

Getting Started: Strengthening Exercises

What is strengthening exercise?

Strengthening exercises make your muscles stronger by making them work harder. You can make them work hard by pushing or pulling against resistance – sometimes the resistance is just the air, it can be water or gravity, it can be a stretchy band, or it can be a weight – like a little barbell or a can of beans or a water bottle. No matter what you use for resistance, your muscle has to work harder than usual, so it gets stronger.

You can do strengthening exercises for muscles that you use to move or lift objects and for muscles that help with your posture, back pain, or balance.

How many strengthening exercises do I need?

Adults should do

- 8 to 10 different strengthening exercises, 2 to 3 days a week

Start slow. Whenever you are learning a new exercise, take it slow so that your body learns how to do it correctly – that way you'll get the most benefit and prevent injury.

There are two important words to remember for strengthening exercises:

- Repetition means the number of times you do an exercise one right after another. For example, if you do 5 wall push-ups in a row, you have done 5 repetitions.
- A set is a group of repetitions. If you do 5 wall push-ups and then do 5 more wall push-ups, you have done 2 sets of wall pushups (5 repetitions each). One common way to do strengthening exercises is to do 1 set each of a number of different exercises, then start over and do another set of each exercise. That way, your muscles get a chance to rest between sets. You can do sets of 5, 8, or 10 repetitions for each exercise.

When you are getting started, do no more than 1 set of 5 repetitions of any exercise. Work up to doing 1 set of 10 repetitions for each exercise. Then, work up to doing 2 sets of 10 repetitions of each exercise.

Watch your breathing. It is very common to accidentally hold your breath while doing strengthening exercises! You should exhale when you are doing the hard part of the exercise and inhale when doing the easy part of the exercise. You can also count out loud to make sure you are breathing easily.

Exercise safely. Remember to stay hydrated and to warm up and cool down with a 5 minute stroll before and after doing strengthening exercises. When you are doing strengthening exercises:

- Move slowly and gently – don't bounce or jerk.
- Always do the same number of exercises for your left side as for your right.

- Make sure to get at least one day of rest between workouts. Don't exercise any set of muscles more than 3 times a week.
- Don't continue an exercise if you feel pain. Stop the painful exercise for a few days or try it with less weight.
- Watch your form and posture – keep your back straight and don't cheat on form to lift more weight than you can handle.
- Wear shoes with good traction. Use stable pieces of furniture or the wall to help you keep your balance.
- Get advice from a professional before lifting heavy weights.

What kind of weights can I use?

Buy dumbbells at Target, Wal-Mart, or any sports store. You'll want to get 2 each of several weights to use for different exercises and so that you can increase the weight you are lifting over time. Try 1 lb., 3 lb., 5 lb., and/or 8 lb. weights. You can also use homemade weights to start, such as cans or water bottles filled with sand or beans.

What strengthening exercises should I do?

Different exercises work different muscles. Each time you exercise, choose exercises from each of the lists below to strengthen all the major muscle groups in your body (see next page for instructions).

Strengthening exercises for the back and abdomen

- Pelvic tilt
- Floor-Back extension
- Abdominal curl

Strengthening exercises for the legs

- Straight leg raises
- Tiptoes
- Step ups
- Hip abduction
- Knee extension
- Knee curl
- Lunge
- Squats

Strengthening exercises for the arms and shoulders

- Wall push-ups
- Bicep curl
- Overhead press
- Chest press
- Upright row

Guide to Strengthening Exercises

Strengthening exercises for the back and abdomen

Pelvic tilt

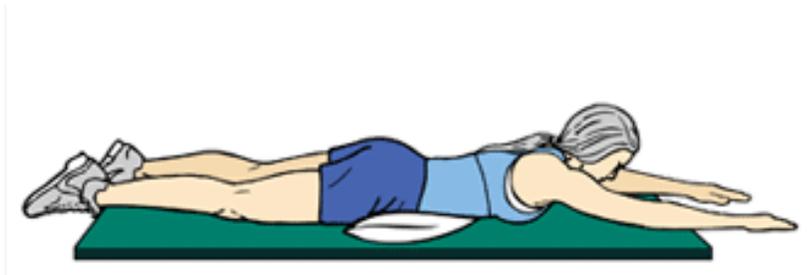
This exercise improves posture and tightens the muscles in your abdomen and buttocks. Do this exercise in conjunction with the floor-back extension to strengthen your midsection.

1. On the floor or on a firm mattress, lie flat on your back with your knees bent, feet flat, and arms at your sides, palms facing the ground.
2. To a count of two, slowly roll your pelvis so that your hips and lower back are off the floor, while your upper back and shoulders remain in place.
3. Pause. Then, to a count of four, slowly lower your pelvis all the way down.
4. Repeat 10 times for one set. Rest for a minute or two. Then complete a second set of 10 repetitions.

Make sure you breathe throughout the exercise and don't lift your upper back or shoulders off the ground.

Floor-Back extension

If you suffer from lower back pain, weak abdominal muscles may be to blame. The floor-back extension, done in conjunction with the pelvic tilt, will strengthen these muscles and ease back pain.



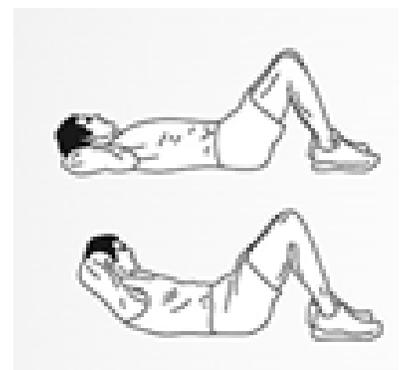
1. Lie on the floor facedown, with two pillows under your hips. Extend your arms straight overhead on the floor.
2. To a count of two, slowly lift your right arm and left leg off the floor, keeping them at the same level.
3. Pause. Then, to a count of four, slowly lower your arm and leg back to the floor.
4. Repeat 10 times for one set, and then switch to left arm with right leg for another 10 repetitions.
5. Rest for a minute or two. Then complete a second set of 10 repetitions.

When doing this exercise, make sure you keep your head, neck, and back in a straight line.

Abdominal curl

The abdominal muscles provide bracing and stability to the trunk of the body. Strengthening this group of muscles can help your posture.

1. Lie on your back on the floor, knees bent and feet flat on the floor.
2. Place your hands behind your head, elbows pointing out.
3. Slowly raise your shoulders and upper back off of the floor to the count of two.



4. Pause. Slowly lower your shoulders back to the floor to the count of two.
5. Repeat 10 times for one set. Rest for one to two minutes. Then complete a second set.

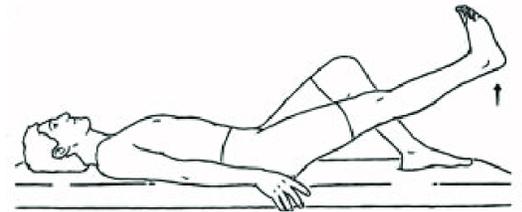
Make sure you:

- Breathe during the movement. Try to exhale as you raise and inhale as you lower.
- Don't pull on your head or neck with your hands.
- Keep your chin lifted toward the ceiling and elbows pointed out throughout the exercise.

Strengthening exercises for the legs

Straight leg raises This exercise strengthens the muscles that bend the hip and straighten the knee.

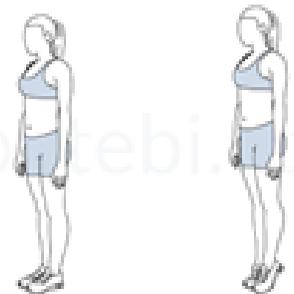
1. Lie on your back, knees bent, feet flat.
2. Straighten your right leg. Tighten the muscle on the top of your right thigh, and straighten the knee as much as possible.
3. Keeping the knee straight, raise your right leg one to two feet off the ground. Do not arch your back.
4. Hold your leg up and count out loud for 4 seconds. Slowly lower your leg back to the floor.
5. Repeat 10 times with the right leg and 10 times with the left leg for one set. Rest for one to two minutes. Then complete a second set of 10 repetitions with each leg.



Tiptoes

This exercise will help strengthen your calf muscles and make walking, climbing stairs, and standing less tiring. It may also improve your balance.

1. Hold onto a counter or table for support and rise up on your tiptoes. (It is easier to do both legs at the same time.)
2. Hold for 4 seconds. Lower slowly. How high you go is not as important as keeping your balance and controlling your ankles.
3. Repeat 10 times. Rest for one to two minutes. Then complete a second set of 10 repetitions.



Step-ups

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 alongside the handrail at the bottom of a staircase. With your feet flat and toes facing forward, put your right foot on the first step.
2. Holding the handrail for balance, to a count of two, straighten your right leg to lift up your left leg.



slowly until it reaches the first step. As you're lifting yourself up, make sure that your right knee stays straight and does not move forward past your ankle. Let your left foot tap the first step near your right foot.

3. Pause. Then, using your right leg to support your weight, to a count of four, slowly lower your left foot back to the floor.
4. Repeat 10 times with the right leg and 10 times with the left leg for one set. Rest for one to two minutes. Then complete 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 through the heel rather than ball or toes of your front leg as you lift.

Hip abduction

By targeting the muscles of the hips, thighs, and buttocks, this exercise makes your lower body shapelier and strengthens your hipbones, which may be especially vulnerable to fracture as you age.

1. Stand behind a sturdy chair, with feet slightly apart and toes facing forward. Keep your legs straight, but do not lock your knees.
2. To a count of two, slowly lift your right leg out to the side. Keep your left leg straight – but again, do not lock your knee.
3. Pause. Then, to a count of four, slowly lower your right foot back to the ground.
4. Repeat 10 times with the right leg and 10 times with the left leg for one set. Rest for one to two minutes. Then complete a second set of 10 repetitions with each leg.



Make sure you:

- Don't lock your knee on the supporting leg.
- Keep your toes facing forward throughout the move.
- Don't lean to the side when you lift your leg.

Knee extension

By targeting the quadriceps muscles in the front of the thigh (which play a primary role in bending and straightening the leg), this exercise strengthens weak knees and reduces the symptoms of arthritis of the knee. It is important to do this exercise in conjunction with Exercise 10, the "knee curl," as the muscles targeted in these two exercises – the front thigh muscles and the hamstrings – work together when you walk, stand, and climb. Use ankle weights for this exercise.

1. Put on your ankle weights.
2. In a sturdy, armless chair, sit all the way back, so that your feet barely touch the ground; this will allow for easier movement throughout the exercise. If your chair is too low, add a rolled-up towel under your knees. Your feet should be shoulder-width apart, and your arms should rest at your sides or on your thighs.



3. With your toes pointing forward and your foot flexed, to a count of two slowly lift your right leg, extending your leg until your knee is straight.
4. Pause. Then, to a count of four, slowly lower your foot back to the ground.
5. Repeat 10 times with the right leg and 10 times with the left leg for one set. Rest for a minute or two. Then complete a second set of 10 repetitions with each leg.

Make sure you keep your ankle flexed throughout the move.

Knee curl

This is an excellent exercise for strengthening the muscles of the back of the upper leg, known as the hamstrings. When done in conjunction with the knee extension, it makes walking and climbing easier. Use ankle weights for this exercise.

1. Put on your ankle weights.
2. Stand behind a sturdy chair, with feet shoulder-width apart and facing forward.
3. Keeping your foot flexed, to a count of two slowly bend your right leg, bringing your heel up toward your buttocks.
4. Pause. Then, to a count of four, slowly lower your foot back to the ground.
5. Repeat 10 times with your right leg and 10 times with your left leg for one set. Rest for a minute or two. Then complete a second set of 10 repetitions with each leg.



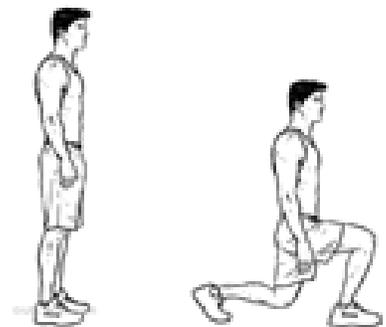
Make sure you:

- Keep the thigh of the bending leg in line with the supporting leg at all times.
- Keep the foot on the bending leg flexed throughout the move.

Lunge

The lunge strengthens the muscles of the upper leg and hips.

1. Stand next to a counter or sturdy chair with your feet about shoulder-width apart. Hold the counter or chair with your right hand for balance.
2. Take a large step forward with your right foot.
3. Bend your right knee and lower your hips toward the floor. Make sure that your right knee stays above your right ankle as you lower.
4. Push against the floor with your right foot to raise yourself up and step back to the starting position.
5. Repeat 10 times with your right leg for one set.
6. Rest for one to two minutes. Then repeat with your left leg.



Make sure you:

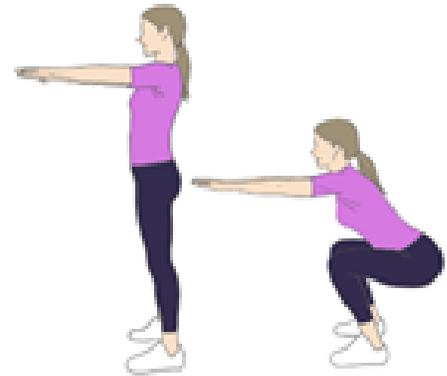
- Don't allow your front knee to move forward past your toes.

- Keep your upper body straight and erect during the exercise. Don't lean forward or backward.
- Try to lower your hips until your front thigh is parallel to the floor. If that's too difficult, just lower as far as you can.

Squats

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

1. In front of a sturdy, armless chair, stand with feet slightly more than shoulder-width apart. Extend your arms out so they are parallel to the ground and lean forward a little at the hips.
2. Making sure that your knees NEVER come forward past your toes, lower yourself in a slow, controlled motion, to a count of four, until you reach a near-sitting position.
3. Pause. Then, to a count of two, slowly rise back up to a standing position. Keep your knees over your ankles and your back straight.
4. Repeat 10 times for one set. Rest for one to two minutes. Then complete a second set of 10 repetitions.



Note 1: If this exercise is too difficult, start off by using your hands for assistance. If you are unable to go all the way down, place a couple of pillows on the chair or only squat down four to six inches.

Note 2: Placing your weight more on your heels than on the balls or toes of your feet can help keep your knees from moving forward past your toes. It will also help to use the muscles of your hips more during the rise to a standing position.

Make sure you:

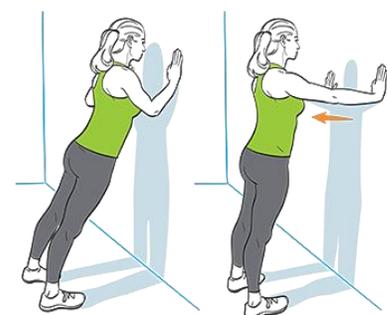
- Don't sit down too quickly.
- Don't lean your weight too far forward or onto your toes when standing up.

Strengthening exercises for the arms and shoulders

Wall push-ups

This exercise is a modified version of the push-up you may have done years ago in physical education classes. It is less challenging than a classic push-up and won't require you to get down on the floor – but it will help to strengthen your arms, shoulders, and chest.

1. Find a wall that is clear of any objects – wall hangings, windows, etc. Stand a little farther than arm's length from the wall.
2. Facing the wall, lean your body forward and place your palms flat against the wall at about shoulder height and shoulder-width apart.
3. To a count of four, bend your elbows as you lower your upper body toward the wall in a slow, controlled motion,



keeping your feet planted.

4. Pause. Then, to a count of two, slowly push yourself back until your arms are straight – but don't lock your elbows.
5. Repeat 10 times for one set. Rest for one to two minutes. Then complete a second set of 10 repetitions.

Make sure you don't round or arch your back.

Bicep curl

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 seem a cinch! You will need weights (or cans or water bottles) for this exercise.

1. With a dumbbell in each hand stand, or sit in an armless chair, with feet shoulder-width apart, arms at your sides, and palms facing your thighs.
2. To a count of two, slowly lift up the weights so that your forearms rotate and palms face in toward your shoulders, while keeping your upper arms and elbows close to your side – as if you had a newspaper tucked beneath your arm. Keep your wrists straight and dumbbells parallel to the floor.
3. Pause. Then, to a count of four, slowly lower the dumbbells back toward your thighs, rotating your forearms so that your arms are again at your sides, with palms facing your thighs.
4. Repeat 10 times for one set. Rest for one to two minutes. Then complete a second set of 10 repetitions.



Make sure you:

- Don't let your elbows move away from the sides of your body.
- Keep your wrists straight.

Overhead press

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. You will need weights (or cans or water bottles) for this exercise.

1. Stand or sit in an armless chair with feet shoulder-width apart. With a dumbbell in each hand, raise your hands, palms facing forward, until the dumbbells are level with your shoulders and parallel to the floor.
2. To a count of two, slowly push the dumbbells up over your head until your arms are fully extended—but don't lock your elbows.
3. Pause. Then, to a count of four, slowly lower the dumbbells back to shoulder level, bringing your elbows down close to your sides.
4. Repeat 10 times for one set. Rest for one to two minutes. Then complete a second set of 10 repetitions.

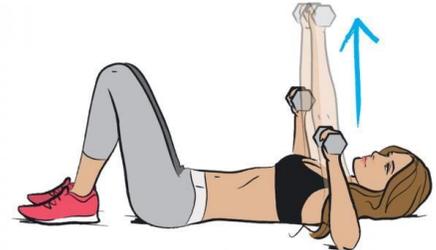


Make sure you:

- Keep your wrists straight.
- Don't lock your elbows.
- Don't let the dumbbells move too far in front of your body or behind it.
- Breathe throughout the exercise.

Chest press

This exercise targets the muscles of the chest and shoulders. You will need weights (or cans or water bottles) for this exercise.



1. Lie on your back on the floor, knees bent and feet flat on the floor.
2. Hold a dumbbell in each hand at chest level, about shoulder width apart. Your elbows should be bent and your palms should face your knees.
3. Slowly straighten your arms toward the ceiling, directly above your chest to a count of two.
4. Pause. Slowly lower the dumbbells back to your chest, to a count of four.
5. Repeat 10 times for one set. Rest for one to two minutes. Then complete a second set.

Make sure you raise the dumbbells directly above your chest. Don't let your arms move toward your head or your waist as you lift.

Upright row

This exercise strengthens upper arms and upper back muscles. You will need weights (or cans or water bottles) for this exercise.

1. Stand with feet about hip-width apart, holding a dumbbell in each hand.
2. Hold the dumbbells in front of your thighs, palms facing your thighs.
3. Bend your elbows and raise the dumbbells in front of your body, to the count of two, until they are at shoulder height. Raise your elbows slightly higher than the dumbbells.
4. Pause. Lower the dumbbells, to the count of four, to the starting position.
5. Repeat 10 times for one set. Rest for one to two minutes, then complete a second set.



Make sure you keep your back straight throughout the exercise.

Source

Living a Healthy Life with Chronic Conditions
CDC Physical Activity for Everyone (<http://www.cdc.gov/nccdphp/dnpa/physical/everyone.htm>)