

Spinal Cord Stimulation Permanent

Spinal Cord Stimulation is a treatment option for patients suffering from Complex Regional Pain Syndromes (CRPS) also known as Reflex Sympathetic Dystrophy (RSD), nerve damage (neuropathic pain), failed back surgery pain, spinal cord damage, phantom limb pain, and pain caused by blood vessel disease. It is not a "first line" treatment and is performed after more conservative therapies have failed. The Spinal cord stimulator electrically stimulates the spinal cord with a low voltage impulse that blocks the sensation of pain. Electrical stimulation is delivered through an implanted lead near the spinal cord in the epidural space.

The lead is connected to an implanted long life battery or a receiver that receives energy from an external battery. The procedure is done in two stages at different times. In the trial stage, temporary wires are placed and an external device is used by the patients to generate electrical stimulation. This is really a test to determine if a permanent spinal cord stimulator should be used. If this trial is successful in relieving your pain, then the permanent device is placed under the skin, usually about two weeks later.

Procedure Overview

The spinal cord stimulation permanent implant is performed in the Operating Room under strict sterile conditions. It may be done as an outpatient or you may be required to spend 23- hours or one night in the hospital. When brought to the Operating Room, you will be connected to monitoring equipment (EKG monitor, blood pressure cuff, and a blood-oxygen monitoring device). The doctor or nurse will start an intravenous line and give some medicine to help you relax. You may also receive an antibiotic. The procedure is performed with you lying on your stomach.

The doctor will cleanse your back and stomach with antiseptic solution, and inject some numbing medicine into the skin. You may feel a burning sensation for a few seconds. The previously implanted temporary wires are removed. With the assistance of a special X-ray machine called a fluoroscope, the doctor will place a needle through the skin next to the nerves to be stimulated. When the needle is in the correct position, the doctor will advance the permanent spinal cord stimulating wires through the needle until they are next to the targeted nerves.

The doctor will then test the leads for appropriate location. After confirming proper location, you will be put to sleep for the surgical placement of the permanent battery generator. The permanent wires will then be connected to the implanted battery. When you wake, the battery will be programmed with a "battery programmer," that sends signals similar to a remote TV channel changer. After the procedure, we ask that you remain at the Clinic until the doctor feels you are ready to leave. If you are admitted to the hospital, you may leave after 23 hours or the next day.

Procedure Details

Will you be asleep for the procedure? Since you need to talk to the doctor and tell him the type of sensation you are experiencing, you will not be put to sleep. However, you will be put to sleep when the battery is implanted. How long will the procedure take? Normally, the spinal cord stimulator permanent implant will take one hour or longer.

Before the procedure

Do not eat or drink anything after midnight the day before the procedure. If you are on medications, you may take them with sips of water. If you are a diabetic, discuss your medication with your doctor. You may need to stop taking certain medications several days before the procedure. Please remind the doctor of all prescription and over-the-counter medications you take, including herbal and vitamin supplements. The doctor will tell you if and when you need to discontinue the medications. Tell the doctor if you develop a cold, fever, or flu symptoms before your scheduled appointment.

After the procedure

You may experience some abdominal pain, bruising, and swelling at the incision site. This will be treated with medication. You can also apply an ice pack to the area. Keep the area clean and dry to help prevent skin infection. You may experience a tingling or electrical buzzing sensation in the area of your usual pain. Although your pain may not totally go away, you should have enough relief to help you function better. You may experience some muscle discomfort where the needles were placed. This may be treated with a mild pain reliever such as Tylenol.

Do not drive for the remainder of the day. Please have an adult drive you home or accompany you in a taxi or other public transportation. Depending on how you feel, you may resume normal activities and return to work in one to three days.

Procedure Risks

The risks are minimal but potentially include: Infection, spinal cord compression, meningitis, spinal fluid leak, bleeding, movement of the wires, and hardware failure.