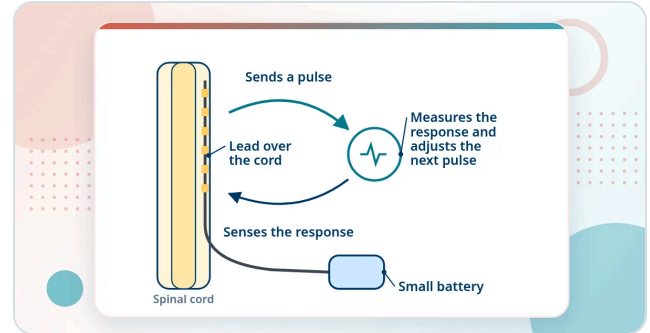


Closed-loop SCS (Evoke)

Spinal cord stimulation (SCS) sends mild electrical pulses to the spinal cord that may change how pain signals reach the brain. With traditional systems, the strength of the signal reaching the spinal cord can change when you move, cough or lie down. Closed-loop SCS is designed to keep stimulation steady as you move. The Evoke system, made by Saluda Medical and FDA-approved in 2022, measures how the spinal cord responds to each pulse and adjusts automatically many times per second. It may help some people with chronic trunk and limb pain that is hard to treat. As with other SCS, you try it first in a trial.



At GSMC: all GSMC providers evaluate patients and help decide which options may fit, at any of our 7 offices. Results vary.

What it is

When a stimulator sends a pulse, the nerve fibers in the spinal cord respond with a tiny electrical signal called an evoked compound action potential, or ECAP. The Evoke system measures this response after each pulse. If the response is too strong or too weak, for example because you changed position, the system adjusts the next pulse. This "closed loop" is designed to keep the dose of stimulation steady.

Studies compared it with traditional open-loop systems. In clinical studies, many patients reported meaningful pain relief at two years; results vary.

Who it may help

Closed-loop SCS may help some adults with:

- Chronic, hard-to-treat pain of the trunk and/or limbs, such as back and leg pain
- Nerve pain in the legs that has not improved with other treatments
- People who noticed with a previous stimulator that the feeling changed a lot with movement or position (ask whether this may apply to you)

SCS is usually considered after other treatments have not given enough relief.

What to expect

Step 1: Evaluation. We review your history, exam and imaging. Many insurance plans also ask for a psychological evaluation before a trial.

Step 2: The trial. 1. In an outpatient procedure, temporary leads are placed through a needle into the epidural space using live X-ray guidance. 2. The leads connect to a device worn outside the body, and the system is set up to read your spinal cord's responses. 3. For several days, often about a week, you go about your normal routine and track your pain, sleep and activity. 4. The temporary leads are removed in the office.

Step 3: The decision. You and your physician review how much your pain and function changed. If the trial did not help enough, nothing more is placed.

Step 4: The permanent implant. 1. A permanent system is placed in a separate outpatient procedure with sedation or anesthesia. 2. Leads are placed in the epidural space and connected to a small rechargeable generator under the skin. 3. Most people go home the same day. Your care team programs the system and shows you how to use and charge it.

Recovery

- After the trial, avoid bending, twisting and lifting so the leads do not move.
- After the implant, soreness at the incisions is common for a week or two. You will usually limit bending, twisting, reaching overhead and heavy lifting for several weeks.
- The generator is rechargeable. Your care team will explain how often to charge it.
- Follow-up visits are used to adjust the settings.
- Some people notice less pain, and some do not.

Is it right for me?

May be a good fit: adults with chronic, hard-to-treat trunk or limb pain who have tried other treatments, have realistic goals and have a good response during the trial.

Ask about MRI rules for this system before any scan.

Risks

Risks are similar to other spinal cord stimulators: infection, bleeding, lead movement, pain at the generator site, device problems and the need for another procedure. A spinal fluid leak and headache are uncommon. Nerve injury is rare. We will review your specific risks.

Other options

Other options may include physical therapy, medicines, injections, radiofrequency ablation, other spinal cord stimulation systems, dorsal root ganglion stimulation, peripheral nerve stimulation or an implanted pain pump.

Questions people ask

What does closed-loop mean? The system measures how your spinal cord responds to each pulse and adjusts the next pulse automatically. It is designed to keep stimulation steady as you move.

What is an ECAP? An evoked compound action potential is the tiny electrical response of spinal cord nerve fibers to a stimulation pulse. The Evoke system measures it.

How is this different from other spinal cord stimulators? Traditional open-loop systems deliver pulses at fixed settings. Closed-loop systems adjust in real time. Studies compared the two; results vary.

Is there a trial? Yes. A temporary trial is done first so you can see whether it helps in daily life.

Insurance and cost

GSMC participates with all Aetna plans, including Aetna HMO, and many other plans. Coverage depends on your plan and may need prior authorization. Our team checks your benefits before treatment.

When to call us: fever or chills; redness, swelling or drainage where a needle or device was placed; new or worse pain, numbness or weakness. **Call 911** for chest pain, trouble breathing, or sudden loss of bladder or bowel control.

Call 732-202-3000

One number for all 7 GSMC offices:

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Whiting · 1100 NJ-70, Entrance B

Barnegat · 249 S Main St, Suite 5

Manahawkin · 1109 Beacon Ave

Freehold · 322 Professional View Dr, 300 Bldg, 2nd Fl

West Long Branch · 100 NJ-36, Suite 1K

gsmedicalcenter.org/treatments/closed-loop-spinal-cord-stimulation/



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