

Epidural steroid injections for back pain Worth a shot, or should you skip it?

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People with lower-back pain have several options for potential relief, including spinal manipulation, massage, medication, surgery, and simply letting time pass. But steroid injections are an increasingly popular option for lower-back pain—even though the Food and Drug Administration has [not approved them for this use](#).



Controversy surrounds these injections, and use has increased dramatically in recent years, along with escalating costs. The injections have been an option for those with lower-back pain that also travels down the buttock or leg, often referred to as nerve-root pain or sciatica. Some experts believe that their growth reflects—in part—the rising prevalence of lower-back pain. But others suspect it's driven by financial incentives. Our analysis of the evidence, based on a recent report by the American Society of Health-System Pharmacists and several published reviews and treatment guidelines, suggests that while the shots might have limited value by providing short-term relief to some people, in most cases people should try other measures first.

What's the evidence?

Several conditions can put pressure on the nerves that go from the base of your spine to the sciatic nerve that runs down each leg. That pressure can inflame and irritate the nerve, causing pain—often with numbness and tingling—known as "radicular pain." Those conditions include a sed (herniated) disk, arthritis, [diabetes](#), and degenerative changes in which the spine grows bony bumps.



Steroids injected into the spine—typically in an area called the epidural space, between the vertebrae and the protective covering of the spinal cord—can temporarily reduce inflammation around the irritated nerve.

But three professional organizations—the American Pain Society, the American Society of Interventional Pain Physicians, and the American Academy of Neurology—recently reached the same basic conclusion. While some evidence suggests that the shots can ease lower-back pain caused by nerve problems in the short-term, they're not going to provide long-term benefits. The neurology group, for example, concluded that treatment had no impact on functional impairment, the need for surgery, or pain relief beyond three months.

And a Cochrane review of studies focused only on back pain (not radiating to the leg) concluded that there was insufficient evidence to support the use of any type of injection therapy for pain that is only in the lower back.

"They can be overused," says Charles E. Argoff, M.D., a professor of neurology at Albany Medical College and director of the Comprehensive Pain Program at the Albany Medical Center. "This is especially true when they are performed on people who have pain only in their lower back or another type of pain that will not likely be helped by an epidural steroid injection. But a properly selected patient—for example, one who has nerve-root irritation based on physical examination and testing—may attain approximately 4 to 6 weeks of relief on average. That's often enough to get that person into an [exercise program and jump-start the healing process](#)."

Moreover, while steroid injections are generally safe they can pose some rare risks, including elevated blood sugar, fluid retention, weight gain, [hypertension](#), osteoporosis, menstrual irregularity, suppression of the body's stress system, and a hormonal disorder known as Cushing's syndrome. (But these are fairly unlikely at the doses used for this procedure.)

Risks from the injection itself include such complications as meningitis, inflammation of the lining of the spinal cord, damage to the spinal cord, nerve injury, and paralysis. Another rare but serious risk is an epidural abscess, which can cause incontinence, urinary retention, fever, and back pain. And the shots can cause several minor (and short-lived) side effects, including headaches, dizziness, facial flushing, increased back or leg pain, nausea, vomiting, and pain at the injection site.

Try other options first

Because of the limited known benefits of the shots so far and the potential risks, our consultants say it's best to try [noninvasive measures first](#). "The vast majority of patients with their first episode of lower-back pain or sciatica will be better within four to six weeks with conservative treatment alone," says Richard W. Rosenquist, M.D., a professor of anesthesia and director of the pain medicine division at the University of Iowa.



Conservative treatments include medication, hot and cold compresses, physical therapy, [exercise](#), and nontraditional therapies such as acupuncture, massage, and spinal manipulation. (CR readers [rated hands-on therapies](#) in a recent survey as some of the most effective treatments for their lower back pain.)

[Acetaminophen](#) (Tylenol and generic) or nonsteroidal anti-inflammatories, such as [asibuprofen](#) (Advil and generic) or [naproxen](#) (Aleve and generic) are good first-choice drugs to treat lower-back pain. But NSAID prescription

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medication, such as [diclofenac](#), could be considered if those aren't sufficient. Be wary of narcotic pain relievers—opioids such as [hydrocodone](#) (Vicodin and generic), [oxycodone](#) (Oxycontin and generic), [oxycodone and aspirin](#) (Percodan and generics), or [oxycodone with acetaminophen](#) (Percocet and generic) to treat your back pain. They are only [moderately effective in treating long-term chronic pain](#), and their effectiveness can diminish over time. They have also not been studied sufficiently for long-term use.

Also, muscle relaxers like [cyclobenzaprine](#) (Flexeril and generics) are [no better than the NSAIDs at providing pain relief](#), and they can carry dangerous side effects, like addiction and sedation.

You should also limit bed rest; activity is more effective.

When shots might be warranted

Steroid injections might make most sense for people who still have back pain with leg pain or numbness and tingling despite trying the treatments suggested above. For them, short-term relief from the shots might help enough so they can start an [exercise or physical rehab program](#). But make sure you understand the limitations of the treatment. And also consider these steps, which might make the therapy safer and more effective:



- **Discuss your medication and medical conditions with your doctors.** You shouldn't have an injection if you have an infection, uncontrolled diabetes, or if you are on blood thinners—unless you can discontinue them long enough for the procedure to be safe. Other circumstances that might preclude injections include heart failure, pregnancy, allergies to steroids, and a history of severe psychiatric reactions to steroids.
- **Make sure your back pain is treatable by an epidural injection.** While some doctors base their diagnosis on a patient's history and physical exam, others confirm it with an MRI or if that's not possible, a CT scan. "If I'm about to do an invasive procedure, I believe the patient often deserves an imaging test to make sure he or she doesn't have a medical condition that you wouldn't treat with an injection," Argoff explains.
- **Ask if the doctor is a board-certified pain specialist.** "Ideally he or she has done a formal fellowship in pain management," Argoff says. Be wary of those who learned the procedure in a weekend course. "Lots of people do that and wind up billing for these injections without applying contemporary standards of practice," he warns.
- **Ask about X-ray guidance.** In many cases, a live X-ray imaging technique called fluoroscopy is used to guide needle placement and to observe the spread of contrast dye to ensure that the medication to be injected will go to the desired location. Although Rosenquist notes that the use of X-ray and dye increase the cost, they are essential to the safety and success of certain procedures. In some cases, an X-ray might not be needed for injections in young healthy patients.
- **Ask where the procedure will be performed.** "Although the risk is small, there is always the possibility of a serious reaction," Argoff says. "The injection should be given in a sterile operating or procedure room where there is proper staff to assist the injector, equipment to monitor the patient during and after the procedure, safety measures for radiation if fluoroscopy is used, resuscitative equipment, and a staff that knows how to use it."

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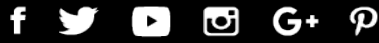
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