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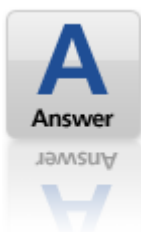
Will A Spinal Pump Relieve My Back and Leg Pain?



Question:

I have a spinal cord stimulator implanted, and it controls my leg pain but not my lower back pain. I have tried every option, from physical therapy to injections, and even had a spinal fusion at L3-L4. If I were to have a pump implanted to help my lower back pain, would I have to remove the spinal cord stimulator and risk having leg pain again?

—Worcester, MA



Answer:

This is a great question and one that I hear about often.

Spinal cord stimulation (SCS) has many benefits—mainly that it puts you in control of how much pain relief you need. But one sentiment I hear from many of my patients echoes what you're experiencing. SCS often works marvelously for leg pain and not as well for back pain.

If you're dissatisfied with your level of back pain, a spinal pump may help. Spinal pumps are implanted, usually under the skin of the abdomen, and a catheter delivers the medication directly into the spinal fluid.

However, there are some important considerations you need to take into account.

Trial Expectations

Whether you have a stimulator or a pump, it's important to do a trial to help see how you respond to the treatment.

The trials for stimulators are somewhat more predictive of how you'll respond than a trial for a pump. This is because once a stimulator is implanted and programmed properly, your body doesn't adjust—or build a tolerance to—the treatment. But with narcotics in a pump, it's not totally dissimilar from taking the medications orally. The body will still build a tolerance to the medication, and it can lose its effect over time. In other words, a trial won't shed light on how well pumps work in the long run.

This Week's Expert:



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Dr. Ed Kowlowitz is the owner and medical director of the Center for Pain Management and Center for Special Surgery. A native of New York, he earned his undergraduate degree in biomedical engineering at Columbia University and completed medical school at New York Medical College. After completing his residency at Danbury (Conn.) Community Hospital, he performed both his anesthesiology residency and chronic pain management fellowship at Duke University Medical Center.

Prior to opening the Center for Pain Management in 1992, Dr. Kowlowitz held numerous additional positions, including Chief of Anesthesiology at PhysiciansCare Outpatient Surgical Center, and Medical Director of the Winona Hospital Pain Management program.

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Stimulators and Pumps—Can You Have Both?

But if you have a successful trial with a pump and want to continue with the treatment, you can, theoretically, keep your spinal cord stimulator in place at the same time. They don't occupy the same space, which is one of the reasons they could co-exist. The lead (a small wire connected to the stimulator) is placed in the epidural space outside the spinal fluid, and the pump catheter is placed intrathecally (that is, inside the spinal canal) within the spinal fluid.

Different physicians will have different viewpoints on having a stimulator and pump in simultaneously, but I would personally take out the stimulator if a pump was implanted. This is to monitor certain complications that may occur. One possible problem is known as tip granuloma.

Spinal Pumps and Tip Granuloma

Tip granuloma is a collection of drug discharge or precipitation at the tip of the pump catheter. Eventually, this precipitation begins to harden, so it appears almost like rock candy at the tip of the catheter. Morphine, which is the most commonly used drug in pumps, is specifically susceptible to causing tip granuloma. (Morphine is the only FDA-approved opioid for pump usage, although physicians often compound an assortment of a half dozen other narcotics and local anesthetics safely in the pump.)

Tip granuloma can cause serious issues. Since the pump catheter is placed in the spinal canal, this hardening can grow to the extent that it compresses on the nerves and spinal cord—potentially causing stenosis and paralysis.

If you have a pump, it's recommended that you have an MRI scan every 18 months (though I personally check annually) to make sure there are no problems. If you discover tip granuloma early, it can easily be controlled. If the problem isn't caught early enough, you may require surgery.

MRI scans are the best tests for detecting any problems with the spinal pump. However, if you have a stimulator in, you cannot have a MRI because stimulators are not MRI compatible. This is why I prefer to *not* have a pump implanted unless you'd like the stimulator removed. Leaving the stimulator in presents a management problem when it comes to monitoring the tip of the pump catheter. If you needed both the pump and stimulator, there are tests you can take (such as a CT scan), but they're not as effective as a MRI.

Ultimately, having a spinal pump implanted with your stimulator is not insurmountable. But it does present some management problems. To help relieve your back pain, I suggest that you first try a fair amount of oral medication before committing to a pump.

Dr. Kowlowitz employs a multidisciplinary approach to pain management, including assessment and treatment of pain and suffering.

He and his colleagues at Center for Pain Management use interventional procedures, physical therapy, medication management and psychological counseling, all of which are provided within the walls of his practice, to help patients manage or overcome their conditions.

Dr. Kowlowitz has a particular interest in neuromodulation to treat chronic neuropathic pain and has done extensive research and training with Advanced Neuromodulation Systems in order to evaluate and improve the safety and effectiveness of such devices. He is one of the leading implanters of spinal cord stimulators in the state of Indiana and the Midwest.