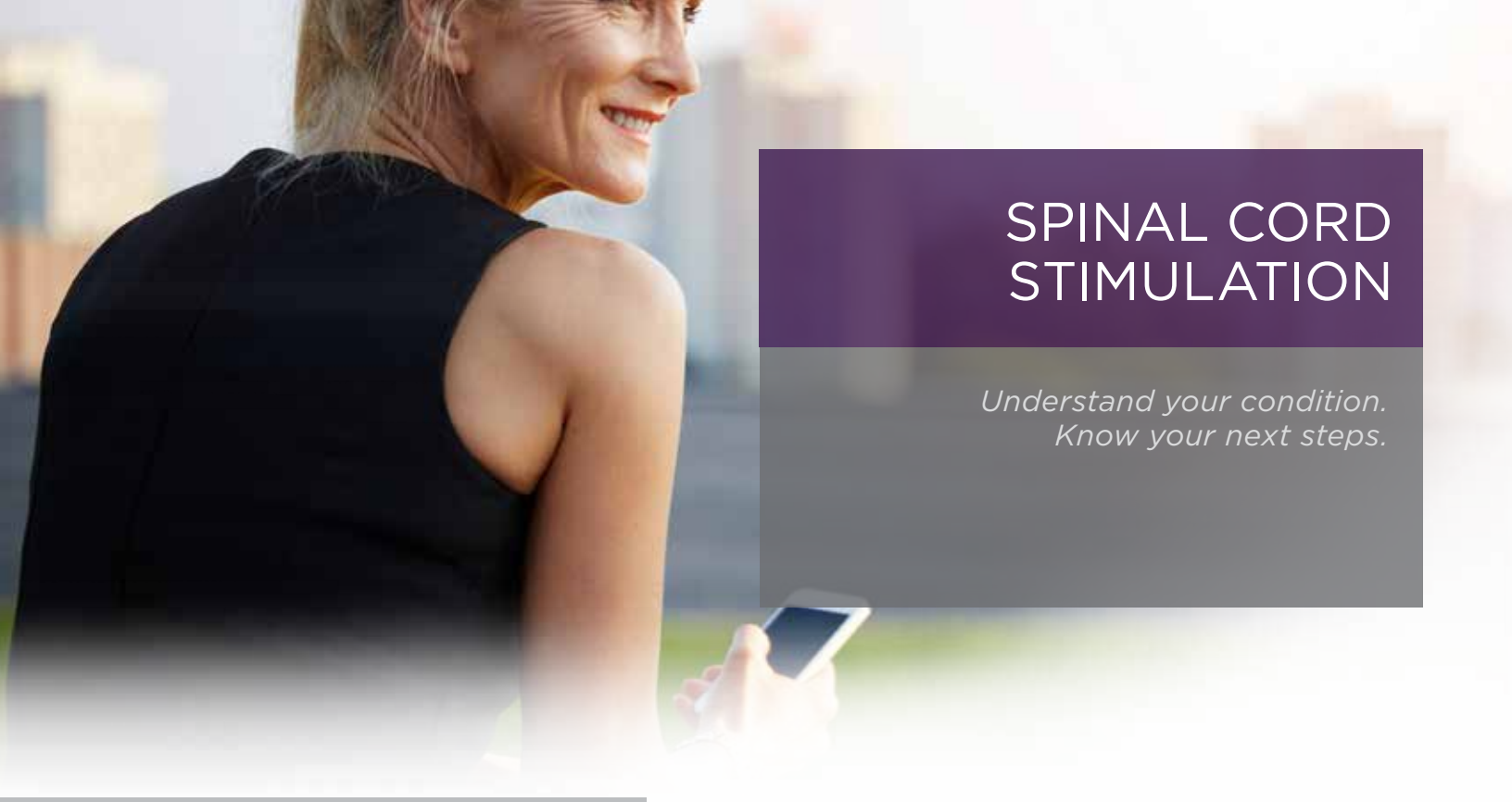


SPINAL CORD STIMULATION

Understand your condition.
Know your next steps.

Introduction

Despite best efforts with physical therapy, medicines, pain interventions, and surgeries, some patients will have persistent neuropathic leg or arm pain or back pain. In some situations, spinal cord stimulation may decrease pain in these areas and improve quality of life.

Spinal cord stimulation is not a new therapy. It has been used for multiple decades for the treatment of chronic neuropathic lower extremity pain in patients not improved with spine surgery. Over the last several years, improvements in technology have led to new and better stimulation patterns that have improved and expanded the use of this technology while making it more convenient for patients.

Many scientists and physicians have tried to fully explain the mechanism of action of spinal cord stimulation, and to this day the exact mechanisms are unknown. Some feel it may block painful neurons from synapsing on the spinal cord. Other evidence points to increased release of pain-relieving chemicals in the central nervous system and even potentially affecting parts of your brain that are involved in maintaining pain.

Even with the variety of neurostimulator companies and waveforms, all stimulators act similarly in that the stimulator leads are placed in the epidural space near the mid to lower spinal cord in the thoracic spine. There, stimulation is applied to the spinal cord. Depending on the device used, you may feel a paresthesia (a buzzing or massaging sensation) overlapping the area of pain you have, or in some devices, no stimulation at all. The goal of therapy is to decrease pain and improve function.

Another advantage of spinal cord stimulation is that there is a trial period that will determine if it is an effective technology for the patient before it is permanently implanted. This way the patient has some reasonable degree of certainty as to what kind of pain relief he or she should obtain with a permanent implant.

SPINAL CORD STIMULATION

SPINAL CORD STIMULATION LEADS INSERTED

Who is a candidate for spinal cord stimulation?

Spinal cord stimulation is considered in patients with chronic pain. The indications for spinal cord stimulation are increasing as technology improves. Traditionally patients who have extremity pain that is neuropathic in nature (burning, electric, lancinating) are ideal candidates. Some cases of chronic low back pain are also considered. If you are interested in spinal cord stimulation or believe you could benefit from the procedure, please speak with your Summit specialist.

The procedure: spinal cord stimulator trial

This is done under light conscious sedation. Similar to other spine procedures, the patient is positioned lying on his or her stomach, and the spine is sterilely prepped and draped. After numbing the tissues with local anesthetic, an X-ray machine (fluoroscope) is used to guide a specialized needle into the epidural space. Then, a spinal cord stimulator lead is placed

IF YOUR PROCEDURE INCLUDES SEDATION

- **You should have no solid foods for 6 hours before your procedure.**
- **You may have clear liquids up to 2 hours before your procedure.** Examples include: water, broth, clear fruit juices such as apple, cranberry, and grape juice. These juices should not include pulp. Tea, black coffee with ***no cream,*** and carbonated beverages are also allowed.
- Nothing by mouth, including throat lozenges, mints, and all hard candy.
- No gum for 2 hours before your procedure.
- You must have a responsible adult arrive with you to our facility. If you use a taxi or volunteer ride service, you still must have a responsible adult with you in order to help take care of you after your sedation procedure.
- Please take your regular medications the day of your procedure, especially any **heart or blood pressure medications**.
- If you are on medication for **diabetes**, be sure to take it the day of the procedure.

For expert advice on how to stay healthy and active, visit **summitortho.com.**

through this needle and guided into appropriate position under live X-ray. Depending on your pain condition or the product used, one or two leads are inserted. The leads are then tested in the procedure room, and ultimately they are secured to the patient with a specialized dressing and covered with medical dressing/tape.

The trial period lasts about one week. During this time, patients should try to keep the area dry and clean. Sponge baths are permitted, but the patient can't shower or submerge the dressing. A device representative will work closely with the patient during the week in order to optimize pain control. The patient will then be seen about one week later in the office, where the specialist will remove the trial leads, help determine if the trial was successful, and provide further guidance.

How should I prepare?

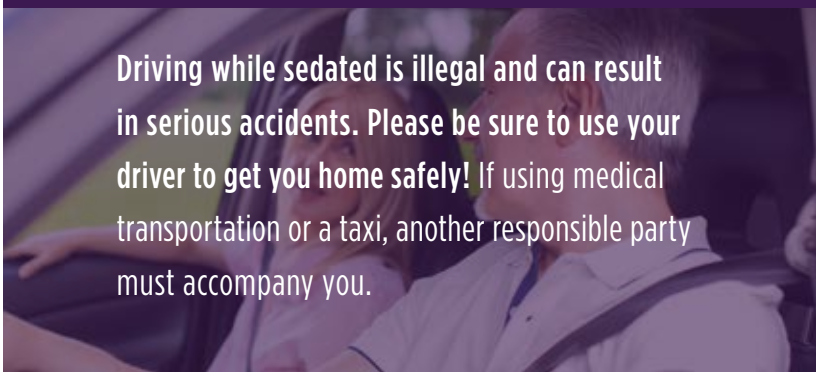
Follow the specific instructions given to you by the nurses at the procedure center.

» While the procedure usually takes around 30 to 45 minutes to perform, you should allow for at least 1 to 2 hours at the procedure center.

» You need to arrange for a driver to be present and take you to and from the medical facility. If you do not have a driver with you, your procedure may have to be rescheduled.

» If you are taking prescription blood thinners such as Coumadin (warfarin), Ticlid (ticlopidine), or Plavix (clopidogrel bisulfate), please inform your specialist's patient care coordinator. These medications will need to be stopped before the procedure, *but only after you receive permission from the provider who is prescribing these medications.*

CAUTION



Driving while sedated is illegal and can result in serious accidents. Please be sure to use your driver to get you home safely! If using medical transportation or a taxi, another responsible party must accompany you.

» If you are on high doses of aspirin (more than 2 per day), inform your specialist's patient coordinator.

» Inform your specialist's patient coordinator if you have a *pacemaker.*

» If you develop a fever, night sweats, or an active infection, your procedure will need to be rescheduled. Please contact our office at (651) 968–5201 immediately to inform us of your change in condition.

Potential risks

Spinal cord stimulator trials are relatively safe, minimally invasive procedures. The risks associated with the procedure include:

» bleeding

» infection

» pain at the needle insertion site

» trauma to nearby structures from needle or lead placement

These complications are all very rare.

SPINAL CORD STIMULATION

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After the procedure

Follow the specific instructions given to you by the nurses at the procedure center.

» Rest for a few hours, resume activity as tolerated, and use assistance as needed. Do not overexert yourself the first day.

» For discomfort, apply ice packs to the area for 15 minutes several times a day.

» *Do not take a tub bath or shower.* You may take a sponge bath while the trial lead is in place.

» Observe for any signs of infection, including redness and warmth at the injection site, increasing pain, swelling, drainage, chills, night sweats, or fever that reaches above 100° F. Report any signs of infection or other unusual symptoms.

» Keep a record of your pain and symptoms during the week of your spinal cord stimulator trial. The device representative will be in close contact with you throughout the trial period. You will then follow up with your specialist in clinic in approximately 1 week to have the leads removed and discuss your response to the trial period.

NOTES