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Prevention

What is radiculopathy?

Radiculopathy is a condition due to a compressed nerve in the spine that can cause pain, numbness, tingling, or weakness along the course of the nerve. Radiculopathy can occur in any part of the spine, but it is most common in the lower back (lumbar radiculopathy) and in the neck (cervical radiculopathy). It is less commonly found in the middle portion of the spine (thoracic radiculopathy).

What causes radiculopathy?

Radiculopathy is caused by compression or irritation of the nerves as they exit the spine. This can be due to mechanical compression of the nerve by a disc herniation, a bone spur (osteophytes) from osteoarthritis, or the thickening of surrounding ligaments.

Other less common causes of mechanical compression of the nerves are a tumor or infections. Either of these can reduce the amount of space in the spinal canal and compress the exiting nerve.

Scoliosis can cause the nerves on one side of the spine to become compressed by the abnormal curve of the spine.

Inflammation from trauma or degeneration can lead to radiculopathy from direct irritation of the nerves.

Risk factors for radiculopathy are activities that place an excessive or repetitive load on the spine. Patients involved in heavy labor or contact sports are more prone to develop radiculopathy than those with a more sedentary lifestyle. A family history of radiculopathy or other spine disorders also increases the risk of developing radiculopathy.

What are the symptoms of radiculopathy?

The symptoms of radiculopathy depend on which nerves are affected. The nerves exiting from the neck (cervical spine) control the muscles of the neck and arms and supply sensation there. The nerves from the middle portion of the back (thoracic spine) control the muscles of the chest and abdomen and supply sensation there. The nerves from the lower back (lumbar spine) control the muscles of the buttocks and legs and supply sensation there.

The most common symptoms of radiculopathy are pain, numbness, and tingling in the arms or legs. It is common for patients to also have localized neck or back pain as well. Lumbar radiculopathy that causes pain that radiates down a lower extremity is commonly referred to as sciatica. Thoracic radiculopathy causes pain from the middle back that travels around to the chest. It is often mistaken for shingles.

Some patients develop a hypersensitivity to light touch that feels pain in the area involved. Less commonly, patients can develop weakness in the muscles controlled by the affected nerves. This can indicate nerve damage.

Diagnosis of radiculopathy

The diagnosis of radiculopathy begins with a medical history and physical examination by the physician. During the medical history, the doctor will ask questions about the type and location of symptoms, how long they have been present, what makes them better and worse, and what other medical problems are present. By knowing the exact location of the patient's symptoms, the doctor can help localize the responsible nerve. The physical examination will focus on the extremity involved. The doctor will check the patient's muscle strength, sensation, and reflexes to see if there are any abnormalities.

The patient may then be asked to obtain imaging studies to look for a source of radiculopathy. Plain X-rays are often obtained first. These can often identify the presence of trauma or osteoarthritis and early signs of tumor or infection. An MRI scan may then be obtained. This study provides the best look at the soft tissues around the spine including the nerves, the disc, and the ligaments. If the patient is unable to obtain an MRI, they may obtain a CT scan instead to explore possible compression of the nerves.

In some cases, the doctor may order a nerve conduction study or electromyogram (EMG). These studies look at the electrical activity along the nerve and can show if there is damage to the nerve.



— QUESTION —

Nearly everyone has low back pain at some time during their life.

[See Answer](#)

What is the treatment for radiculopathy?

Fortunately, most people can obtain good relief from their symptoms of radiculopathy with conservative treatment. This may include anti-inflammatory medications, physical therapy or chiropractic treatment, and avoiding activity that strains the neck or back. The majority of radiculopathy patients respond well to this conservative treatment, and symptoms often improve within 6 weeks to 3 months.

If patients do not improve with the treatments listed above they may benefit from an epidural steroid injection. With the help of an X-ray machine, a physician injects steroid medication between the bones of the spine adjacent to the involved nerves. This can help to rapidly reduce the inflammation and irritation of the nerve and help reduce the symptoms of radiculopathy.

In some cases, the symptoms continue despite all of the above treatment options. If this occurs and the symptoms are severe, surgery may be an option. The goal of the surgery is to remove the compression from the affected nerve. Depending on the cause of the radiculopathy, this can be done by a laminectomy or a discectomy. A laminectomy removes a small portion of the bone covering the nerve to allow it to have additional space. A discectomy removes the portion of the disc that has herniated out and is compressing a nerve.

What is the prognosis for radiculopathy?

The outlook for radiculopathy is good. The majority of patients respond well to conservative treatment options. Those patients that need surgical procedures typically obtain good results as well with no long-term restrictions.

- Radiculopathy is caused by compression or irritation of a nerve as it exits the spinal column.

- Symptoms of radiculopathy include pain, numbness, tingling, or weakness in the arms or legs.
- Most patients with radiculopathy respond well to conservative treatment including medications, physical therapy, or chiropractic treatment.
- Radiculopathy may resolve within 6 weeks to 3 months.

Can radiculopathy be prevented?

There is no specific prevention for radiculopathy. Maintaining a reasonable weight, good muscle conditioning, and avoiding excessive strain on the neck and back can reduce the chances of developing radiculopathy.

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Medically Reviewed on 7/5/2023

Low Back Pain: 11 Stretches & Exercises for Relief

Reviewed By: Charles Patrick Davis, MD, PhD

Reviewed on 1/18/2022

How Can I Relieve My Lower Back Pain?



You feel it each time you bend over or stand up. It's that groan-inspiring ache that shoots through your lower back and never seems to fully go away. Sometimes called **lumbago** or **spondylosis**, lower back pain is one of the most common forms of chronic pain among adults.

Maybe you've been resting, hoping the back pain just needs time to heal. But most doctors now encourage lower back pain sufferers to get active and move their backs and related muscles as a better pain relief treatment.

Movement can help relieve back pain, but only the right kind; avoid workouts that put too much stress and strain on the back. So which exercises should you choose? That partly depends on how intense your pain is, and what causes it. So, you should always get the recommendation of your doctor before doing any heavy exertion for lower back pain.

The following slides present several simple exercises that can help relieve lower back pain, and also highlight a few activities to avoid. With your doctor's approval, adding these movements to your workout routine can free you from your nagging, daily pain, leading to better overall health.

Skip the Toe Touches



Fitness is often a great treatment for back pain, but some movements offer you little health benefit. Toe touches can harm your back. Toe touches from a standing position can aggravate sciatica and other conditions by overstressing ligaments and spinal disks. Another cause for concern is the way standing toe touches can overstretch hamstrings and muscles in your lower back.

How Much Pain Is Too Much?

Some mild discomfort and pain can be expected anytime you start a new workout. As you work your way back to better health and your muscles strengthen, that pain and discomfort should disappear. But when a fitness routine causes moderate or severe pain symptoms that lasts longer than 15 minutes, you should end the exercise and check in with your doctor.

Pain Relief: Try Partial Crunches



Crunches are great for your back. One of the classic core-strengthening workouts is the partial stomach crunch. Partial crunches build strength in both your lower back and related stomach muscles, making this an ideal exercise for people with spondylosis.

Here's how to get the most out of partial crunches:

- Lie back, and keep your feet flat on the floor with your knees bent.

- With your hands behind your head or with arms crossed around your chest, raise your shoulders from the floor. Make sure to keep your stomach muscles tight.
- Breathe out while raising your shoulders. Avoid leading with your elbows (or yanking your neck off the floor with your arms).
- Hold for one second. Next, lower yourself back down to the floor in a controlled manner.
- Repeat with between eight and 12 repetitions. Remember to follow proper form, which prevents excessive spine stress. Keep your feet, tailbone, and lower back against the floor throughout the exercise.

Skip the Sit-Ups



Sit-ups are a fitness standard, but they're not as good at strengthening your core as you may think.

Although most people see sit-ups as a stomach-strengthening activity, in reality people often use their hip muscles more than their stomachs when doing this exercise.

Not only are these a poor choice for core strength, but sit-ups create pressure on spinal disks, which can lead to injury by increasing your lower back pain rather than lowering it. To maintain good health and improve low back pain, try more suitable workouts like the ones outlined further on

Hamstring Stretches

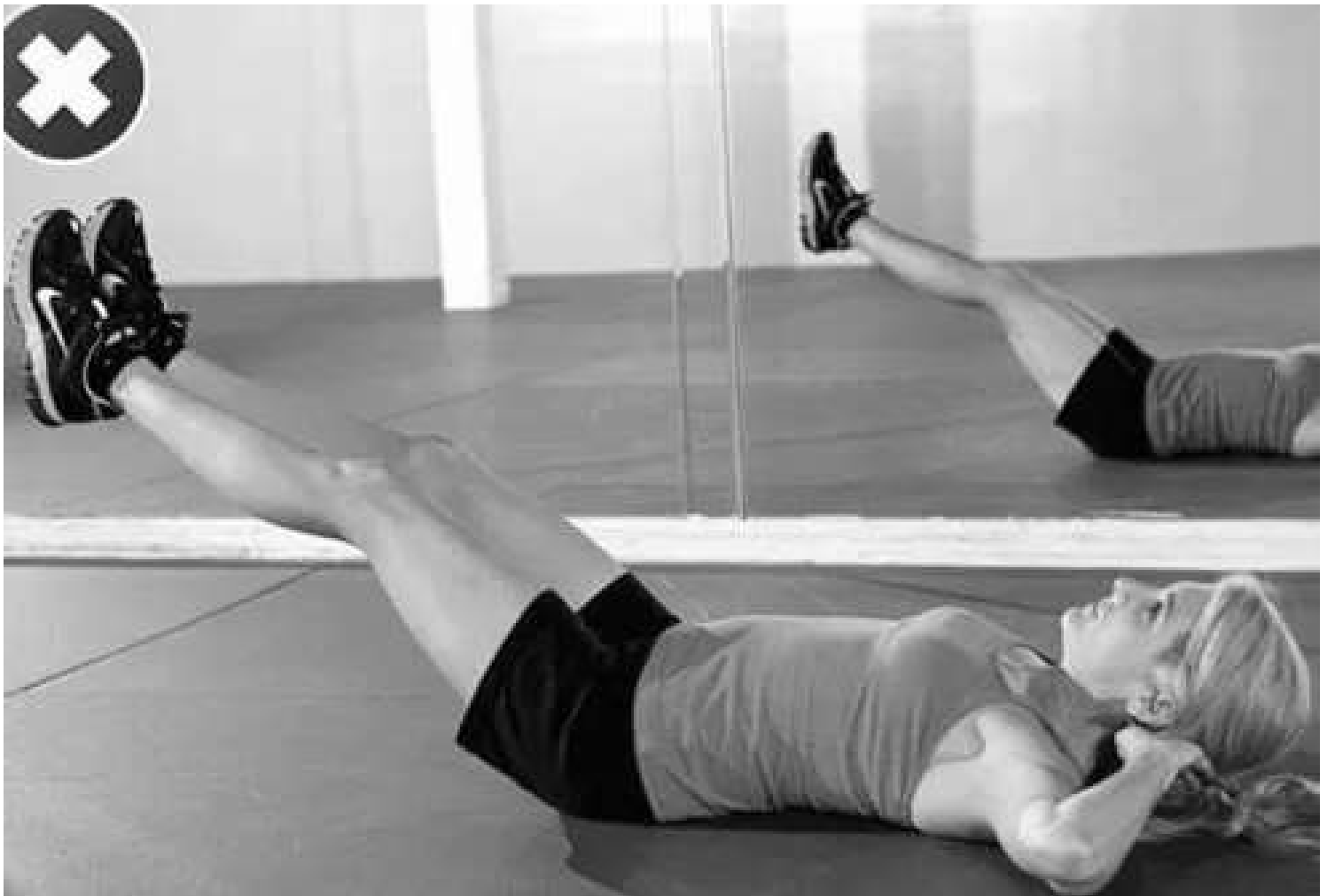


Hamstring stretches relieve the back of your leg, where some of the muscles that support the work of your lower spine are found. As shown in the photo, this is a stretch that benefits from the use of a towel or fitness band.

To perform a hamstring stretch, follow these steps:

- First, lie on your back with one knee bent.
- Next, thread a towel beneath the ball of the foot on the unbent leg.
- Pull back on the towel slowly, straightening your knee. You ought to feel a gentle stretch along the back of your leg.
- Hold the stretch for at least 15-30 seconds.
- For each leg, repeat 5 times.

Avoid Leg Lifts



Once in a while, leg lifts are suggested as useful treatments for lower back pain. That's because they help strengthen abdominal muscles, which play an important part in back health. Unfortunately, lying on your back and lifting both legs together can worsen back pain, and could cause injury.

Instead of relying on leg lifts for better spine health, try this modified leg lift for lower back pain:

- First, lie on your back. Leave one leg straight, and bend the other leg at the knee.
- Next, lift the straight leg slowly up about six inches from the ground and briefly hold it in this position.
- Finally, slowly lower the leg.
- Repeat 10 times with the left leg, then switch to the right leg.

Wall Sits



When it comes to low back pain, try some wall sits as a break from sitting on the couch. To do these wall sits properly and without injury, follow these steps:

- Stand with your back facing the wall at a distance of about 10 to 12 inches.
- Carefully lean into the wall until your spine is flat against it.
- Slide down the wall slowly until your knees are bent slightly. Continue to press your low back into the wall.
- Hold this position for a count of 10, then carefully slide back up the wall. Repeat 8 to 12 times.

Press-up Back Extensions



Another treatment for back pain symptoms is the press-up back extension. Here are the steps:

- Lie on your stomach. Position your hands directly underneath your shoulders.
- Push down on your hands. You should feel your shoulders begin to lift away from the floor.

- If you can do so comfortably, set your elbows on the floor directly beneath your shoulders. Then spend several seconds holding this position.

Bird Dog



It's a bird! It's a dog! No, it's a fitness routine to ease low back pain! The bird dog is a great way to learn to stabilize the low back during movements of the arms and legs. Here's how it is done:

- To begin, get on your hands and knees.
- Tighten your abdominal muscles.
- With one leg, lift and extend it behind you while keeping your hips level.
- Hold that position for a full five seconds.

- Now switch to the other leg.
- For each leg, repeat eight to 12 times. For an added challenge, try lengthening the time you hold each lift.
- For each repetition, try lifting and extending your opposite arm in front of you.
- Don't allow your lower back muscles to sag.
- Stay in position—don't lift your arms or legs any higher than the low back position can maintain.

Knee to Chest



Here's another way to get your legs pumping as a treatment for low back pain symptoms. Follow these directions to perform a safe knee-to-chest workout..

- Lie on your back. Put your feet flat on the floor and bend your knees.
- Draw your right knee up to your chest. Keep the left foot flat against the floor.
- Hold for 15-30 seconds. Meanwhile, be sure to keep your lower back flat on the floor.
- Next, lower your right knee. Repeat the routine with the left leg.
- For each leg, perform knee-to-chest two to four times.

Pelvic Tilts



Before back pain has you writhing on the floor with the usual symptoms, try lying on your back for some pelvic tilts. This workout is designed to strengthen your pelvis, which often works in concert with the core muscles along your spine. Making sure your abdomen can pull its fair share means your spine pain will have one less possible cause.

- Lie with your back and upper body on the floor with your knees bent. Keep your feet flat on the floor.
- Pull in your stomach. Imagining your belly button is being pulled toward your backbone—this helps keep your stomach tight. Doing this, you will notice your hips rocking back as your back and spine press into the floor.
- Hold this movement for 10 seconds, allowing your breath to smoothly enter and exit your chest.
- Repeat your pelvic tilts eight to 12 times.

Glute Bridges (Bridging)



Bridging offers so much for the symptoms of back pain. This exercise helps strengthen various supporting players for your back like the hamstrings, glutes, transverse abdominis, abdomen and hips. It also works directly to strengthen your lower back. Follow these steps to assure a safe and rewarding bridge workout:

- Lie with your back to the floor, knees bent with only your heels touching the floor.
- Dig your heels into the floor. Squeeze down on your glutes. Lift your hips up until your shoulders, hips, and knees make a single, straight line.
- Hold this position for about six seconds.
- Slowly bring your hips back to the floor and give yourself about 10 seconds of rest.
- Repeat bridges eight to 12 times.

There are a couple of things to remember when bridging. First, try not to arch your lower back while your hips are moving upward. Next, avoid overarching. You can do that by keeping your abdomen tight both before and throughout the lift.

Carefully Choose a Weight Lifting Regimen



If properly done, weight lifting will not exacerbate your back pain. In fact, you may feel that pain start to melt away as weight lifting begins to strengthen your lower back and supporting body parts.

However, when your back pain comes on suddenly (what doctors call acute pain), the additional stress of weight training could put you in harm's way, potentially leading to injury. To use weight lifting as a back-pain treatment, start by talking to your doctor. Your doctor can advise you on whether or not to lift weights. If they are recommended, your physician can advise you on which workouts to stay away from.

Aerobic Exercises



Aerobic exercises are good for your back, and your whole body. Aerobic workouts—sometimes called cardio—help strengthen the whole cardiovascular system, from the lungs and heart down to the blood vessels themselves. Aerobics can include biking, swimming, walking, or many other exercises that elevate your heart rate and get you moving. To start, try a short session. Then over time, lengthen the session as your stamina improves.

Since back pain sometimes requires special care, try swimming as a treatment for your symptoms. In swimming, the water supports your body weight, giving your back a break. Be careful to avoid any strokes that require your body to twist.

Some Pilates



A routine that incorporates strengthening and stretching with a focus on the abdominal core sounds ideal for those who suffer from back pain symptoms. Pilates is a training workout that sometimes uses an apparatus called a Reformer (adds resistance with the use of springs) to emphasize flexibility and endurance along with strength. But many Pilates exercises can be performed without any special equipment.

With help from an experienced instructor, Pilates may help some people with low back pain. Make sure your instructor knows about your pain ahead of time, as you may need to skip some moves.

Sources: 🔍

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