



LUMBAR EXTENSION EXERCISES

TREATING UNCOMPLICATED DISC
DISORDERS WITH EXERCISE ©

Your Better Back



DISCLAIMER

No advice is a replacement for a competent doctor. This information is not intended to be a substitute for the advice of your doctor, but rather a supplementation to your patient-doctor relationship. This information is not intended to provide self-diagnosis and treatment of herniated discs. It is intended to help educate patients who know that they have a condition that does not require surgery.

The risks of self-care include delaying timely and appropriate professional care and possible risk of permanent impairment.

“The views expressed in this book are those of the author and do not necessarily reflect the official policy or position of the Department of the Navy, Department of Defense, nor the U.S. Government.”

It should be noted that in more severe disc injuries the disc derangement may be severe enough that it is not affected by extension or is made worse with extension exercises. Listen to your body. If these exercises or any advice given in this presentation increases the level of pain or causes pain to extend further down a leg, discontinue the exercise or activity immediately.

Lumbar extension exercises should be introduced in a graduated and systematic manner. If you cannot tolerate these exercises, you may have a more serious disc injury.

Begin by testing your tolerance by laying on your stomach. If you are able to tolerate this posture, or if it reduces your symptoms or reduces the extent of leg pain, you may progress to the next level by raising up a little by using your arms.

No exercise program, including this one, should be started without the consent and approval of your physician.

Lumbar disc derangements are frequently characterized by lower back pain that is worse with sitting, bending, and compression (lifting). Disc derangements, such as herniations, frequently are responsible for buttocks pain, sciatica, and leg pain. While severe disc derangements may require surgical intervention, uncomplicated disc disorders are frequently managed conservatively with lifestyle modifications, exercise prescriptions, chiropractic, and physical therapy.

What determines if my back pain requires a consultation with a surgeon?

Certain spinal symptoms require an immediate surgical consultation: Loss of bowel or bladder control, urinary retention, neurological sexual dysfunction, muscle weakness or flaccidity, neurological deficit, numbness of the genitalia, numbness in the distribution of a saddle.

Less urgent symptoms that may need a surgical consultation include severe and disabling back pain or shooting pain into the legs that is refractory (does not respond) to other treatments and that lasts more than four to eight weeks.

TERMINOLOGY: FLEXION AND EXTENSION

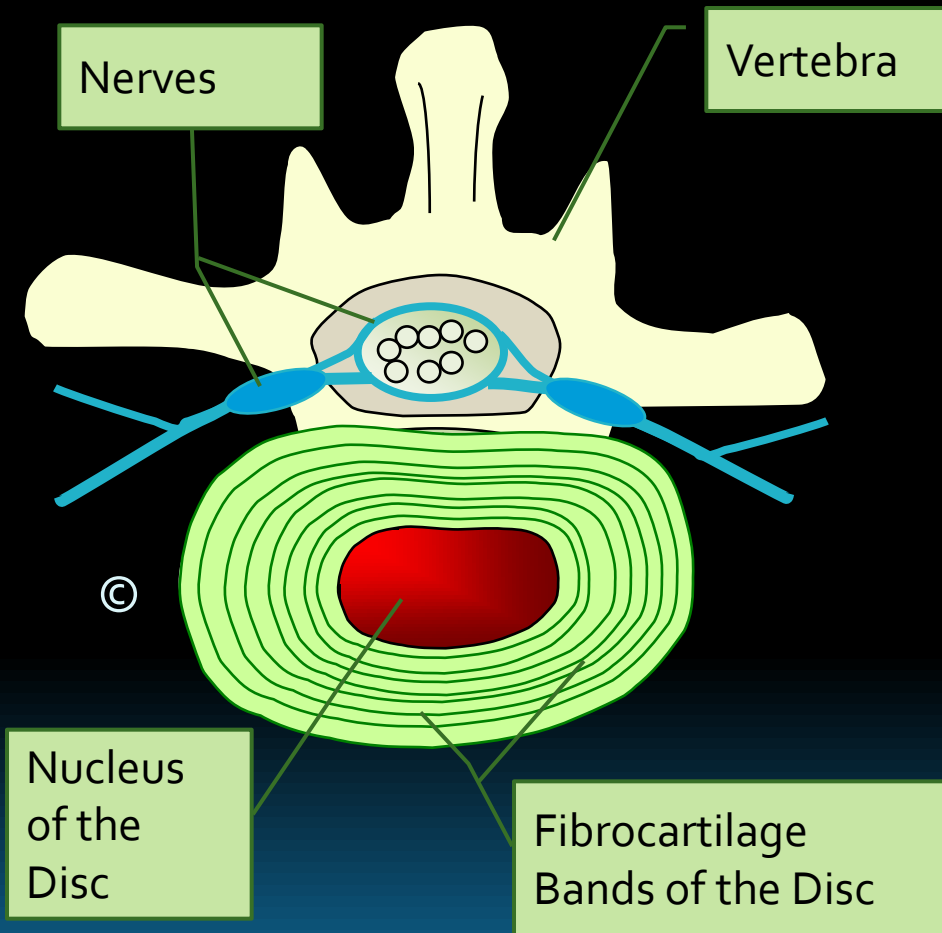


Extension of the spine : Arching your spine backward.

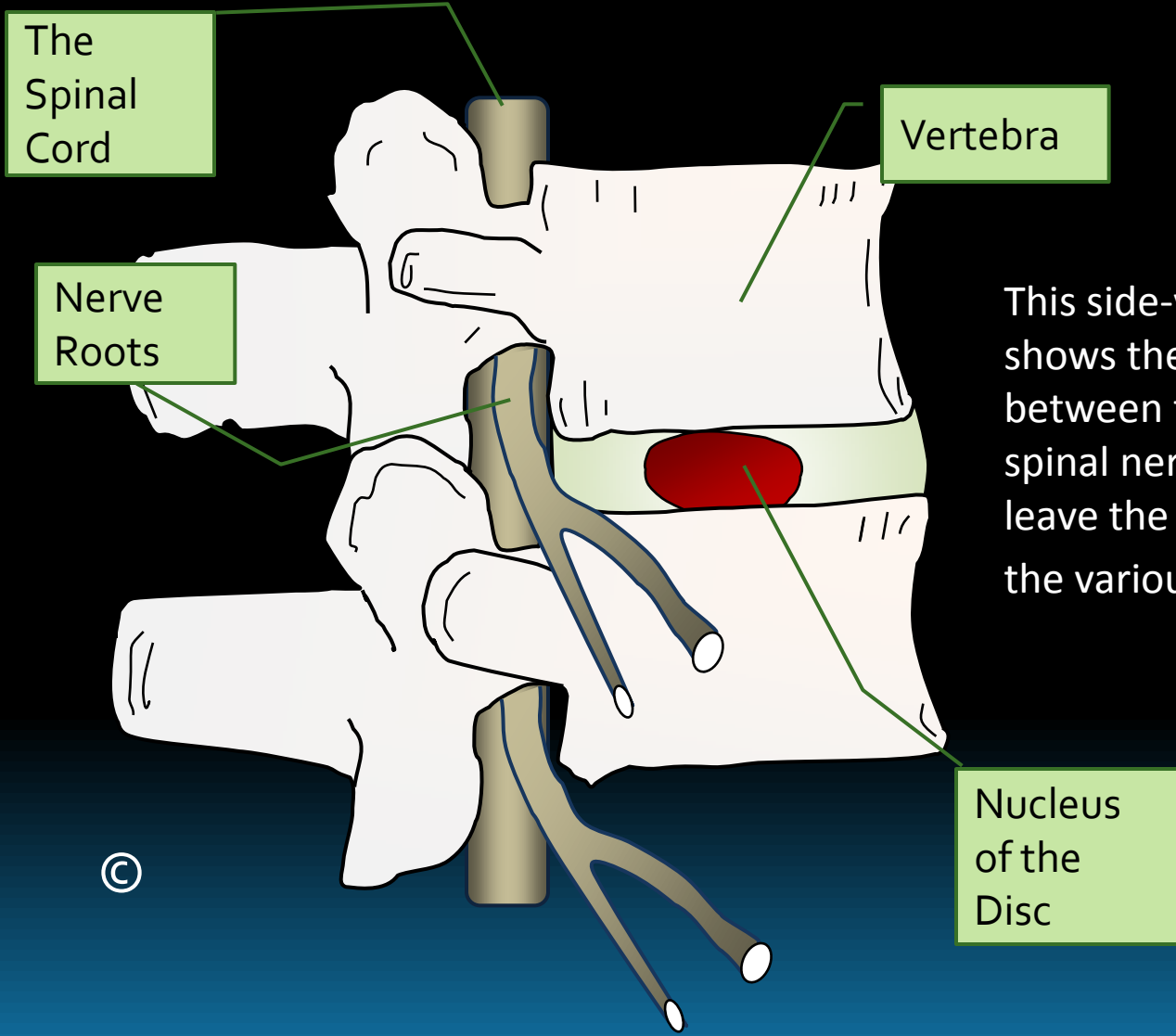


Flexion of the spine : Bending your spine forwards.

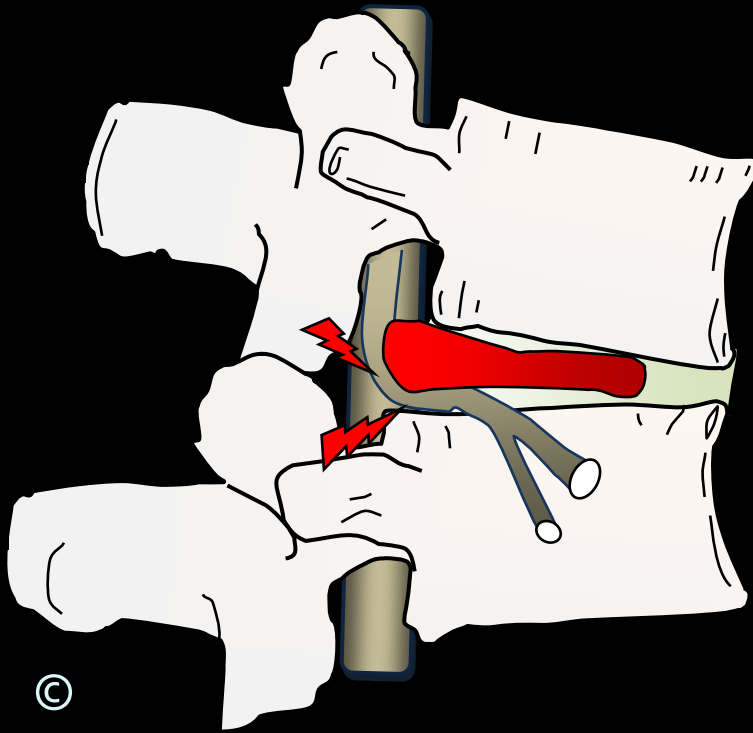
ANATOMY: THE DISC



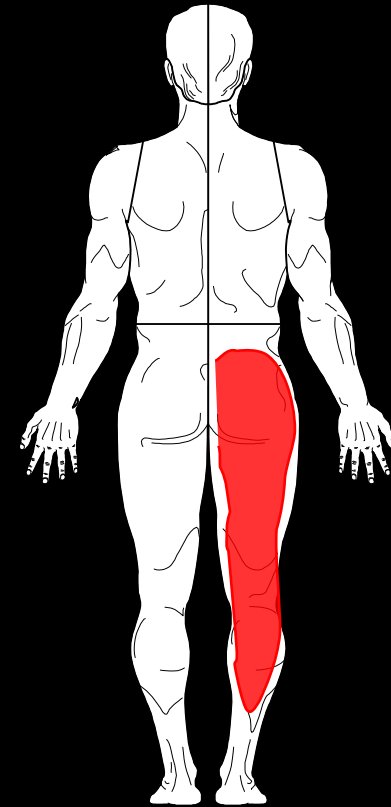
This cross-sectional schematic shows the relationship between the lumbar disc and the spinal nerves.



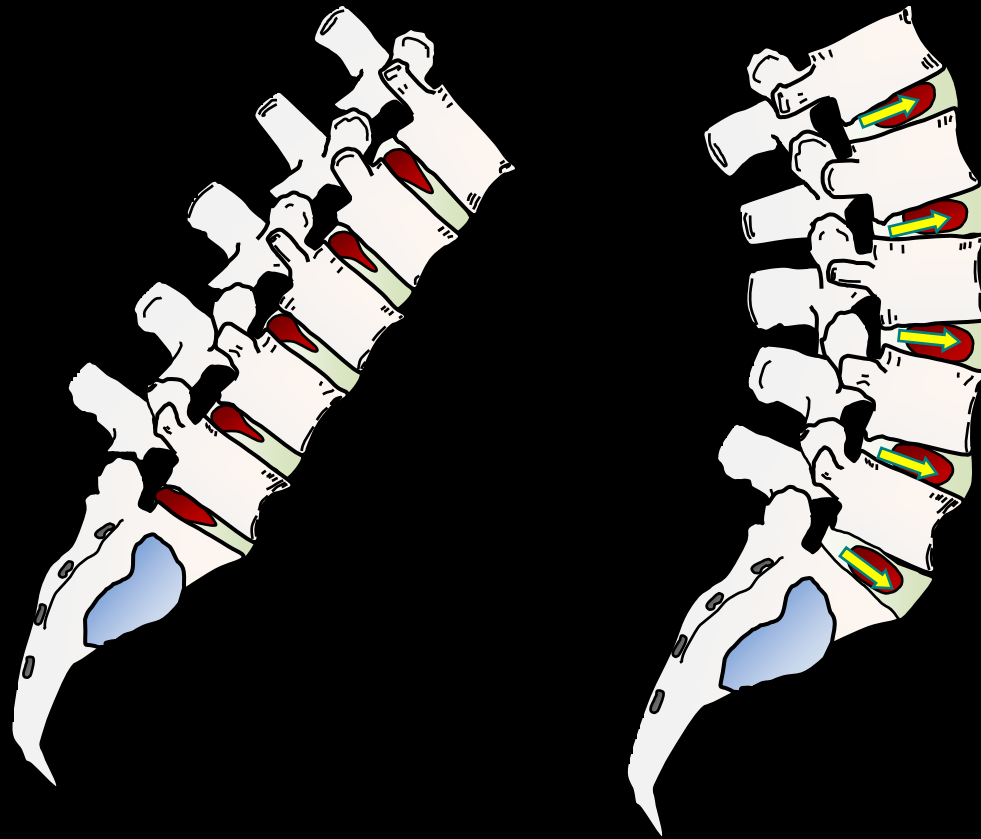
This side-view schematic shows the relationship between the disc and the spinal nerves. The nerves leave the spine and travel to the various parts of the body.



When the lumbar disc is disrupted it can interfere with the spinal nerves. This can result in sciatica, muscle weakness, and other neurological symptoms.

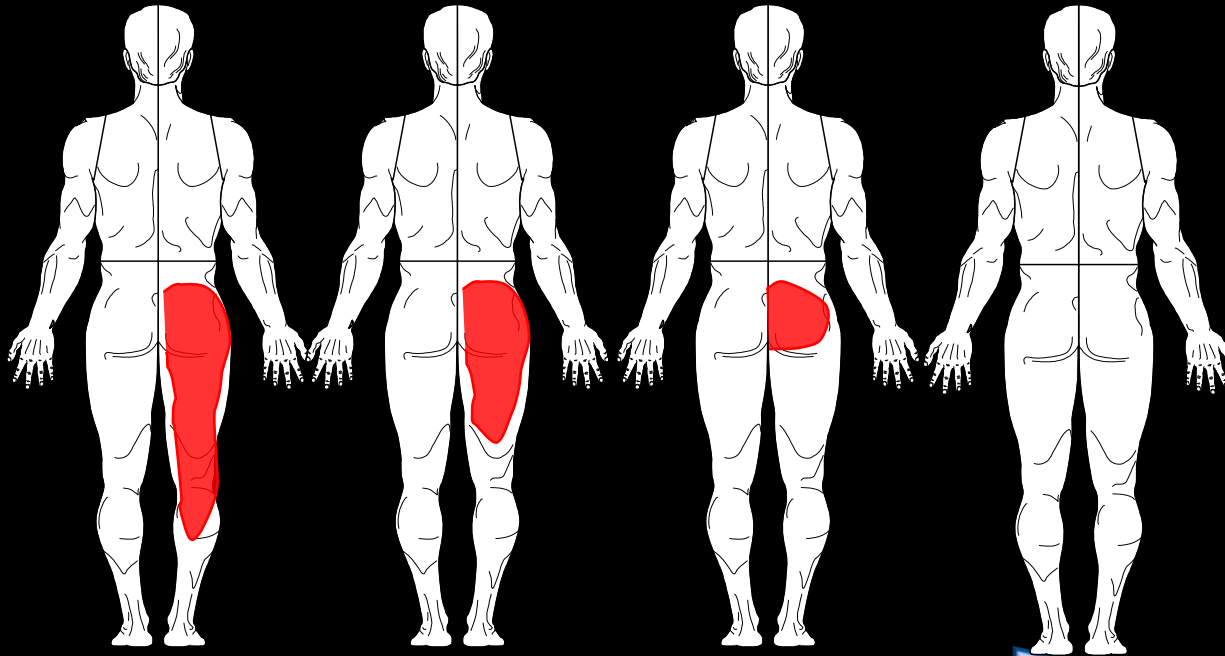


Leg pain caused by irritation of spinal nerves is called sciatica.



The premise of the extension exercises is based on the expectation that lower back extension manipulates the gel-filled nucleus away from nerves. We know that in healthy discs bending forward (flexion) causes a distortion backward toward the spinal nerves. Extension helps to manipulate, at least in healthy discs, the gel away from the spinal nerves.

Measuring Response to Treatment



Centralization (good)

Peripheralization (bad)

This schematic shows various distributions of leg pain in sciatica. Treatment that results in centralization (symptoms regressing to a more central location) is considered to be successful, while treatment that results in peripheralization (symptoms extending further down the leg) is not successful. If extension exercises cause peripheralization, discontinue them immediately.

The Exercises



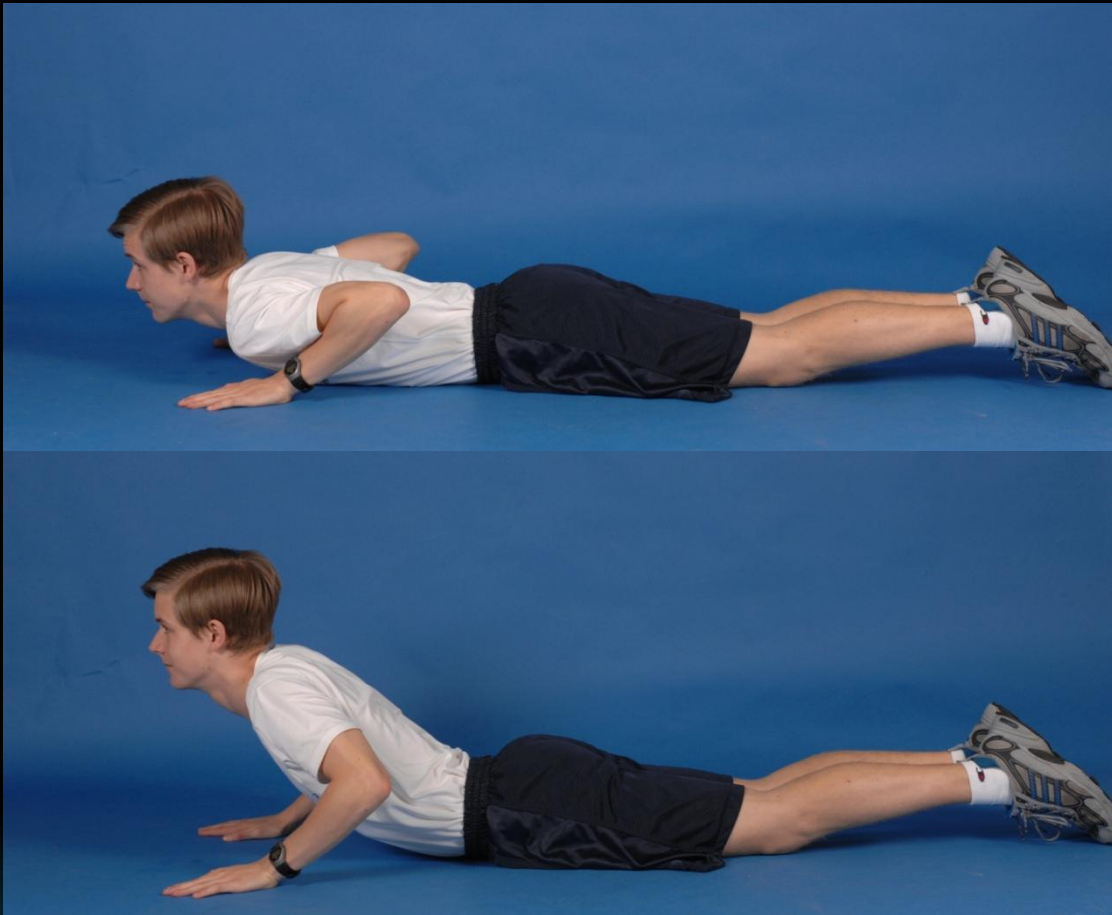


Begin by laying on your stomach. If you are not obese, this will put a slight arch in your lower back. Lay in this position for 5-10 minutes. If this is well tolerated, or if it reduces your symptoms, you may progress to the next step.



Rest on your elbows for 30 seconds to 5 minutes, then lie back down. This may be repeated every hour until symptoms regress. You may reduce the frequency, duration of extension, or the number of repetitions to accommodate your tolerance of this exercise.

This exercise may be modified by using pillows placed under your chest to help prop you into position. Slowly return to the neutral position. Rapidly straightening out may produce discomfort.



Using your arms to gently push up increase the arch of your lower back. Stop if you experience pain, or if any legs symptoms (including pain, numbness, weakness) extend further as a result of this exercise. Progress to step three.

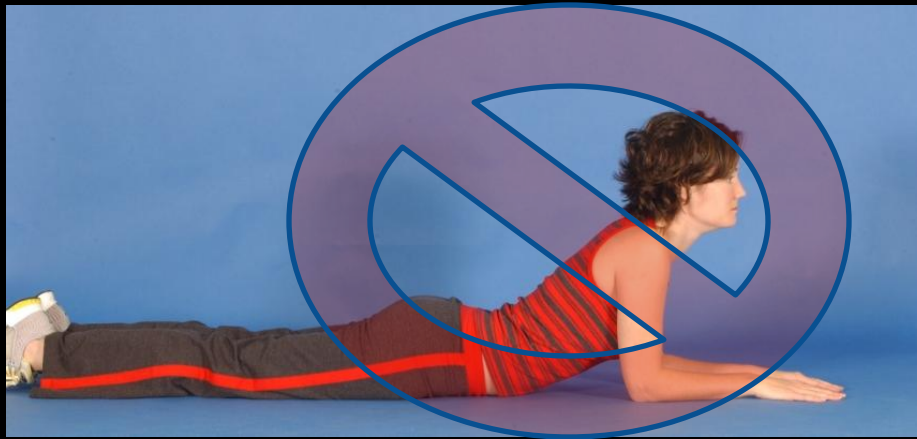


Progress to full extensions as you are able to tolerate this exercise. Hold in the extended position for 8 seconds. Slowly lower your upper body. Repeat up to 10 times.



Standing lumbar extensions:
Place your elbows against a wall for support and as a spacer. Glide your pelvis toward the wall until a comfortable arch is produced. You may be able to touch the wall with your pelvis. Hold for 20 seconds and repeat. Standing extensions may be performed throughout the day. They are particularly beneficial after sitting or bending.

When to Avoid Extensions

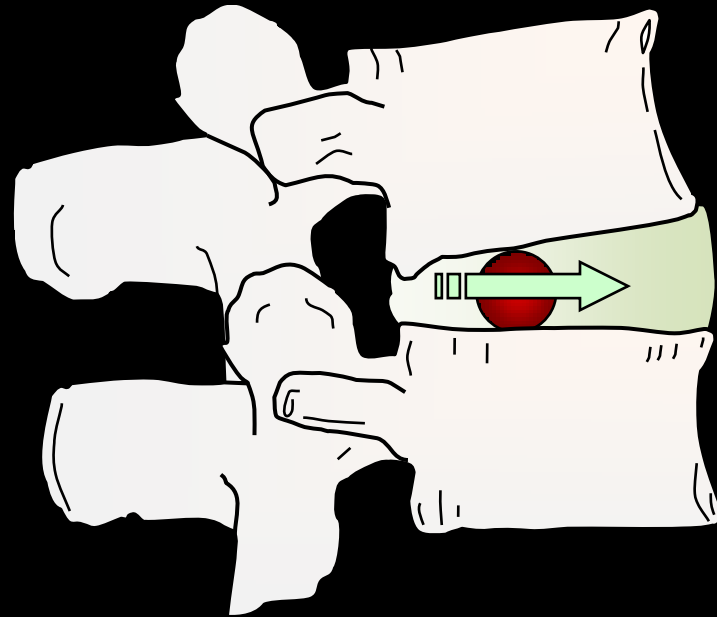


Certain conditions can be made worse with extension exercises. These include spondylolysis, spondylolisthesis, spondylosis, stenosis, facet disease, arthritis, or degenerative disc disease.

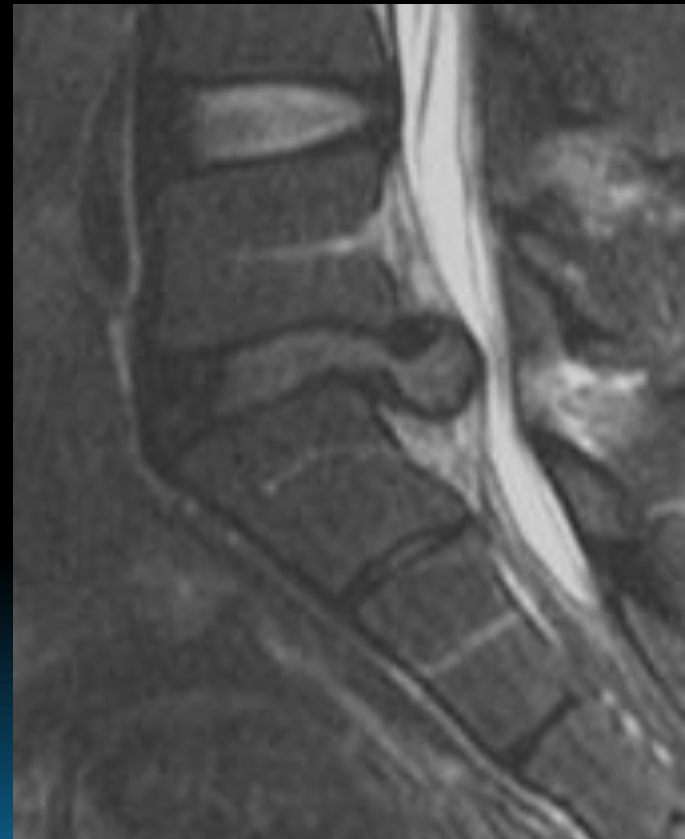
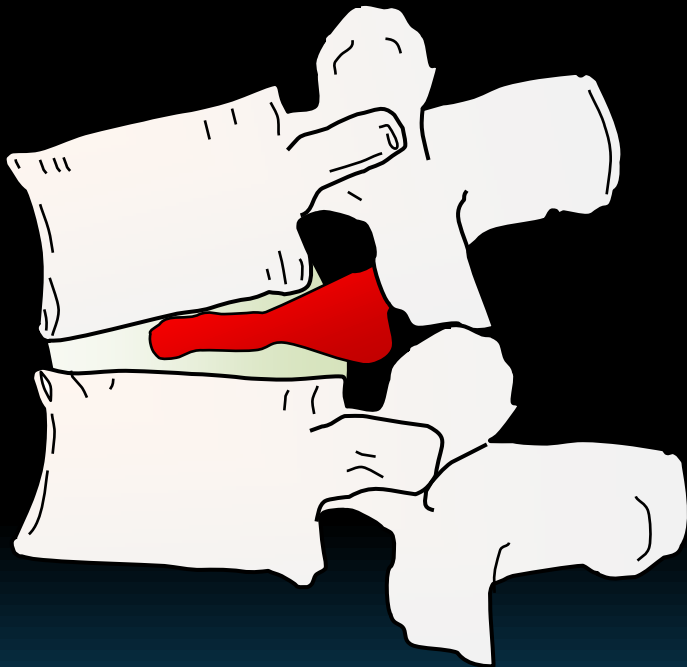
Pregnant women and anyone with recent spinal surgery should not perform these exercises. Pregnant women may perform standing extension exercises under the supervision of their physician, if extension placates the pain.

Also avoid extension if peripheralization occurs (if extension causes a further progression of pain down the leg).

Lumbar extension exercises are based on the concept that the gel-filled “nucleus” of *healthy* discs migrate forward away from the spinal nerves when the lumbar spine is arched. More evidence is needed to confirm that this phenomenon occurs in *diseased or herniated discs*.



Some disc lesions are so large that they are not able to benefit from extension exercises. Some conditions will even worsen with extensions. Moderation and physician supervision is advised for managing disc injuries.

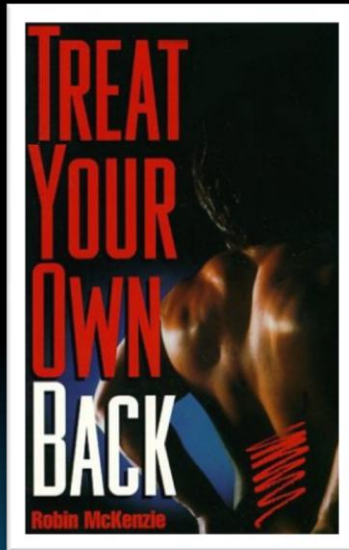


Patients with disc herniations generally should avoid flexion of the spine. They should avoid exercises such as these stretches:



Acknowledgements:

Extension exercises have been [reportedly] utilized in yoga for centuries. It was not until the 1960s that Robin McKenzie identified extension exercises as a reasonable method for treating sciatica within mainstream healthcare. In yoga these exercises are called the sphinx or the cobra. Extension exercises are commonly referred to as “McKenzie Exercises.” To fully understand McKenzie’s methodology you may read his [book](#):



For more information on spine related
topics visit:

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