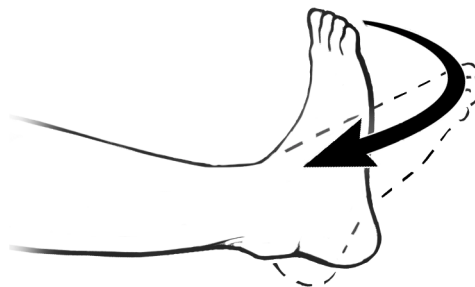


Figure 12. Ankle rotations

Sit with your right ankle hanging free. Move your ankle so that the big toe slowly makes a circle. Make 10 circles, then repeat with the left ankle.

Aerobic Conditioning Exercise

Aerobic exercise refers to activities that require a steady supply of oxygen to the exercising muscles. This type of exercise is the most beneficial for developing cardiovascular fitness. The aerobic conditioning part of your program includes activities that require continuous, rhythmic muscle contraction of the legs and possibly the arms.

Find an activity or group of activities that you enjoy. Examples of common aerobic conditioning exercises include the following:

- Walking (outdoor, treadmill, mall, school)
- Cycling [outdoor (wear helmet), indoor]
- Stair climbing (stair machine, step aerobics)
- Elliptical trainer
- Cross-country skiing (on snow, ski machine)
- Swimming (laps, water aerobics, water walking)
- Jogging (outdoor, indoor track, treadmill)
- Racquet sports (tennis, racquetball, squash)
- Dancing (aerobics, ballroom, polka/western)
- Rowing (on water, rowing machine)
- Combination arm/leg ergometer
- Skating (ice skating, roller blading, roller skating)
- Rope skipping
- Sports (basketball, soccer)

Talk with your health-care provider about the forms of aerobic exercise best for you, taking into account your preferences, present physical fitness, and medical condition.

Intensity of exercise

Proper exercise intensity will result in health and fitness improvement without causing bothersome symptoms. Exercise intensity needs to be moderate for most people. Use the following tools to help you assess your exercise intensity so that you can exercise safely:

- **Heart rate or pulse.** If you have had a recent exercise test, you may have been given a target heart rate range (pulse rate) as a guide for exercise intensity. A person with an irregular heart rhythm usually is not given a target heart rate since the heart rate response to exercise varies too much to provide an accurate measurement.

Follow these steps to check your heart rate during an exercise session:

1. Stop exercising momentarily. If you count your pulse while standing, shift your weight from foot to foot slowly to avoid a feeling of light-headedness, which can occur when blood pools in the legs after exercise.
2. Place two fingers between the bone and the tendon over your radial artery, which is located on the thumb side of your wrist, and exert gentle pressure (figure 13).
3. Count your pulse for 10 seconds and then multiply by six to determine your heart rate in beats per minute.

For people who have difficulty counting their pulse, or when it is impractical to stop and count the pulse (for example, outdoor cycling, cross-country skiing), an electronic pulse monitor may be useful. The heart rate response during swimming (not water aerobics or water walking) differs from exercises that use upright posture. A target heart rate is usually not helpful for swimming unless it has been determined during a swimming exercise test.

- **Perceived exertion.** This scale allows you to give a rating to your total perceived effort during exercise. It is a useful tool to help you pace yourself. It refers to the total amount of physical effort experienced, taking into account all of the sensations of exertion, physical stress and fatigue.

When you use the scale, don't dwell on any single factor such as muscle fatigue, discomfort or labored breathing. Instead, concentrate on your overall feeling of exertion.

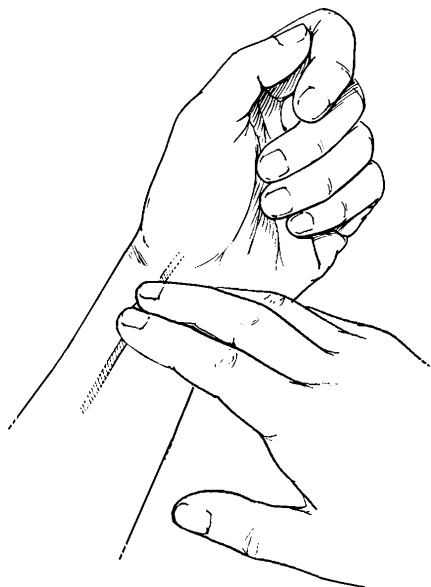


Figure 13. Checking your pulse

Table 1. Borg Perceived Exertion Scale.

6	
7	Very, very light
8	
9	Very light
10	
11	Fairly light
12	
13	Somewhat hard
14	
15	Hard
16	
17	Very hard
18	
19	Very, very hard
20	

A rating of “6” indicates a minimal level of exertion, such as sitting comfortably in a chair. A rating of “20” corresponds to a maximal effort, for example, walking briskly or jogging up a very steep hill.

Ratings between 11 (“fairly light”) and 15 (“hard”) are generally recommended. Ask your health-care provider about your individual perceived exertion range.

- **Talk test.** During exercise you should be able to talk with a companion. If you are too short of breath to do this, you are pushing too hard and should slow your pace of exercise.

If your exercise heart rate and perceived exertion ratings are below your recommended levels, increase your pace of exercise. On the other hand, if your heart rate or perceived exertion is above your recommended levels, reduce your intensity of exercise.

If you have questions about your exercise intensity, ask your health-care provider.

Exercise frequency

Exercise at least three times per week on nonconsecutive days. Increasing your exercise sessions to four to six times per week will increase the rate of improvement in fitness and the benefits to your health.

However, exercising more than four days per week, doing high-impact activities such as jogging, will increase your risk of developing a joint or muscle injury. If you wish to exercise more than four times per week and plan to include high-impact activities, alternate one day of lower-impact exercise with one of higher-impact.

Talk with your health-care provider about the exercise frequency that is best for you.

Exercise duration

Eventually you should increase your aerobic conditioning exercise to at least 20 to 30 minutes. In general, if you have not been exercising for several weeks or longer, start with 10 to 15 minutes and add one to five minutes each session, as tolerated, until you achieve the desired duration.

Duration may be increased to 45 to 60 minutes if a faster rate of progress in improving fitness or if weight loss is a major goal.

If you have been ill or are recovering from surgery, an initial exercise duration of five minutes or less may be recommended. Talk with your health-care provider about the exercise duration that is best for you.

Cooldown

Cooldown immediately follows the aerobic conditioning part of your exercise program. Cooldown allows your heart rate and blood pressure to return gradually to pre-exercise levels; prevents blood from pooling in the legs, which may cause dizziness; and gently stretches the muscles, allowing you to maintain or improve flexibility and maintain healthy joints.

The first two objectives are accomplished by performing three to five minutes of low-level aerobic activity. For example, if you have been walking briskly for your aerobic conditioning exercise, slow the pace considerably during the cooldown, bringing your perceived exertion rating below 11 (“fairly light”).

After this activity, repeat the stretching exercises listed in the section describing the warm-up period. The stretching exercises are better at improving flexibility when done after the aerobic conditioning period when the muscles and connective tissue are warmer than usual. The length of the cooldown period is usually six to 12 minutes.

Resistance Exercises (Strength Training)

Benefits from resistance exercises (strength training) may include the following:

- Improved muscular strength and endurance
- Modest increased muscle size
- Increased bone density (reduced fracture risk)
- Reduced joint pain
- Decreased risk of falls in the elderly / improved balance

Begin strength training gradually. If you begin with too much resistance or too many repetitions, serious muscle and joint damage may occur. It is normal to have mild muscle soreness for two to four days after starting strength training. Both elderly people and people with cardiovascular disease may do strength training.

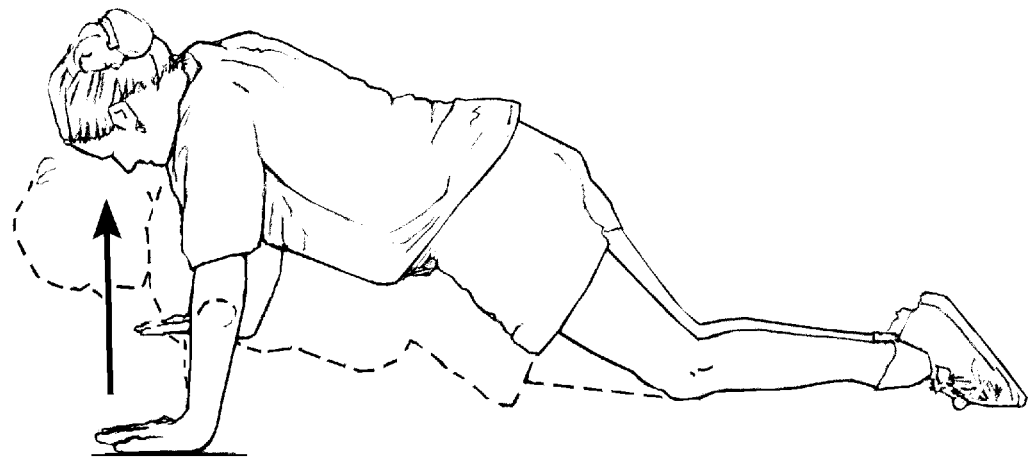
Strength training can be done using one's own body weight, handheld weights or adjustable weight machines. A combination of all three forms of exercise is commonly recommended. A warm-up of eight to 10 minutes (or more) of aerobic exercise before strength training is recommended if an aerobic conditioning workout did not precede strength training.

Breathe out (exhale) with exertion, breathe in (inhale) when returning to the starting position. **Do not hold your breath during strength training.**

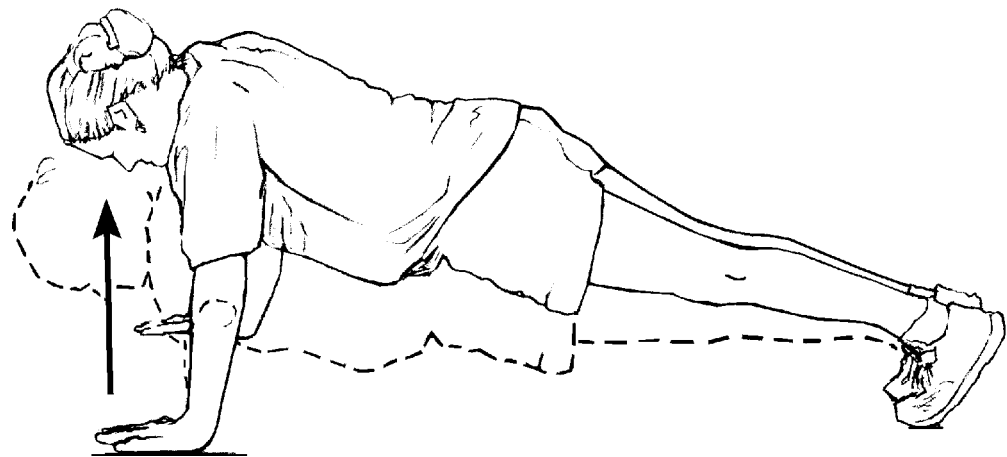
Talk with your health-care provider about a specific strength training program for you. Consider using a qualified personal trainer to get you started with strength training.

Using body weight for resistance

The following (pages 19 to 21) are examples of strengthening exercises that use body weight for resistance.



Knee push-up



Toe push-up

Figure 14. Push-ups

(work muscles of the chest, arms, shoulders and upper body)

Lie on your stomach with the palms of your hands on the floor on either side of your shoulders. Push your chest off the floor with your arms supporting your weight. Keep your abdominal muscles tight and your back straight. Do not lock your elbows. Lower yourself slowly to the surface.

The knee push-up is less strenuous than the toe push-up. You may work up to 15+ repetitions.

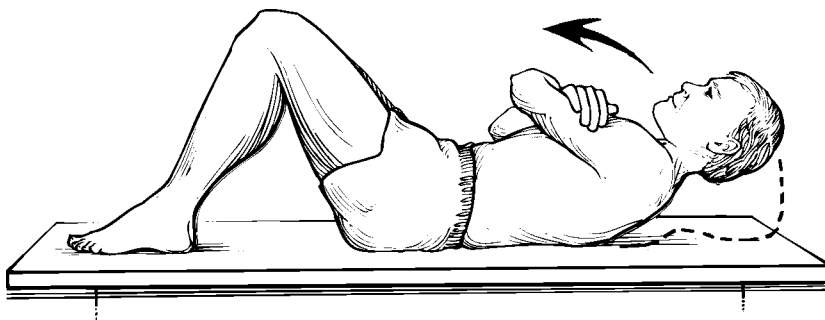


Figure 15. Curl-ups
(work abdominal muscles)

Lie on your back with your arms folded across your chest. Bend your knees and place your feet flat on the floor. Slowly lift your head, neck and shoulders (if possible) off the floor. Pause and lower yourself to the mat. Breath out (exhale) as you lift yourself off the mat. (You may work up to 10 repetitions.)



Figure 16. Toe raises
(work calf muscles)

Hold on to a stable surface for balance. Look straight ahead, keeping your abdominal muscles tight and your back straight. Lift your heels from the floor, supporting your weight on the balls of your feet. Pause. Slowly lower your heels. (Work up to 15 repetitions)

Figure 17. Chair squats
 (work the thigh and hip muscles)
 If necessary, hold on to a stable surface for balance. Lower your buttocks as if you were going to sit in a chair (do not actually sit). Keep your back straight. Pause. (Work up to 15 repetitions)

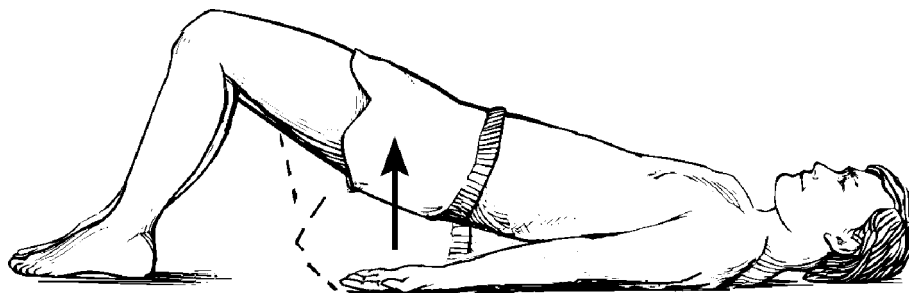
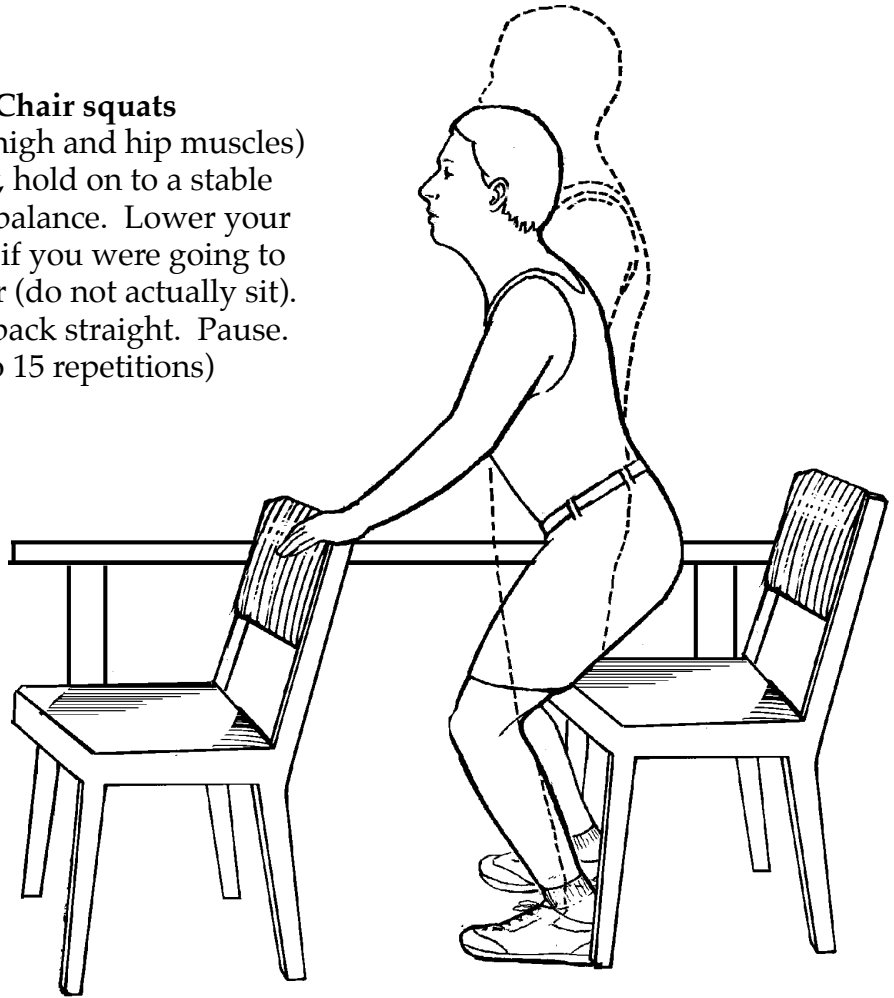


Figure 18. Bridging
 (works the back and abdominal muscles)
 Lie flat on the floor or a mat with your palms facing the ceiling. Bend your knees and keep your feet flat on the floor. Lift your hips until your hips and lower back are off the floor. Your head and neck should remain relaxed on the floor. Hold the position until fatigued or unable to comfortably keep your knees and hips in a straight line. To increase difficulty, extend and hold one leg straight out from your hip.

Using handheld weights and weight machines

Do the exercises as instructed. To improve your muscle strength and endurance, two or three strength training sessions per week (on nonconsecutive days) are enough. Don't grip the weights tightly. Eight to 15 repetitions of each exercise are enough for most people.

The intensity of your strength training should begin with perceived exertion levels of 12 to 13. Weight and repetitions can be increased gradually, as tolerated. This is the secret to "progressive resistance training." By asking your body to perform a little more lifting than usual, you will increase your strength.

After several weeks of training, you may progress the intensity to 15 or 16 on the perceived exertion scale if approved by your health-care provider. Remember to breathe out (exhale) as you lift the weight. Breathe in (inhale) as you lower the weight.

Avoid joint and muscle pain with lifting. It may be a good idea to use a personal trainer to get you started on a program that works for you. Before beginning any new exercise program, talk to your health-care provider.

Examples of exercises using handheld weights and weight machines include those on the following pages (23 to 32).

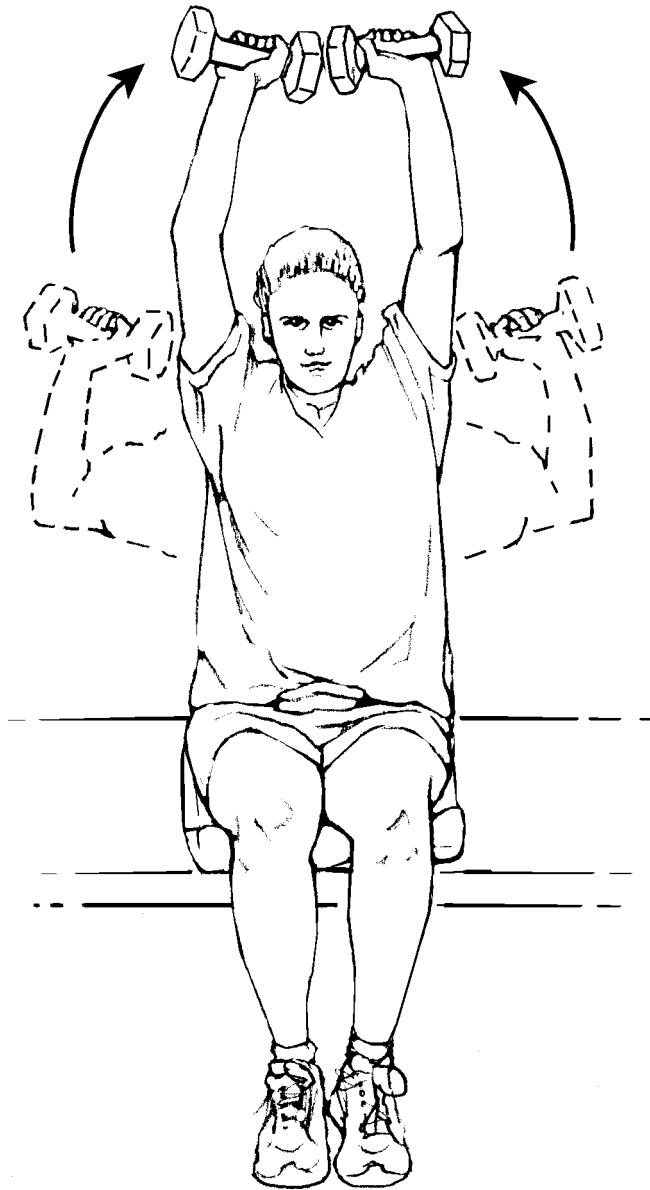


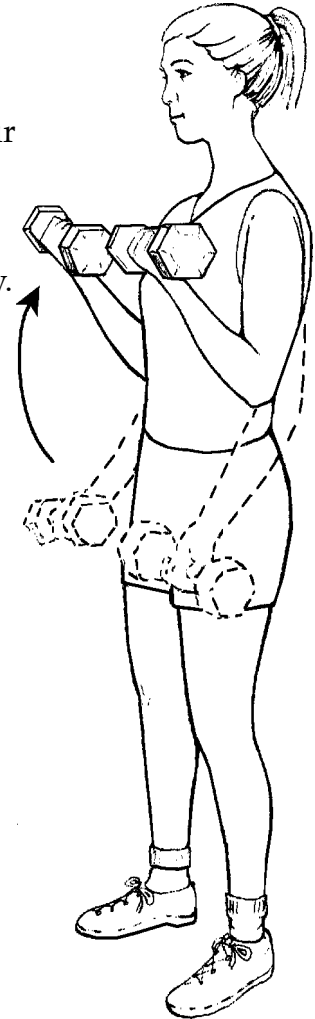
Figure 19. Shoulder press
(works the shoulder muscles)

Grip weights in hands at shoulder height. Push the weights above your head and together, keeping a slight bend in your elbows. Lower the weights back to the starting position. Keep your back straight.

Figure 20. Biceps curl

(works the biceps muscles)

Stand with your feet about shoulder-width apart and knees slightly bent. Hold the weights at your side with the palms facing forward. Keep your abdominal muscles tightened and your back straight. Slowly raise the weights towards your collar bones. Stop before you fully flex the elbow. Keep your wrists straight. Slowly lower the weights to the starting position.

**Figure 21. Triceps extension**

(works the triceps muscles)

In a seated position, grasp the weight with your palm inward and the weight above the shoulder. Raise your arm so that the weight is straight up, slightly behind your shoulder. Tighten your abdominal muscles. Bend your elbow and lower the weight to the starting position. Repeat with the opposite arm.

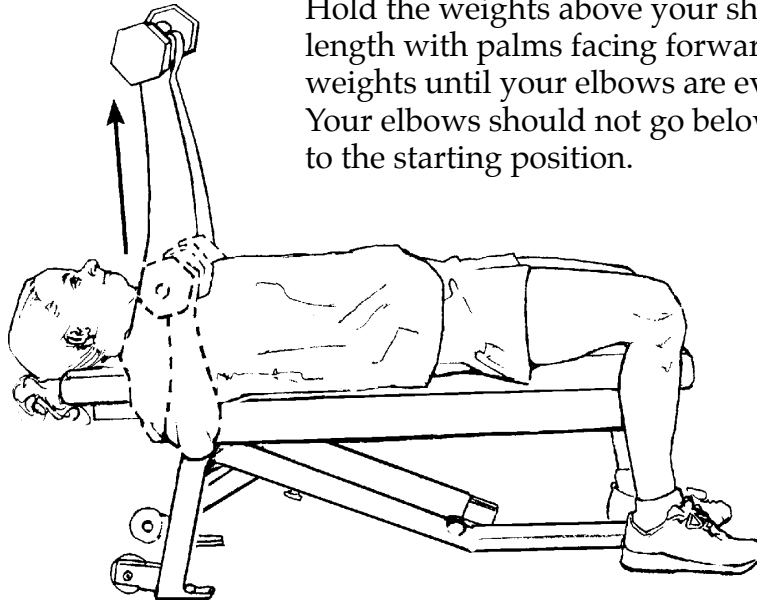
Figure 22. Chest press

(works the muscles of the chest and shoulder)

Lie on the bench with your feet flat on the floor.

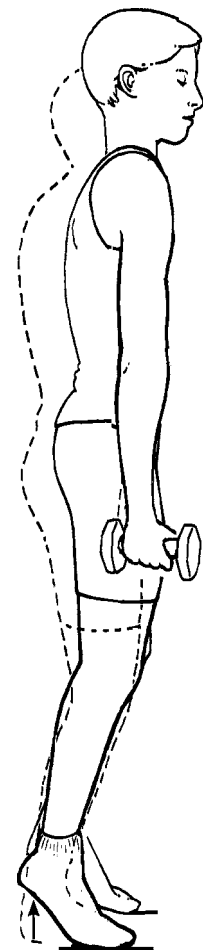
Hold the weights above your shoulders at arm's length with palms facing forward. Slowly lower the weights until your elbows are even with the bench.

Your elbows should not go below the bench. Return to the starting position.

**Figure 23. Toe raises**

(work the calf muscles)

Stand with your feet slightly spread. Hold the weights at your sides with your palms facing your body. Rise up on the balls of your feet, hold for a second or two, and slowly return to the starting position. Look straight ahead, keep your abdominal muscles tight and your back straight.



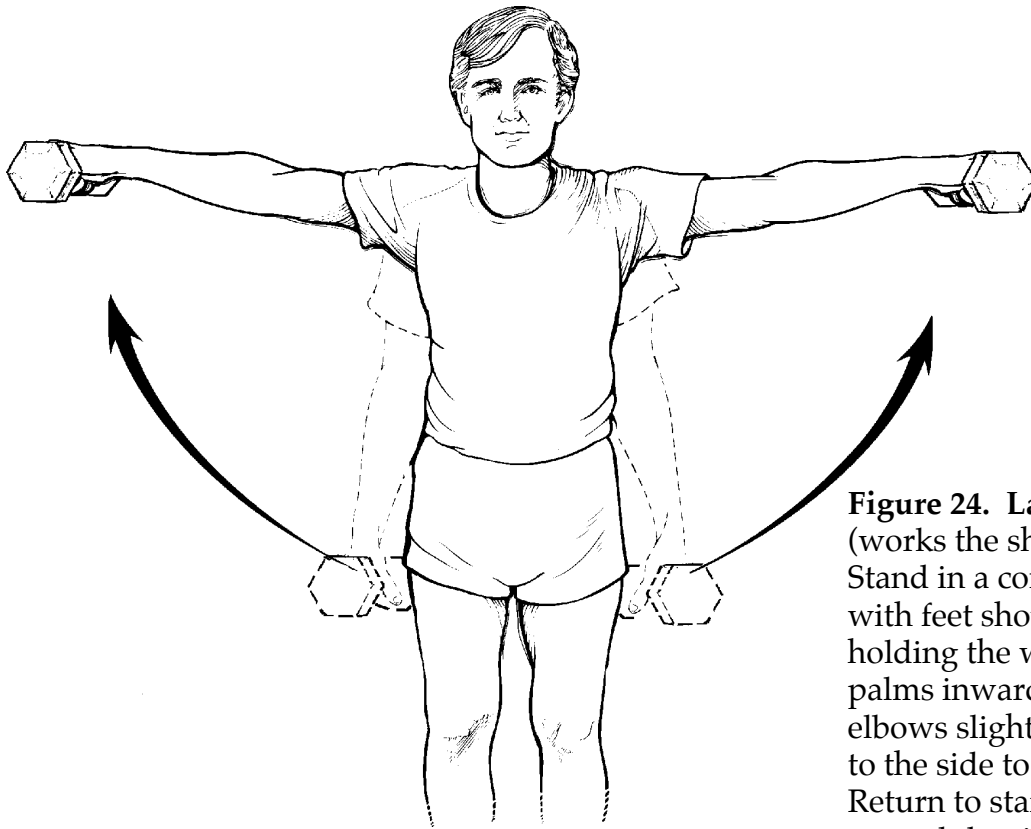


Figure 24. Lateral raise
(works the shoulder muscles)
Stand in a comfortable position with feet shoulder-width apart, holding the weights at your side, palms inward. Bend your elbows slightly. Raise your arms to the side to shoulder height. Return to starting position. Keep your abdominal muscles tightened and your back straight.

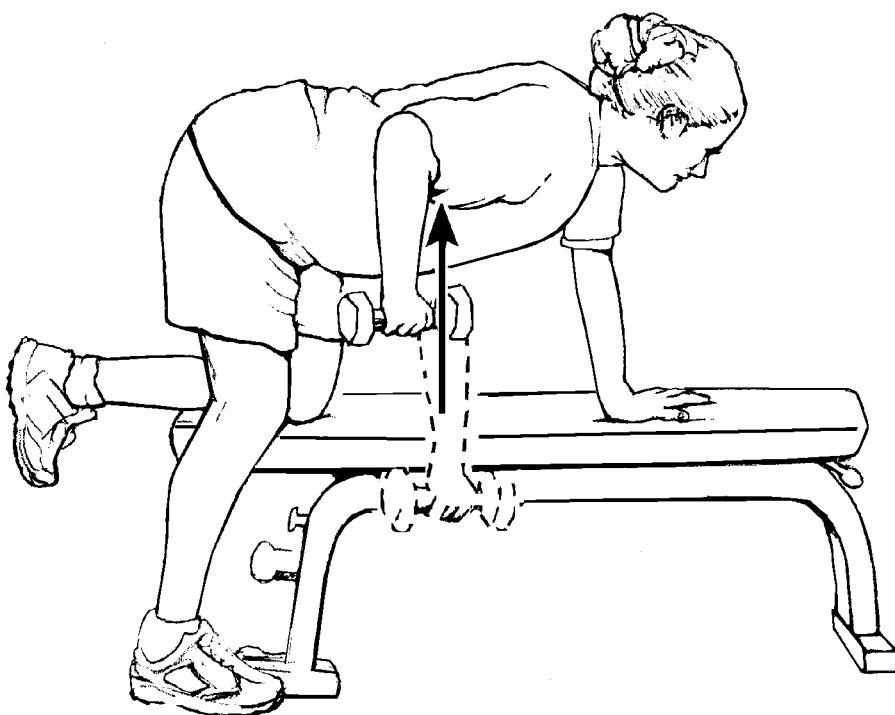
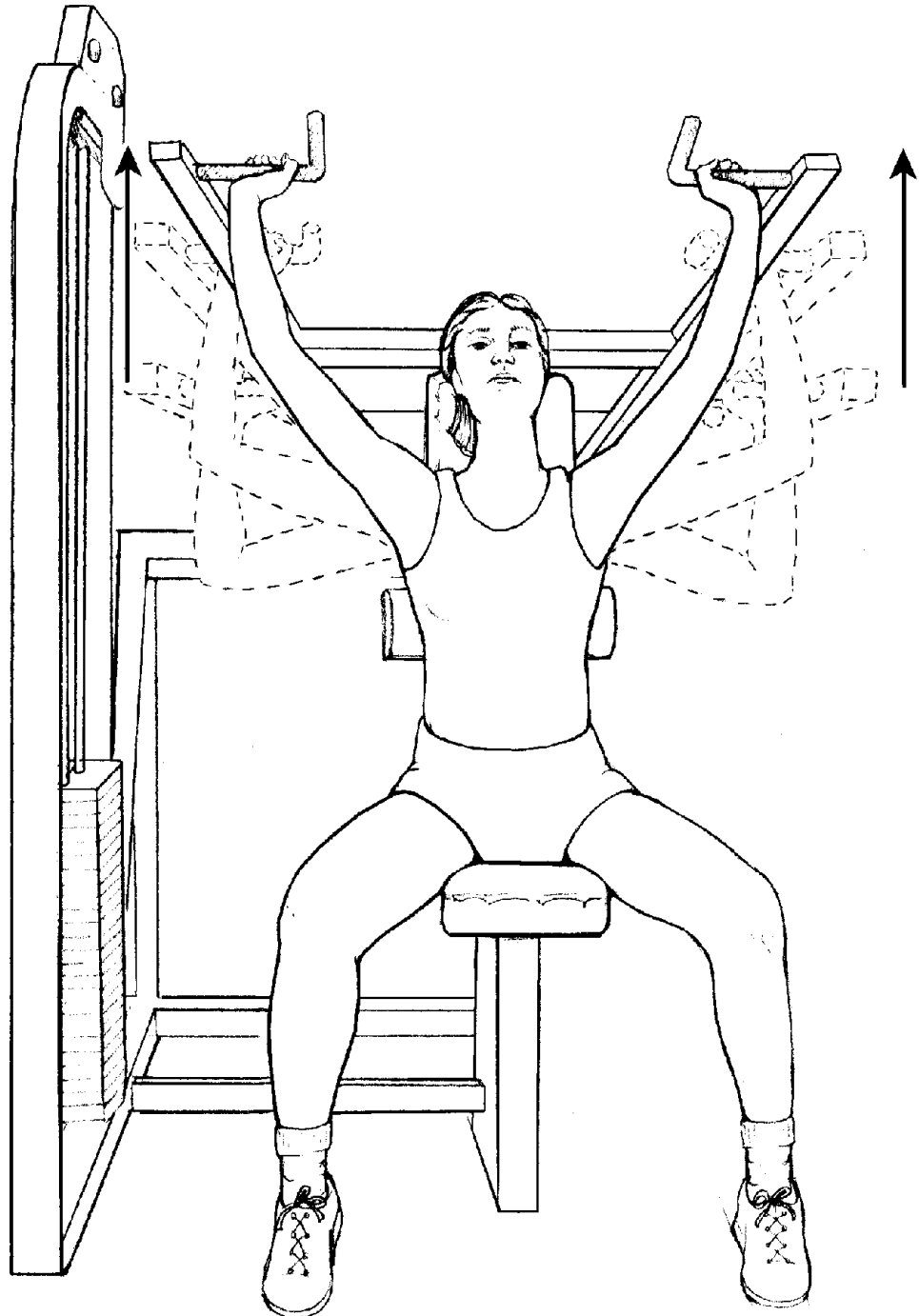


Figure 25. Single arm row
(works the muscles of the back and shoulders)
Facing a bench with your knees slightly bent, lean forward from your hips and support yourself with your left hand and knee. With the weight in your right hand, pull the weight towards your hip. Keep your elbow close to your body. Return to starting position. Repeat the exercise with the opposite arm.

Weight machines**Figure 26. Shoulder press**

(works the shoulder muscles)

Adjust the seat so the handles of the machine are just above shoulder level. Push upward until your arms are extended but do not lock your elbows. Return to starting position.

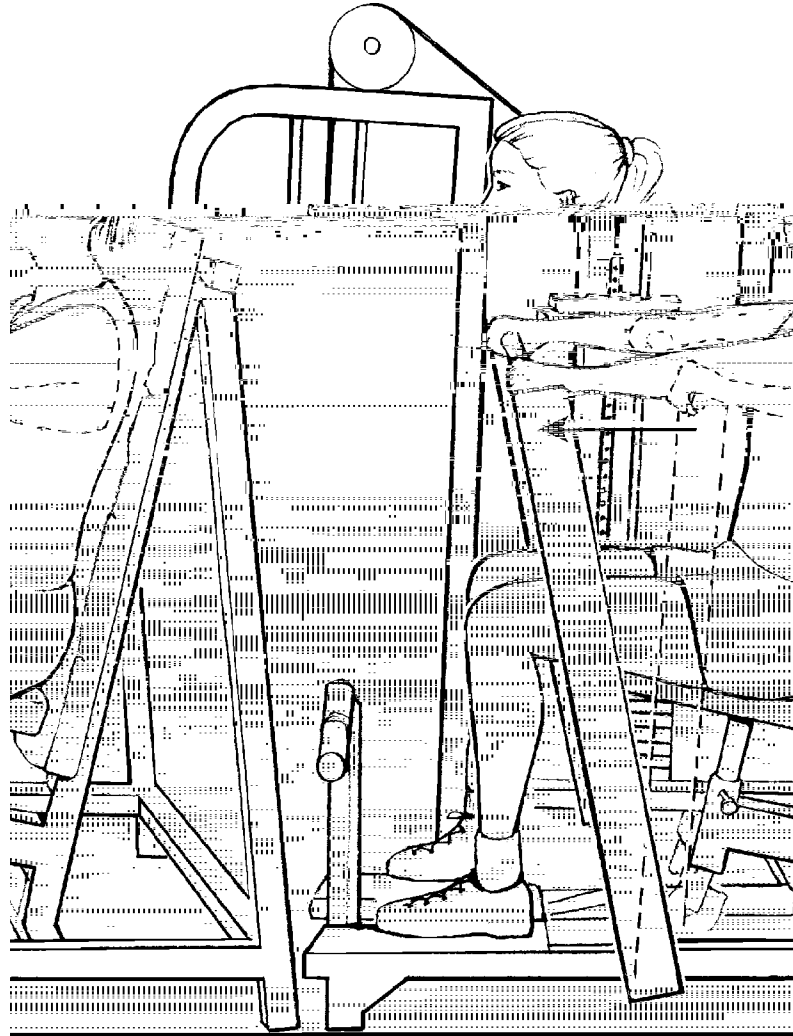


Figure 27. Chest press
(works the chest muscles)

Adjust the seat so the machine handles are at chest level. Push forward on the foot pedal so you can reach the handles easily. Release the foot pedal. Push the weight forward until your arms are extended but do not lock your elbows. Bring the handles back toward your chest until you feel a stretch across your shoulders.

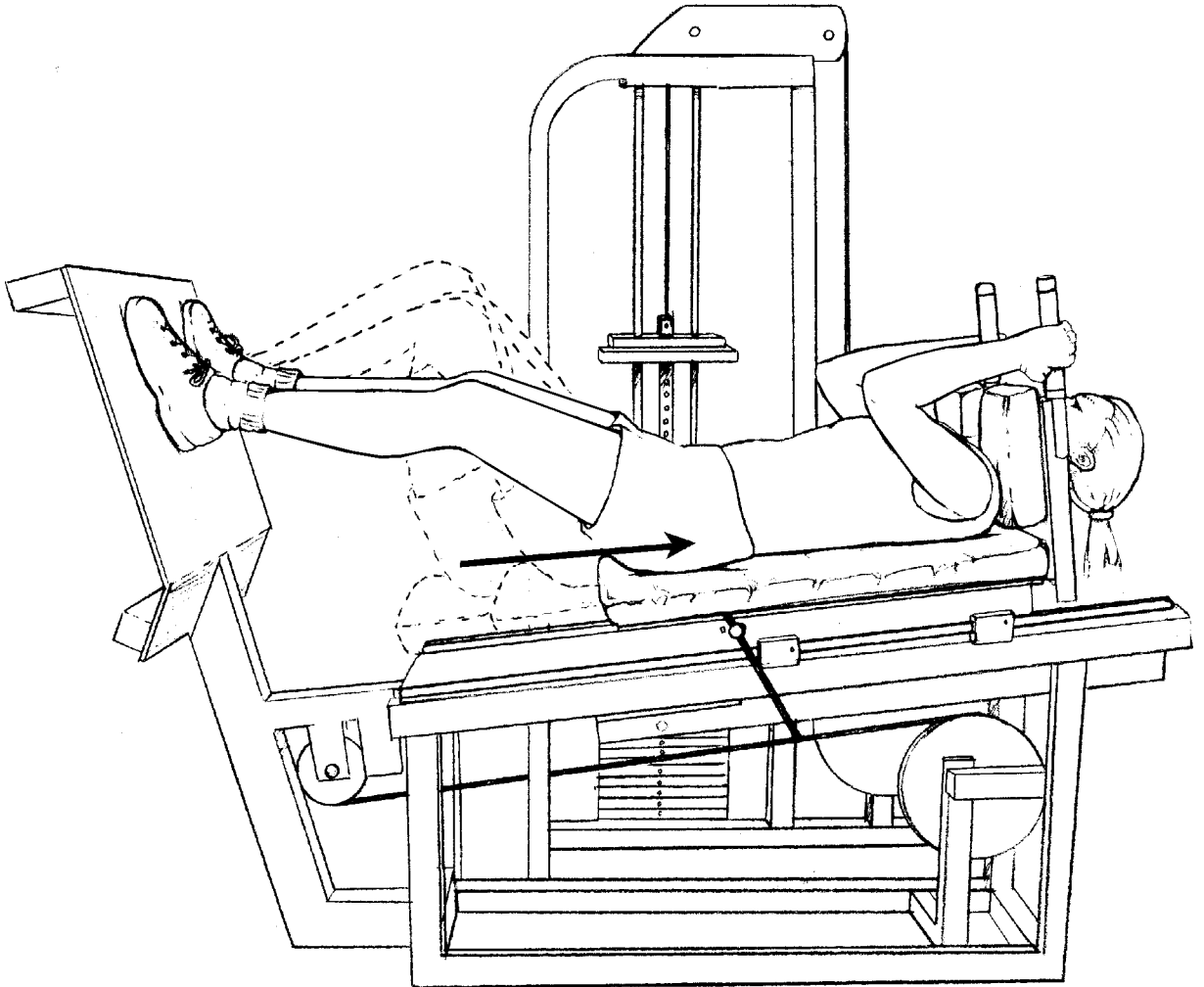
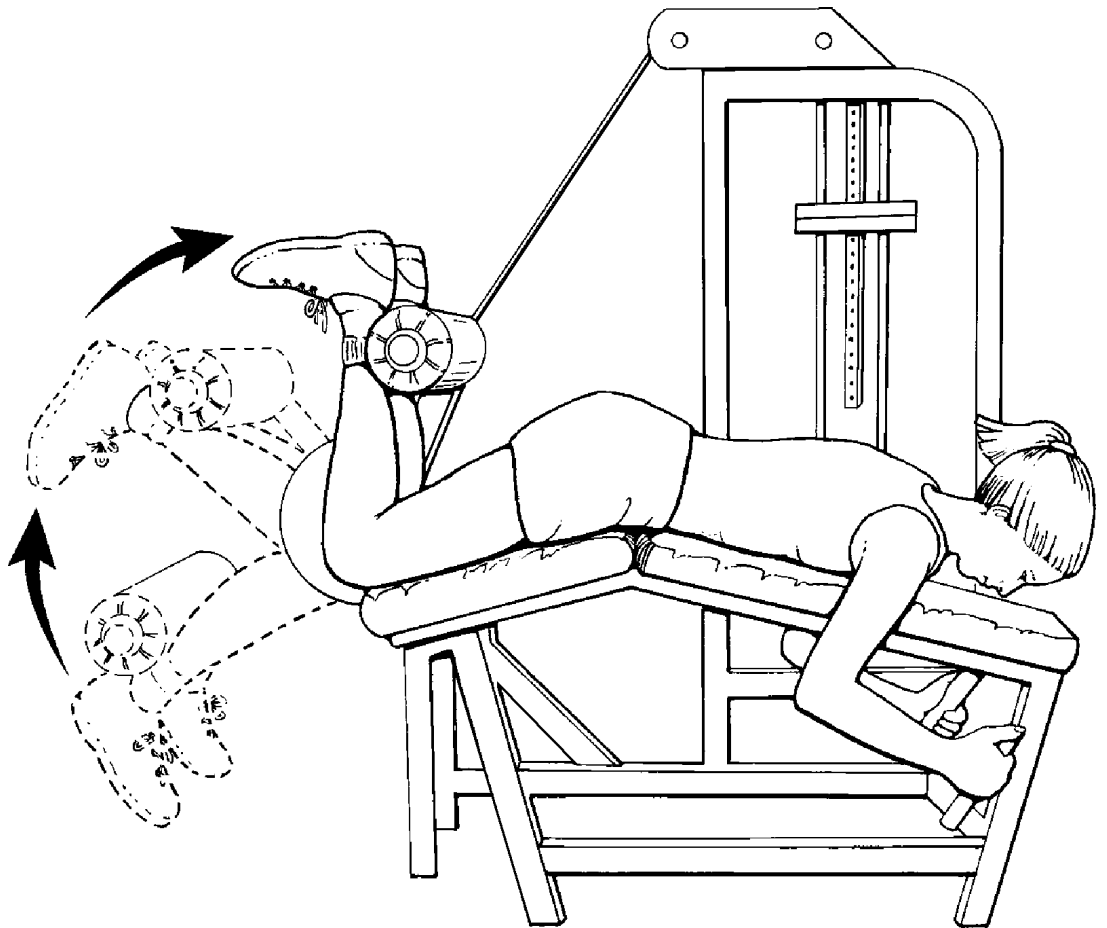


Figure 28. Leg press

(works the thigh and hip muscles)

Place your feet shoulder-width apart on the platform. Tighten your abdominals and keep a slight curve in your low back. Begin with your knees bent at slightly less than a 90-degree angle. Push away from the platform until your legs are almost fully extended. Do not lock your knees. Return to the starting position.

**Figure 29. Leg curl**

(works the hamstring muscles)

Lie on the pad on your stomach. Adjust the roller bar to lay on the back of your ankles. Tighten your abdominal muscles and buttocks, maintaining a slight curve in your lower back. Slowly bend your knees and bring your heels to your buttocks. Return to the starting position. Do not arch your back during the exercise.

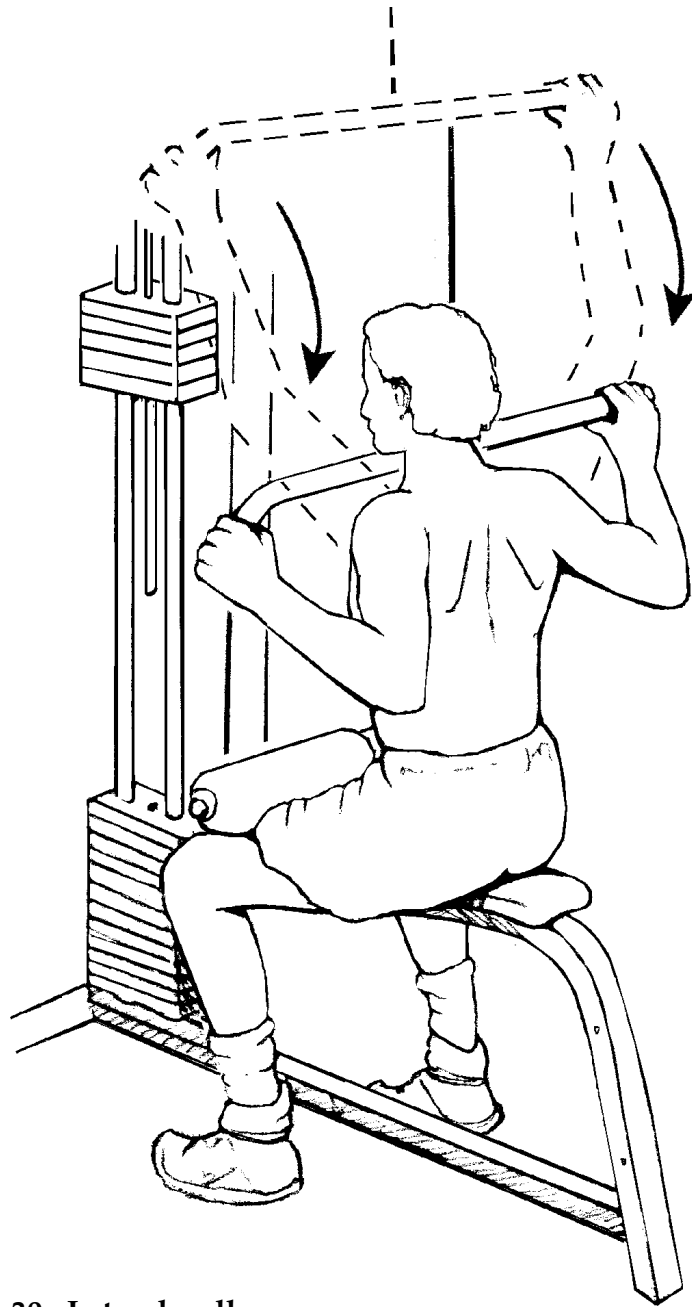


Figure 30. Lateral pull

(works the muscles of the arms, shoulders and back)

Adjust the seat so that the pad rests on your knees. Bend your knees to a 90-degree angle. Grasp the bar and pull the weight toward your upper chest, trying to bring your shoulder blades together. Return to starting position.

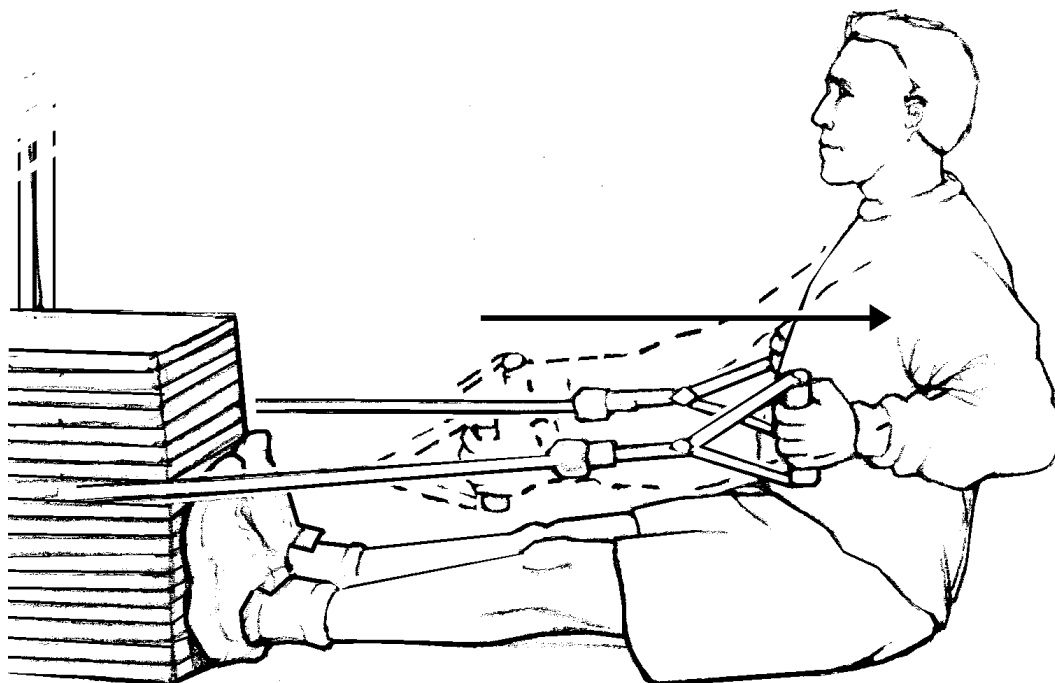


Figure 31. Seated row

(works the muscles of the back and shoulders)

Adjust the machine so that you are just able to reach the handles without slouching forward. Tighten your abdominal muscles and keep the back straight. Pull the handles back towards your chest, using the muscles between your shoulder blades. Return to your starting position.

Special considerations

Clothing

Wear comfortable, nonrestrictive clothing suitable for the activity, weather conditions and place where you exercise. Do not overdress in order to increase sweating during exercise. Any weight loss from sweating is due to water not fat loss and will be replaced as you drink to replenish body fluids.

In cool weather, wear clothing in layers so that you can adjust your garments as your body temperature and the environmental temperature (or windchill factor) change. Wear properly fitting athletic shoes.

Environment

On hot days, exercise during the early morning, later in the evening, or indoors. Drink plenty of water during exercise. Drink before and after exercise and every 15 to 20 minutes during exercise on hot, humid days. When it is hot and/or humid, more blood is directed to the skin to aid in cooling the body and less blood is available for the exercising muscles than on cooler days. The heart rate increases in response. You may have to decrease your exercise intensity to remain within your target heart rate range. Let your heart rate and perceived exertion guide you.

Extremely cold, windy weather may offer some of the following dangers:

- Exposed skin may freeze (frostbite).
- Snow and ice may make footing difficult and cause slips and falls.
- People with asthma or angina (heart pain), may get worse in cold weather. Covering the nose and mouth will warm air as you breathe in and help reduce symptoms.

You may wish to exercise indoors on very cold, windy days.

If you are traveling from sea level to an altitude greater than 4,000 feet above sea level, check with a member of your health-care team before deciding if you should exercise there, or how you may need to change your exercise routine. Increased altitude results in less available oxygen in the air. You will need to reduce your exercise intensity to remain in your recommended target heart rate and perceived exertion ranges.

During ozone alerts or on days with poor air quality, avoid outdoor exercise, especially if you have respiratory disease.

Illness or time away from your exercise program

If you feel ill, especially if you have a fever, rest rather than continue your exercise routine. If you miss more than three days of exercise because of illness or other reasons, resume your program at a lower level of intensity and shorter duration and gradually work yourself back to your previous level.

Medications

Take your scheduled medications before morning exercise.

Exercise and meals

Because your digestive system requires an increased blood supply to do its job after eating, rest for at least one hour after meals before doing exercise.

The enjoyment factor

These tips may help you successfully maintain your exercise routine:

- Choose activities that you will enjoy, since no single form of exercise is “best.”
- If you are easily bored, use a variety of types of exercise or incorporate sports into your program.
- Many people are more likely to exercise if they have a companion (human or a dog) or attend an exercise class.
- Listen to music or books on tape, or watch television during workouts.

Other adherence aids

If you enjoy your exercise program, you are more likely to keep it up.

However, several other techniques also may help to keep you active:

- Keep an exercise log book to record your accomplishments.
- Wear a pedometer to measure the number of steps taken each day.
- Develop a written “action plan for exercise” with specific, realistic goals and milestones.
- Include family members/ significant others in your program (be a role model for your children).
- Develop a specific schedule for your exercise program, including time of day (make an appointment with yourself), location, activities, time allotment, etc.
- Use walking or bicycling as a form of transportation, if feasible.
- Reward yourself with a gift when you reach a milestone in your program.
- When traveling, keep your exercise routine going by walking whenever possible, taking your exercise clothing along and using hotel exercise facilities.

Everyone has lapses in an exercise routine because of illness, other adverse events, or lack of motivation. However, when lapses occur, forgive yourself and gradually restart your program, focusing on the things that helped you to start and be successful in the first place.

Frequently Asked Questions

Is there a “best” time of day for exercise?

Generally, there is no “best” time of day to exercise. In order to maintain your exercise routine, it is important to choose a time of day that is convenient for you. It may be best for you to schedule exercise at the same time each day. Also, some people have trouble sleeping if exercise is done right before bedtime.

What is the best form of aerobic exercise?

There is no “best” form of aerobic exercise. Fitness and health-related benefits are very similar as long as activities are equally matched in terms of **intensity, duration and frequency**. Weight-bearing forms of exercise such as walking, jogging and stair climbing may provide greater caloric expenditure and osteoporosis protection than non-weight-bearing activities (swimming, cycling, rowing, etc.).

Non- or low-weight-bearing exercise may be best for you if you have problems with your joints.

What can I do to avoid exercise-related injuries?

Following some simple guidelines may help you avoid injury:

- Don't do too much exercise too early in a new exercise program. Progress gradually.
- Warm up and cool down appropriately.
- Wear protective gear when appropriate (helmets, pads, etc.)
- Avoid activities that cause you significant joint or muscle pain.

Some activities are more likely to cause injury than others. These include activities with a lot of jumping (basketball), with abrupt changes in speed and direction (tennis, soccer, etc.) or with high-impact weight bearing (jogging). Take this into account when choosing an exercise program.

Will exercise help me lose weight, and if so, how much exercise is necessary?

To lose weight, you must use more calories than you take in. If you add exercise to your life but don't change how you eat, you can lose fat. However, it will take longer to lose weight with exercise if you don't lower the number of calories you eat. If you want to lose weight, talk with a dietitian about a healthy eating plan.

How can I find time for exercise?

Busy lives make finding time for exercise difficult. Make exercise an important priority and schedule time for it. Most people do not need to exercise daily; three to four days of 30-minute exercise sessions each week provide substantial fitness and health benefits to most people.

- Exercise on each weekend day plus two sessions during the week.
- Exercise on a treadmill or cycle while watching the news.
- Exercise at home or close to the office, rather than at a distant fitness center.
- Exercise with your spouse or significant other and use the time for conversation, coordination of schedules, planning, etc.
- If you have a hard time scheduling 30 minutes to exercise, consider exercising for 10 minutes, three times per day on most days of the week (accumulate 30+ minutes of physical activity most days).

My family doesn't seem to support my exercise program. How can I help them understand that I need to take time for exercise?

Support from your family can make the difference in terms of your success and enjoyment of your exercise program. Begin by educating them regarding the benefits of regular physical activity. Involve them in your exercise program as a means of increasing their support and understanding.

I want to begin jogging. How should I start?

Jogging can be an enjoyable form of aerobic exercise, but it is not for everyone. People with painful knees, hips or backs are not good candidates for jogging. Before you begin jogging, you must have a certain level of fitness. Talk with your health-care provider if you want to begin jogging. This information is meant to give you guidelines for starting a jogging program.

If you and your health-care provider agree that jogging is appropriate for you, follow these steps to begin a jogging program:

- Always warm up and cool down.
- Wear good, properly fitting running shoes. Replace the shoes after 400 miles of jogging – or more often if needed.
- Start with a walking program, especially if you have been physically inactive for several months.
- When you can walk two miles in 30 minutes (4 mph) comfortably, try to alternate walking and jogging (jog one minute, walk one minute) as shown in the table.
- Don't jog more than four times per week. Jog on alternate days in order to minimize joint and muscle discomfort.
- Jog at a comfortable pace and walk briskly. Always keep within your target heart rate and perceived exertion ranges.
- Advance one step in the **starter jogger program** (see table) every two to seven days, as tolerated. For example, if you are in step 1, you jog for one minute and then walk for one minute. Repeat this until you have jogged/walked for a total of 24 minutes (12 repetitions). When you

move to step 2, jog for two minutes and walk for one minute. Repeat until you have jogged/walked for a total of 24 minutes (eight repetitions).

Starter Jogging Program

Step	Exercise Time (minutes)		Repetitions		Total Time (min)
	Jog	Walk	Jog	Walk	
1.	1	1	12	12	24
2.	2	1	8	8	24
3.	3	1	6	6	24
4.	4	1	5	5	25
5.	5	1	4	4	24
6.	7	1	3	2	23
7.	10	1	2	2	22
8.	12	1	2	1	25
9.	15	1	2	1	31
10.	20	-	1	-	20
11.	25	-	1	-	25
12.	30	-	1	-	30

You should not have discomfort with your exercise program. **Stop** your exercise session and consult your physician if you have any of the following symptoms:

- Severe shortness of breath
- Pain, pressure or aching in the chest, arms, jaw, neck, shoulders or back
- Unusual, extreme fatigue
- Light-headedness, near-fainting or fainting
- Excessive heart palpitations or heart fluttering (very rapid or very slow heart rate)
- New or increased significant joint or muscle pain

If you have questions about this information or about your exercise program, talk with your health-care provider.

Notes



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