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Spinal cord stimulation

Spinal cord stimulation is a treatment for pain that uses a mild electric current to block nerve impulses in the spine.

Description

A trial electrode will be put in first to see if it helps your pain.

- Your skin will be numbed with a local anesthetic.
- Wires (leads) will be placed under your skin and stretched into the space on top of your spinal cord.
- These wires will be connected to a small current generator outside of your body that you carry like a cell phone.
- The procedure takes about 1 hour. You will be able to go home after the leads are placed.

If the treatment greatly reduces your pain, you will be offered a permanent generator. The generator will be implanted a few weeks later.

- You will be asleep and pain-free with general anesthesia.
- The generator will be inserted under the skin of your abdomen or buttocks through a small surgical cut.
- The procedure takes about 1 to 2 hours.

The generator runs on batteries. Some batteries are rechargeable. Others last 2 to 5 years. You will need another surgery to replace the battery.

Why the Procedure is Performed

Your doctor may recommend this procedure if you have:

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- Back pain that continues or gets worse, even after surgery to correct it
- Complex regional pain syndrome (CRPS)
- Long-term (chronic) back pain, with or without arm or leg pain
- Nerve pain or numbness in the arms or legs
- Swelling (inflammation) of the lining of the brain and spinal cord

SCS is used after you have tried other treatments such as medicines and exercise and they have not worked.

Risks

Risks of this surgery include any of the following:

- Cerebrospinal fluid (CSF) leakage
- Damage to the nerves that come out of the spine, causing paralysis, weakness, or pain that does not go away
- Infection of the battery or electrode site (if this occurs, the hardware usually needs to be removed)
- Movement of or damage to the generator or leads that requires more surgery
- Pain after surgery
- Problems with how the stimulator works, such as sending too strong of a signal, stopping and starting, or sending a weak signal
- The stimulator may not work

The SCS device may interfere with other devices, such as pacemakers and defibrillators. After the SCS is implanted, you may not be able to get an MRI anymore. Discuss this with your health care provider.

Before the Procedure

Tell the doctor who will be doing the procedure what medicines you are taking. These include drugs and supplements you bought without a prescription.

During the days before the surgery:

- Prepare your home for when you come back from the hospital.

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- If you are a smoker, you need to stop smoking. Your recovery will be slower and possibly not as good if you keep smoking. Ask your doctor for help quitting.
- Two weeks before surgery, you may be asked to stop taking blood thinners. These are drugs that make it harder for your blood to clot. They include aspirin, ibuprofen (Advil, Motrin), naproxen (Aleve, Naprosyn).
- If you have diabetes, heart disease, or other medical problems, your doctor will ask you to see the doctors who treat you for these problems.
- Talk with your doctor if you have been drinking a lot of alcohol.
- Ask your doctor which drugs you should still take on the day of the surgery.

On the day of the surgery:

- Follow instructions about not eating or drinking anything before the procedure. Take the drugs your surgeon told you to take with a small sip of water.
- Bring your cane, walker, or wheelchair if you have one already. Also bring shoes with flat, nonskid soles.

After the Procedure

After the permanent generator is placed, the surgical cut will be closed and covered with a dressing. You will be taken to the recovery room to wake up from the anesthesia.

Most people can go home the same day, but your surgeon may want you to stay overnight in the hospital. You will be taught how to care for your surgical site.

You should avoid heavy lifting, bending, and twisting while you are healing. Light exercise such as walking can be helpful during recovery.

Outlook (Prognosis)

After the procedure you may have less back pain and will not need to take as much pain medicines. But, the treatment does not cure back pain or treat the source of the pain.

Alternative Names

Neurostimulator; SCS; Neuromodulation; Dorsal column stimulation; Chronic back pain - spinal stimulation; Complex regional pain - spinal stimulation; CRPS - spinal stimulation; Failed back surgery - spinal stimulation

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