

Strengthening Your Core

Your body's core is the area around your trunk and pelvis (hips) and is where your center of gravity is located. All body movement involves the core. A weak core can cause poor posture, lower back pain, and increased risk for injury. The benefits of a strong core include:

- Increased protection and support for your back
- Controlled movement
- Improved balance

Strengthening your core requires regular and proper exercise of your body's core muscles. Here are some basic core exercises:

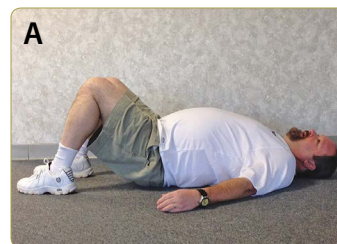
- Before you start to exercise your body's core, locate your deepest abdominal muscle – the transversus abdominis – by coughing once. The muscle you feel contracting is your transversus abdominis. We will refer to this muscle as your “abdominals.”
- Focus on keeping this muscle contracted while doing each of these exercises, and the rest of your core muscles get a workout, too. Once you know how to contract your abdominal muscles, begin the core muscle exercises.
- With each exercise, breathe freely and deeply and avoid holding your breath. Coordinate your breathing with the tightening of your abdominals to get the maximum benefit.



Bridge

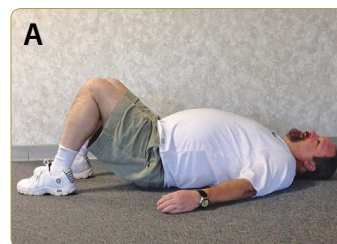
This exercise works many of your core muscles in combination.

- Lie on your back with your knees bent (A). Keep your back in a neutral position – not overly arched and not pressed into the floor. Avoid tilting your hips up.
- Cough to tighten your abdominals. Holding the contraction in your abdominals, raise your hips off the floor (B).
- Align your hips with your knees and shoulders. Hold this position and take three deep breaths.
- Return to the start position and repeat. For a challenge, extend one knee while maintaining the bridge position (no picture).



Single-leg abdominal press

- Lie on your back with your knees bent and your back in a neutral position (A). Cough and hold to activate your abdominals.
- Raise your right leg off the floor – so that your knee and hip bend at 90-degree angles – and rest your right hand on top of your right knee (B).
- Push your hand forward while using your abdominal muscles to pull your knee toward your hand. Hold for three deep breaths and return to the start position.
- Repeat this exercise using your left hand and left knee. Keep your arm straight and avoid bending more than 90 degrees at your hip.



Trunk rotation

- Lie on your back on the floor with your knees bent and your back in a neutral position. Cough and hold to tighten your abdominals.
- Keeping your shoulders on the floor, let your knees fall slowly to the left (A). Go only as far as is comfortable – you should feel no pain, only a stretch.
- Use your trunk muscles to pull your legs back up to the start position. Repeat the exercise to the right (B).



Crunch

- Lie on your back and place your feet on a wall with a 90-degree bend at your knees and hips. Cough and hold to activate your abdominals.
- Imagine two dots in a vertical line on your abdomen – one above and one below your bellybutton. Imagine pulling those dots together.
- Use your trunk muscles to raise your head and shoulders off the floor. To avoid straining your neck, cross your arms on your chest, rather than locking them behind your head, and don't raise your head more than shown. Hold for three deep breaths, then return to the start position and repeat.



Quadruped

- Start on your hands and knees with your hands directly below your shoulders and your head and neck aligned with your back (A).
- Cough and hold your abdominals tight. Raise one arm off the floor and reach ahead (B). Hold for three deep breaths, return your arm and raise your other arm.
- Repeat the exercise by raising each leg (C).
- Challenge yourself by raising one arm and the opposite leg together (D). When raising your leg, avoid rolling your pelvis. Center your hips and tighten your trunk muscles for balance. Do this on both sides.

