Strength Training

Healthy Bones, Healthy Heart

No matter what your age, strength training can improve your bone health and your balance. As we age, our bones lose both tissue and strength. This condition is called osteoporosis, and it increases your risk for breaking a bone, even from a minor fall.

Strength training is exercise in which your muscles move against resistance (such as hand-held weights or the weight of your own body). It not only improves your muscle mass and strength, but can improve your balance, slow bone loss and also build bone—even if you are over 65. Strength training is good for your heart, too. It can lower your blood pressure and cholesterol, and can help you lower or maintain your weight.

How do I start?
The following strength-training exercises are from the book Growing Stronger: Strength Training for Older Adults,1 but are great for beginners of every age. Do these basic exercises 2–3 times per week, on alternating days, for the greatest benefit.

Talk to your clinician before starting an exercise program, especially if you have a health concern such as a recent fracture, osteoporosis, arthritis, heart disease or any other chronic condition.

What equipment do I need?
• A pair of hand-held weights in 2-lb, 3-lb and 5-lb sets (8-lb and 10-lb sets optional)
• A sturdy chair with a back at least as high as your waist when you are standing
• Athletic shoes with a rubber sole

Strength-training tips to avoid injury and maximize your workout

- Warm up with a 5-minute walk.
- Strength-train two or three times a week for 20–30 minutes.
- Skip a day between strength-training sessions to let your muscles recover.
- When first starting this strength-training program, use no weights, or just 2-lb weights. After the first week or two, use weights that you can lift at least ten times with only moderate difficulty. If a given exercise seems too difficult—if you cannot do at least eight repetitions—then the weight you are using is too heavy and you need to use lighter weights.
- When an exercise becomes too easy (for example, you can do it more than 12 times without much effort), repeat the exercise or use heavier weights. Be sure to adjust your weights gradually and remember that when you use heavier weights, you will not be able to do the same number of repetitions as before. Stop immediately if you feel any pain or discomfort.
- Cool down and stretch after each workout (see exercises on page 5).

A great exercise for strengthening hips, thighs, and buttocks. Before long, you’ll find that walking, jogging and climbing stairs are a snap!

1. Stand directly in front of a sturdy chair. Your feet should be slightly more than shoulder-width apart. Extend your arms so that they are parallel to the ground.

2. Place your weight more on your heels than on the balls of your feet. Bend your knees as you lower your buttocks towards the chair in a slow, controlled motion, while you count to 4.

3. Pause. Then, slowly rise back up to a standing position as you count to 2. Keep your knees over your ankles and your back straight.

4. Repeat the squat ten times. This equals 1 set. Rest for about 1 minute. Then complete a second set of 10 squats.

Make sure you
Don’t sit down too quickly.

Don’t lean your weight too far forward or onto your toes when standing up.

Note 1
Start off by using your hands for support if this exercise is too difficult. Also, if you can’t sit all the way down or if you feel pain or discomfort, place a couple of pillows on the chair or only squat down 4 to 6 inches.

Note 2
Make sure that your knees NEVER come forward past your toes—this can put stress on the knee joint. This will also help you use your hip muscles more as you rise to a standing position.

Does a gallon of milk feel a lot heavier than it used to? After a few weeks of doing the biceps curl, lifting that eight-pound jug will be a cinch!

1. Stand or sit in a chair with a dumbbell in each hand. Your feet should be shoulder-width apart with your arms at your sides and your palms facing your thighs.

2. Rotate your forearms and slowly lift the weights as you count to 2. Your palms should be facing in towards your shoulders. Keep your upper arms and elbows close to your side—as if you had a newspaper tucked under your arm.

3. Pause. Then, slowly lower the dumbbells back towards your thighs as you count to 4. Rotate your forearms so that your arms are again at your sides, palms facing your thighs.

4. Repeat 10 times for 1 set. Rest for about 1 minute. Then complete a second set of 10 repetitions.

Make sure you
Don’t let your upper arms or elbows move away from the sides of your body.

Keep your wrists straight.
This useful exercise targets several muscles in the arms, upper back and shoulders. It can also help firm the back of your upper arms and make reaching for objects in high cupboards easier.

1. Stand or sit in a chair with feet shoulder-width apart. Pick up a dumbbell in each hand. Raise your hands with your palms and forearms facing forward, until the dumbbells are level with your shoulders and parallel to the floor.

2. Slowly push the dumbbells up over your head until your arms are fully extended as you count to 2. Make sure you don’t lock your elbows.

3. Pause. Then, slowly lower the dumbbells back to shoulder level as you count to 4, bringing your elbows down close to your sides.

4. Repeat 10 times for 1 set. Rest for about 1 minute. Then complete a second set of 10 repetitions.

Make sure you
- Keep your wrists straight.
- Relax your neck and shoulders.
- Don’t lock your elbows; keep a slight bend in your arms.
- Don’t let the dumbbells move too far in front of your body or behind it.
- Breathe regularly throughout the exercise.

If a walk in the park no longer seems easy or enjoyable, the toe stand exercise is for you! It will help make that stroll in the park fun and relaxing by strengthening your calves and ankles and restoring stability and balance.

1. Stand with your feet shoulder-width apart near a counter or sturdy chair. Use the chair or counter for balance.

2. Slowly push up as far as you can onto the balls of your feet as you count to 4. Hold this position for 2 to 4 seconds.

3. Then, slowly lower your heels back to the floor as you count to 4.

4. Repeat 10 toe stands for 1 set. Rest for about 1 minute. Then complete a second set of 10 toe stands.

Make sure you
- Don’t lean on the counter or chair—use it for balance only.
- Breathe regularly throughout the exercise.
This is a great strengthening exercise that requires only a set of stairs. But don’t let its simplicity fool you. Step-ups will improve your balance and build strength in your legs, hips and buttocks.

1. Stand next to a handrail at the bottom of a staircase. With your feet flat and toes facing forward, put your entire left foot on the first step.

2. Hold the handrail for balance. As you count to 2, place your weight on your left leg and straighten it as you slowly lift your right leg until it reaches the first step. Make sure that your left knee stays straight and does not move forward past your ankle as you’re lifting yourself up. Let your right foot tap the first step near your left foot.

3. Pause. Then, use your left leg to support your weight and slowly lower your right foot back to the floor as you count to 4.

4. Repeat 10 times with the left leg and 10 times with the right leg for 1 set. Rest for about 1 minute. Then, do a second set of 10 repetitions with each leg.

Make sure you
- Don’t let your back leg do the work.
- Don’t let momentum do the work.
- Press your weight on the heel rather than ball or toes of your front leg as you lift.

Advanced Move:
When you’re ready, you can use 2 stairs rather than 1.

As you age, you may experience a loss of balance. Some of these exercises help to improve your balance, which reduces your risk of falls and fractures. Be sure to follow these precautions. Make sure: 1. the chair you’re using is sturdy and on a stable surface where it cannot move, or 2. you have a sturdy object such as a counter or railing to hold onto throughout the move.
Cool Down • Chest and arm stretch

This simple reaching stretch will improve the flexibility in your arms and chest and in the front of your shoulders.

1. Stand with your arms at your sides and your feet about shoulder-width apart.

2. Extend both arms behind your back and clasp your hands together. Retract your shoulders if possible.

3. Hold the stretch for a slow count of 20 to 30 seconds, breathing throughout.

4. Release the stretch and repeat.

Make sure you
Breathe throughout the stretch.
Keep your back straight, relax your shoulders, and look straight ahead.

Cool Down • Hamstring/calf stretch

If touching your toes with straight legs seems too difficult, you’re not alone. Many people have tight muscles in the back of the leg. This stretch will give these muscles more flexibility and make it easier for you to bend and reach.

1. Stand facing a sturdy chair.

2. Slowly bend forward at the hip, keeping your legs straight without locking your knees. Rest your hands on the seat of the chair with your elbows slightly bent, feeling a stretch in the back of your upper and lower leg. Keep your back flat.

3. Hold the stretch for a slow count of 20 to 30 seconds, breathing throughout.

4. Release the stretch and repeat.

Make sure you
Breathe throughout the stretch and concentrate on relaxing.
Keep your back straight as you bend towards the chair.

Note
If this stretch is too easy and you’re not feeling a comfortable pull in the back of your legs, try bending your elbows more. Try going as far as to rest your forearms and elbows on the seat of the chair. Just make sure you are bending at the hips and keeping your back straight.

The key to strength-training exercises is to start slowly and build up gradually over several months.
Osteoporosis is a disease in which bones weaken over time and may break, particularly as we get older. Here are some tips to keep your bones healthy and strong.

1. Get the recommended amounts of calcium and vitamin D every day: Women over 50 should have 1,200 mg of calcium and 400-800 IU of vitamin D daily.
2. Perform weight-bearing exercise on a regular basis.
3. Stop smoking and avoid excessive alcohol.
4. Talk to your doctor about whether you need a bone mineral density test.

*Recommendations adapted from the National Osteoporosis Foundation (www.nof.org)

For additional Growing Stronger strength-training exercises as well as tips for getting started and setting goals, visit http://www.cdc.gov/nccdphp/dnpa/physical/growing_stronger/. For more information about osteoporosis, visit our Web site at www.harvardpilgrim.org or call our health education line at 1-800-287-9793.