

Spinal Cord Stimulator Implantation

Introduction

Spinal cord stimulator implantation is a type of surgery. This procedure puts a small device under your skin. The device is a spinal cord stimulator that makes electrical pulses and sends electrical currents. A small wire carries these electrical signals to the nerves in your spinal cord. It stimulates the nerves and can help relieve long-term (*chronic*) pain in your back, legs, or arms.

A spinal cord stimulator may have an electrical pulse generator, battery, and lead wire. It may also come with a small remote you can control. Stimulators with a rechargeable battery may last up to 10 years. Stimulators with a non-rechargeable battery may last 2 to 5 years before being replaced.

Tell a health care provider about:

- Any allergies you have.
- All medicines you are taking, including vitamins, herbs, eye drops, creams, and over-the-counter medicines.
- Any problems you or family members have had with anesthetic medicines.
- Any blood disorders you have.
- Any surgeries you have had.
- Any medical conditions you have.
- Whether you are pregnant or may be pregnant.

What are the risks?

Generally, this is a safe procedure. However, problems may occur, including:

- Infection.
- Bleeding.
- Allergic reactions to medicines, devices, or dyes.
- Damage to other structures or organs.
- The device or battery failing or not working.
- The wire moving.
- Paralysis.
- A pocket of clear fluid forming under your skin (*seroma*).

What happens before the procedure?

- **Do not** use any products that contain nicotine or tobacco, such as cigarettes and e-cigarettes. If you need help quitting, ask your health care provider.
- Ask your health care provider about:
 - Changing or stopping your regular medicines. This is especially important if you are taking diabetes medicines or blood thinners.
 - Taking medicines such as aspirin and ibuprofen. These medicines can thin your blood. **Do not** take these medicines before your procedure if your health care provider instructs you not to.
- You will have blood tests and physical exams.
- You will have electrocardiography (ECG) to check the electrical patterns and rhythms of the heart.
- You may have chest x-rays.
- You may be asked to shower with a germ-killing soap.
- Up to 12 hours before the procedure, stop eating and drinking.
- Plan to have someone take you home from the hospital or clinic.

What happens during the procedure?

- To lower your risk of infection:
 - Your health care team will wash or sanitize their hands.
 - Your skin will be washed with soap.
 - Hair may be removed from the surgical area.
- An IV tube will be inserted into one of your veins. You will get one or more of the following:
 - A medicine to help you relax (*sedative*).
 - A medicine to numb the area (*local anesthetic*).
- You may have x-ray dye injected, so it will be easier to do the procedure.

- A small cut (*incision*) will be made in your back.
- A small piece of bone may be removed from your spine to make room for the device.
- Wires will be placed in your back.
- X-rays will be used to make sure they are in the right spot.
- The wires will be tested with stimulation. You may be asked to wake up to see how you react to the tests.
- You will get medicine to make you fall asleep again (*general anesthetic*).
- The lead wire will be put under your skin and stretch from the spine to your buttocks or abdomen.
- A small cut will be made in either your abdomen or buttocks.
- The pulse generator will be placed in either your abdomen or buttocks and connected to the lead wire. A small pocket of skin will be formed around it.
- You will have stitches (*sutures*) to close the cuts in your body.

What happens after the procedure?

- Your blood pressure, heart rate, breathing rate, and blood oxygen level will be monitored until the medicines you were given have worn off.
- You may have to take medicine for pain.
- You will have to drink fluids to flush the x-ray dye from your body.
- Your pulse generator may be programmed.
- You may have to stay in the hospital after the procedure. Ask your health care provider how long you will stay.

Summary

- Spinal cord stimulator implantation is a type of surgery to put a small device under your skin.
- The device stimulates the nerves and can help relieve long-term pain in your back, legs, or arms.
- You may have to stay in the hospital after the spinal cord stimulator implantation. Ask your health care provider how long you will stay.