

Exercises and Stretches for a Healthier Lower Back



Hamstrings - Sit in a figure-4 position on the floor. While maintaining a curve in the low back, lean forward until a comfortable stretch is felt behind the thigh of the straight leg. Hold for 30 seconds, repeat 3 times on each side.

Hamstrings - Lie on your back on the floor with one leg out straight and the other slightly bent and held upright. Slowly straighten the knee and bend the toes backward. A comfortable stretch should be felt behind the knee and calf. Hold for 30 seconds, repeat 3 times on each side.

Lie flat on your back with your body in the doorway with one leg extended through the opening and the other propped up against the door jam. The raised leg should have a "soft" (slightly bent) knee. The leg that is extended through the door may be slightly bent to limit low back strain. Relax both legs and simply allow the stretch to occur gradually. As the stretch feeling decreases, move your buttock closer to the door jam. This stretch should be felt behind the knee and thigh. Remain in the stretched position for 2-5 minutes, once daily. Repeat on the opposite side.



Piriformis Muscle - Lie on the floor on your back. Bend your left hip and knee into a 90°/90° position and place the left foot on a chair or sofa. Place your right ankle on your left knee in a figure four position. A gentle stretch will be felt in the right buttock. The stretch may be increased by pulling the right knee toward the left shoulder. Repeat on the opposite side. *Duration: 2 minutes. Repetitions: 1-2. Two alternate stretches are shown below.*



Alternate technique - While sitting at the edge of your chair and your feet firmly planted on the floor, cross your right ankle onto the left knee. Lift your chest in order to develop a curve in the low back. While holding onto your right ankle with your left hand, and right knee with your right hand, lean forward slightly. A comfortable stretch should be felt in the right buttock.

The Proper Sit-up/Crunch - Never hook your feet beneath a couch or chair to perform a sit-up. Rather, place your legs on the couch so that your hips and knees are in a 90°/90° position. This removes the stress from the lower back and places it on the abdominal muscles [where it should be].

Rectus Abdominus [front abdominal muscle] - Perform a center crunch by raising your shoulder blades [scapulae] off the ground as high as possible without losing your PPT. Keep your chin slightly tucked and DO NOT pull on your neck. Simply place your hands across your chest or your fingertips behind your ears. Hold for 5 seconds. Be mindful of your lower back. Again, you should only raise as high as you can without arching your lower back. Slowly lower your body.



Obliquus Abdominus [side abdominal muscles] - First perform a center crunch then alternate by bringing your shoulder (NOT elbow) to the opposite knee, return to the center, then slowly lower your body. If your abdomen begins to shake, even after a few repetitions, you are most likely doing it correctly!!



Pelvic Bridges - This exercise is also used to progressively improve stability to the low back. Begin by lying on your back with your feet flat on the floor. Perform an abdominal brace and lift the buttock from the floor. The low back should remain neutral. Hold for 10 seconds. Repeat at least 10 times.

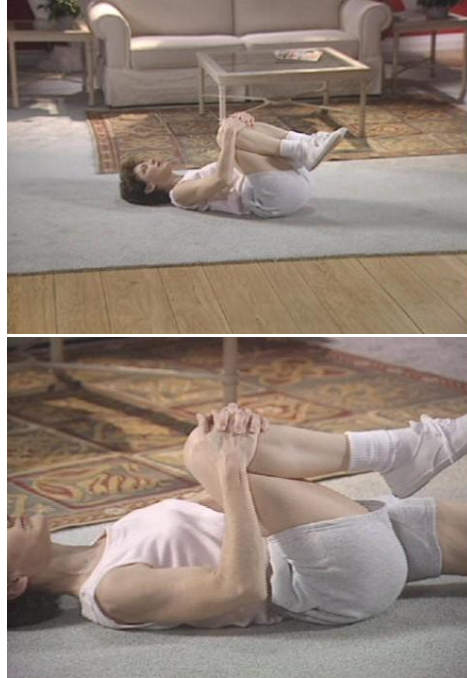
When this becomes easy, try slightly lifting one foot from the floor. Begin by keeping the knee bent and raise only a couple of inches. Progress to the point where you can straighten the leg fully. It is important to watch the pelvis when performing this exercise. It should not drop at all when you lift the foot from the floor. If it does, go back to an easier version.

Knee to Chest Stretches for the Lumbar Spine Muscles

– This is probably the most common and simplest stretch for the low back. Lay flat on your back with the knees bent so that your feet and low back are flat on the surface. With your hands, draw one knee to the chest and hold for ten seconds; repeat on the opposite side; repeat with both legs together. (Figure) Next, repeat the entire process, but this time draw your knee to the opposite shoulder. Keep your shoulders facing forward. Repeat on the opposite side.

Duration: 30 seconds. Repetitions: 2-3.

For an added stretch, lie on your back and hold both knees firmly to the chest. While resisting your hands, push your knees toward the ceiling for eight seconds. Release and pull toward the chest again, keeping the back flat. Repeat several times.



Prayer Stretches for the Lumbar Spine Muscles - While kneeling with your hands flat on the floor, reach overhead to feel a stretch along the entire spine. Perform a slight posterior pelvic tilt. Next, sit back onto your heels to increase the stretch. In order to focus the stretch on one side, reach toward the opposite side before sitting back. *Duration: 30 seconds. Repetitions: 2-3.*

The **iliopsoas** and **rectus femoris** muscles may be stretched together. Begin in a kneeling position with the right knee on the floor. Remain upright and perform a slight posterior pelvic tilt so that a comfortable stretch is experienced at the front of the right thigh. Be sure to relax the right thigh. Bend the left knee slightly to increase the stretch. *Hold for 30 seconds. Repeat 3 times.*





The **quadratus lumborum** (QL) muscle attaches to the lower two ribs, all of the low back vertebrae and crest of the pelvis. It is commonly found to be tight and may restrict low back mobility. In order to stretch the QL, lay on one side with the elbow beneath the shoulder. Extend the arm to raise the upper body from the floor. Keep the trunk and lower body in a straight line and relax the low back and lower body. This is a tricky one. The stretch should be felt on the side closest to the floor. Avoid rolling backward. *Hold for 30 seconds. Repeat 3 times*

Quadruped Exercises - In order to coordinate and strengthen the muscles controlling the low back (erector spinae) and hip (gluteus maximus), a series of progressively more difficult exercises may be initiated. First, you must master the abdominal hollow exercise.

Begin on all 4s with the hands beneath the shoulders and knees beneath the hips. Draw in the abdomen beneath the naval and continue to breathe. Slowly slide one leg straight out and straighten behind you. Work to prevent the low back from extending by bracing the abdomen. Hold for 10 seconds. Repeat on the opposite side.

Next, do the same with the upper extremities. Be sure to draw the shoulder blade (scapula) down when performing this exercise (as though you were trying to pull it into your opposite back pocket).

Once mastered, try combining the two. Ten repetitions of each exercise are recommended, but if you are not able to maintain proper form, begin with fewer.



Gluteus Medius – Lay on one side with the bottom knee bent. Place the palm of the upper hand on the crest of the hip. Turn the upper leg in so that the toe is pointing toward the floor and raise slowly. Monitor the position of the pelvis with the upper hand and do not hike the hip. Repetitions: to fatigue.

Quadratus Lumborum Strengthening - Begin by lying on one side with both knees bent. Brace the abdominal muscles. Slowly raise the pelvis from the floor and hold for 10 seconds. Repeat 10 times.

To make this exercise more difficult, perform with the legs straight.



Photos Courtesy of PhysioVideo