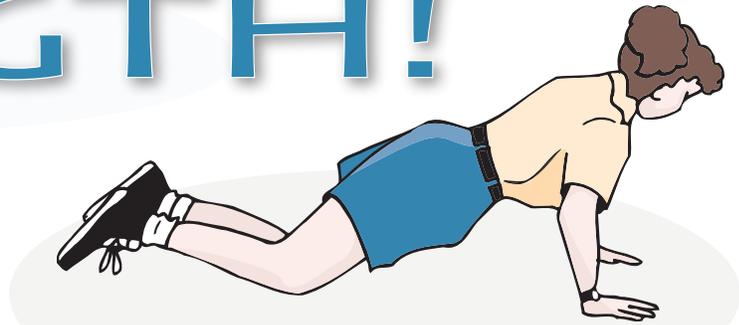


STRENGTH!

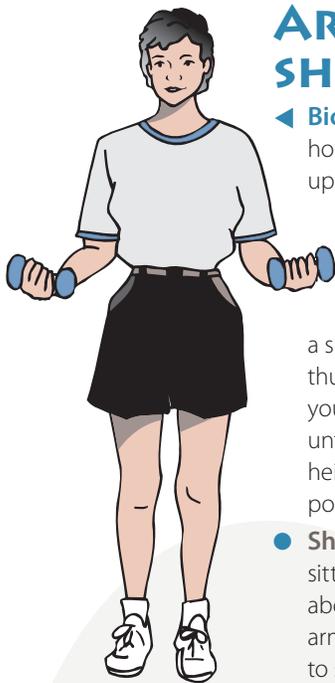
Muscle strength improves body shape and function and is an important part of a fitness program. Sample strengthening exercises are shown below. For additional exercises, talk with a qualified fitness trainer or physical therapist, or consult a book on fitness, such as *Fitness for Everybody* by Diane Dahm and Jay Smith (available at www.wellsources.com).



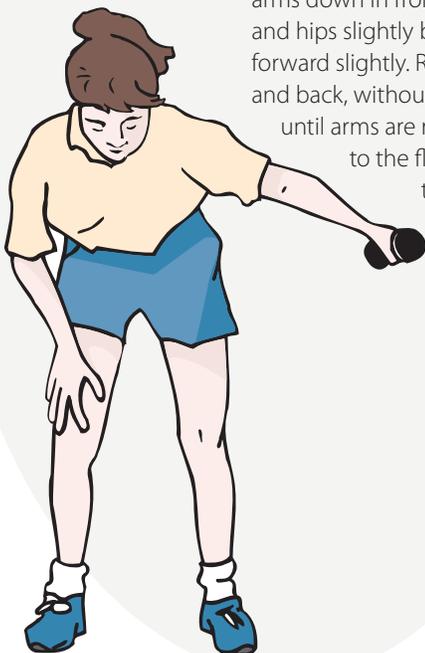
CHEST AND BACK

- ▲ **Pushup.** Lay face down on a mat, with your hands on the mat slightly more than shoulder width apart. Keeping your body straight, press up from the toes until your arms are fully extended. If this is too difficult, press up from the knees. Slowly bend your elbows to return to starting position. Chest should come close to the mat but not touch the mat. Repeat 10–30 times, depending on your fitness level.
- **Row.** Wrap a resistance band around a solid post. Hold each end of the band with arms fully extended in front of you. Slowly, pull your arms directly back, bending at the elbows. Squeeze your shoulder blades together. Slowly return to starting position. Repeat 10–12 times.
- **Lat pull down, or chin-up.** Sit at a weight machine with arms fully extended grasping a bar overhead. Slowly pull bar down to chest level. As an alternate, every other repetition, pull bar down behind the head. (For young, strong people, chin-ups are an alternate – although very strenuous – exercise.) Repeat 6–12 times.
- **Chest builder or butterfly.** Sit at a weight machine, arms out to the side, elbows bent 90 degrees. Slowly squeeze arm pads together in front of you until elbows nearly touch. Repeat 6–12 times.

ARMS AND SHOULDERS



- ▼ **Bicep curl.** Either standing or sitting, hold a dumbbell with your palm facing up. Curl your arm up slowly, bent at the elbow, then slowly extend your arm until the weight is down by your side. Repeat 6–12 times.
- **Side-lateral raise.** Hold a small dumbbell at your side with thumb pointing outward. Slowly raise your arm (with thumb pointing up) until your arm is just below shoulder height. Slowly return to starting position. Repeat 6–12 times.
- **Shoulder press.** Either standing or sitting, hold a barbell in each hand just above shoulder level. Slowly extend arms together overhead. Slowly return to starting position. Repeat 6–12 times.
- ▼ **Bent-over side raise.** Start with a small dumbbell in each hand. Extend arms down in front of you, knees and hips slightly bent, while leaning forward slightly. Raise arms sideways and back, without bending elbows, until arms are raised nearly parallel to the floor. Repeat 6–12 times.



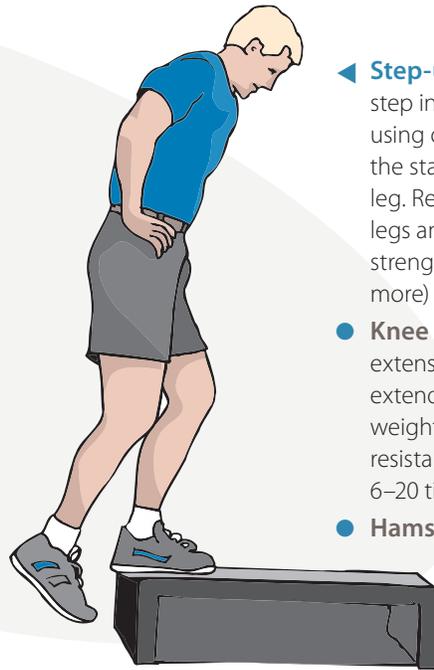
ABDOMEN/TRUNK

- **Cross curl-up.** Use the same position as above, with hands beside head. Twist and curl up, touching right elbow on left knee, then visa versa. Come clear down until your shoulder blades touch the mat. Repeat 10–100 times depending on your fitness level.
- **Trunk lift.** Lay on a mat on your stomach, hands out to your side with elbows bent. Slowly lift your trunk and arms off the mat while keeping your chin tucked in. Hold briefly and return to the mat. Repeat 10–30 times.
- ▼ **Abdominal crunch or bent knee curl-up.** Lay on your back on a mat with knees bent 90 degrees. Keep your feet off the ground. With arms crossed in front of you and fingers on shoulders (or arms beside your head with hands touching your ears), curl up and touch your elbows to your knees. Perform rhythmically, not jerky. Repeat 10–100 times (depending on your fitness level).



HIPS/LEGS

- **Side leg raisers.** Lay on a mat on your side. Raise the top leg sideways and return to starting position. Repeat 10–30 times. Roll over to other side and repeat. Add an ankle weight if desired to increase resistance.
- **Lying hip extension.** Lay on a mat facing down, with arms bent, out to the side. Slowly lift one leg (keeping the leg straight) as high as possible, and hold for a few seconds. Relax and repeat 5–10 times. Repeat using the other leg, or do alternate leg lifts.
- **Squats.** Stand with feet slightly greater than shoulder width apart, hands on hips. Slowly bend the hips, knees, and ankles. Maintain a normal back arch. Descend to a comfortable point, but keep your knees bent less than 90 degrees. Repeat 10–20 times. When you need greater challenge, do the same exercise while standing on one leg. Use a chair back, if needed, for balance. Another challenging alternate is to bend forward while standing on one leg and descending, and touch your palms on the floor. Return to starting position. This takes good balance and strength. Repeat 8–12 times.
- **Leg press.** Sit with bent knees at a leg-press machine. Slowly extend your legs, lifting weight. Repeat 6–12 times.
- **Static wall sit.** Stand with your back toward a wall, with your feet a few inches away from the wall. Lean against the wall and slide down until your knees are nearly at right angles. Hold this sitting position for several seconds then return to starting position. Repeat 6–12 times.



- ◀ **Step-ups.** Use an 8–10" bench or step in your house. Slowly step up using one leg and slowly return to the starting position using the same leg. Repeat this 6–12 times. Switch legs and repeat. To increase your strength, use a higher bench (12" or more) or a chair.
- **Knee extension.** Use knee-extension apparatus at a gym to extend your knees by either lifting weight or by full range-of-motion resistance. Repeat with each knee 6–20 times.
- **Hamstring curl.** Lie on your stomach on a leg curl machine. Curl your legs by lifting weights or with resistance, 6–12 times each leg.
- **Calf raise.** Stand with your feet slightly apart. Slowly raise up on your toes and hold for a moment. Slowly relax to starting position. Repeat 6–12 times. Use a chair back for balance if needed. For a greater challenge, hold heavy barbells in each hand while doing calf raises.

SPECIALIZED BACK EXERCISES

According to an American College of Sports Medicine news release, one of the best things you can do to prevent back injuries is exercises to strengthen both the back muscles and the muscles that support the spine, such as your abdominals. Back exercises should be customized to different groups of people, according to Michael Bracko, EdD, FACSM.

For regular exercisers:

- **Bird dog.** Start on all fours. Lift the right arm and opposing left leg simultaneously, holding straight, as high as you can lift each. Smoothly bring back to ground. Do 10 reps on each side.
- **Front plank.** Begin lying flat on your stomach. Bend arms at the elbows to support your upper body, centering the elbows under the shoulders. Lift body off the ground, using abdominal strength and toes to hold a "bridge" position, keeping the back straight. Hold a straight back for 10 counts.
- **Side planks.** Lie on your side, with bottom arm centered under the shoulder. Lift hips off the ground, and hold with a straight back for 10 counts. Repeat on opposite side.

For athletes and sport performance:

- **Advanced bird dog.** Follow the same instructions as above, but hold a five- to 10-pound weight in your lifting hand, and/or wear ankle weights.
- **Front plank.** Follow the same instructions as above, but move elbows as far forward as possible to challenge the abdominal muscles.
- **Side planks.** Follow the same instructions as above, but hold a 10- to 15-pound dumbbell on your top hip.

In the workplace:

- **Standing cat/camel.** Stand up, and place your hands on your thighs or knees, keeping knees bent. Arch your back up like a camel, hunching the shoulders, and then alternately curve down like a cat, looking up toward the ceiling. You can also lean on your desk instead of your legs, if preferred. Move the spine through a "pain-free" range of motion.
- **Standing bird dog.** With feet shoulder width apart, stand approximately 2–3 feet away from a wall. Lean on the wall, keeping your back straight. Extend your right arm straight up from the wall, and lift your left leg straight back/up. Lift arm and leg as high as possible, then return smoothly back to desk and ground. Repeat with opposite side. Do 10 reps on each side.

Although a desk job may seem relatively easy on the body, maintaining a sitting position for long periods of time strains the back and spinal discs. So in addition to doing exercises to build muscle strength, you should get up and move around at least once every 50 minutes.

It's not necessary to do all of these exercises at each session. Choose 8–10 exercises you enjoy doing that cover all of the major muscle groups. Vary the exercises from time to time to add variety and work other muscles.

Source: American College of Sports Medicine.

