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## EXERCISES FOR SCIATICA FROM A HERNIATED DISC

Leg pain or sciatica (also known as radiculopathy) from a herniated disc is commonly caused by disc material protruding backwards and irritating or compressing a nerve root, which in turn causes pain to radiate along the sciatic nerve.

Specific exercises for sciatic pain from a herniated disc are prescribed according to which positions will cause the patient's symptoms to move up the lower extremity and into the low back.

### **Extension exercises**

For many patients, getting the pain to move up from the leg to the low back is accomplished by getting into a backwards bending position, called *extension exercises or press-ups*.

- The low back is gently placed into extension by lying on the stomach (prone position) and propping the upper body up on the elbows, keeping hips on the floor (**Figure 1**). This should be started slowly, since some patients cannot tolerate this position at first.
- Hold the press-up position initially for five seconds, and gradually work up to 30 seconds per repetition. Aim to complete 10 repetitions.

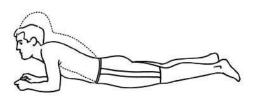


Figure 1: Rise up on elbows, keeping hips on floor.

After practicing this exercise, the spine specialist may recommend a more advanced form of the extension:

- From the prone position (lying flat on the stomach), press up on the hands while the pelvis remains in contact with the floor (**Figure 2**). Keep the lower back and buttocks relaxed for a gentle stretch.
- This position is typically held for 1 second, repeated 10 times.



Figure 2: Press up on hands slowly, keeping hips in contact with floor. Relax low back and buttocks.

If the patient is unable to lie flat, a similar exercise can be done standing by arching backward slowly with hands on hips (**Figure 3**). However, the prone position described above is usually preferred.



Figure 3: Standing backward bend. With hands on hips and knees slightly bent, arch back slowly and slightly.

These extension exercises are done regularly, about every two hours. More importantly, the spine specialist may recommend that the patient with this condition should avoid getting into a forward flexed (bent over) position. This tends to counteract the effects of the extension exercises. The specialist may ask the patient to correct any forward flexed positions immediately by doing an extension exercise.

### Advanced sciatica exercises for abdominal muscles and back muscles

As the patient's pain works out of the lower extremity (leg) and centralizes in the low back, the exercises typically are advanced to strengthen the low back and abdominal muscles to prevent recurrences of sciatic pain caused by a herniated disc.

Low back muscle strengthening exercises:

• *Upper back extension*. In the prone position with hands clasped behind the lower back, raise the head and chest slightly against gravity (**Figure 4**) while looking at the floor (stay low). Begin by holding position for 5 seconds, and gradually work up to 20 seconds. Aim to complete 8-10 repetitions.



Figure 4: Clasp hands behind back and lift hands and chest slightly off floor, keeping chin tucked.

• In the prone position with the head and chest lowered to the floor, lightly raise an arm and opposite leg slowly, with the knee locked, 2-3 inches from the floor (<u>Figure 5</u>). Begin by holding position for 5 seconds, and complete 8-10 repetitions. As strength builds, aim to hold position for 20 seconds.



Figure 5: With knee straight, raise one leg and opposite arm 2-3 inches off floor.

Abdominal muscle strengthening exercises:

• *Curl-ups*. For the upper abdominals, the patient should lie on the back with knees bent, fold arms across the chest, tilt the pelvis to flatten the back, and curl-up lifting the head and shoulders from the floor (**Figure 6**). Hold for two to four seconds, then slowly lower to starting position. As strength builds, aim to complete two sets of ten curls. Do not attempt to lift too high, and bring the head and chest towards the ceiling. For patients with neck pain, place the hands behind the head.



Figure 6: Fold arms across chest, flatten back by tightening lower abs, raise head and shoulders from floor.

• For the lower abdominals, tighten the lower stomach muscles and slowly raise the straight leg 8 to 12 inches from the floor (<u>Figure 7</u>), keeping the low back held flat against the floor. Hold leg raise for eight to 10 seconds, then slowly lower to starting position. As strength builds, aim to complete two sets of ten lifts.



Figure 7: Tighten lower abs to flatten back, slowly raise straight leg 8-12 inches off floor.

• Water exercises are also excellent to strengthen the lower abdominal muscles, and even just walking in waist-deep water can be helpful.

#### Other forms of sciatica exercise

Aerobic conditioning may also be encouraged for general body fitness. In general, walking is an excellent form of exercise for the low back because it is relatively low impact but can provide all the benefits of an aerobic workout. Walking tends to relieve pain from <u>radiculopathy</u>. If possible, it is best to gradually progress to doing up to three miles of exercise walking at a brisk pace each day.