

Sacral Neuromodulation

Sacral neuromodulation (SNM) is a minimally invasive procedure used to treat pelvic floor disorders, including urgency urinary incontinence, urinary urgency and frequency, incomplete bladder emptying, and accidental bowel leakage. It may be offered to patients who do not respond to initial treatment therapies.

What is sacral neuromodulation?

SNM is a procedure in which a small battery and wire is placed under the skin just above the buttocks. The battery is connected to a thin wire that is placed near a nerve known to control the bladder/bowel function and is located in the sacrum near the tailbone.

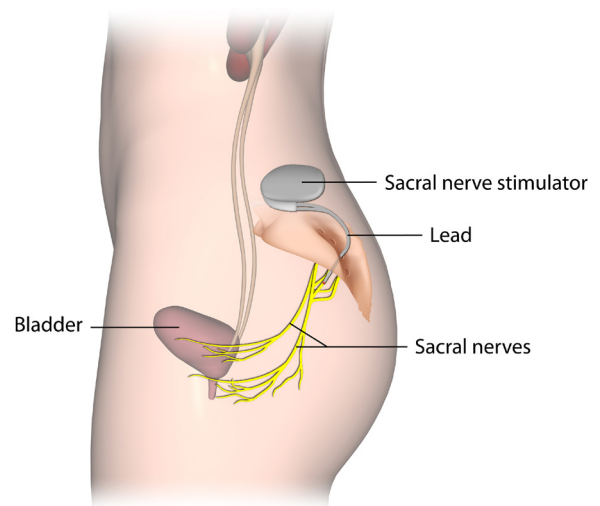
How does sacral neuromodulation work?

Normal emptying of urine and stool requires communication between the bladder and bowel, spinal cord, and the brain. SNM treats bothersome symptoms by interacting with the nerves that control the bowel and bladder. The settings of the battery can be set up to provide the best symptom relief.

Considerations

Some patients may not be candidates for the SNM procedure. The device is not recommended in patients who are pregnant, have complete spinal cord injury, have abnormal back

Sacral Nerve Stimulation



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anatomy, or have certain neurologic conditions. If you take blood thinners or prescription medications, make sure your doctor is aware.

LEARN THE TERMS

Accidental bowel leakage/Fecal incontinence: accidental leakage or staining with stool (hard, soft, or mucous).

Incomplete bladder emptying: a condition where the bladder does not empty fully during attempts to urinate. This is related to urinary retention where the bladder cannot empty at all.

Lead: thin, flexible wire that is placed near a nerve that can modulate nerve signaling.

Overactive bladder: a condition that causes a spectrum of symptoms, including urinary frequency, urgency with or without leakage increased nighttime voiding.

Peripheral nerve evaluation (PNE): office placement of a temporary lead near the sacrum to test bladder or bowel response to treatment.

Sacral neuromodulation (SNM): a minimally invasive procedure used to treat pelvic floor disorders.

Sacrum: the bones of the lower part of the spine at the level of the buttock

Stimulation device/battery: a small device that is connected to the lead and implanted under the skin above the buttock that generates signaling to the nerve.

Urgency urinary incontinence (UUI): loss or leaking of urine with sudden urge to urinate.

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How is sacral neuromodulation performed?

You will be asked to record a 3-day symptom diary before starting the placement process.

Before the placement of the permanent SNM device, you will typically undergo a testing period to confirm that you will benefit from the device. This may be performed in the office using peripheral nerve evaluation (PNE) or in the operating room (Stage I).

With PNE, temporary wires are placed in the office for the testing stage. The temporary wires are removed at the completion of the test, which usually lasts 3-7 days. Once correct placement is confirmed, the wire will be secured by clear tape over the area. The wire will be connected to a battery outside of the body held by a belt during your test period.

During the test period, you will be asked to keep a record of your symptoms. This record will help determine how well you respond to the treatment. You may not shower or get the device wet during the test period. After the test phase, the wires will be removed. If your symptoms improve during the test phase, you will be scheduled for placement of a permanent wire and the internal battery which will be done in the operating room. If your symptoms do not improve during the test, your doctor will discuss the next steps.

As an alternative to PNE, the test stage ("Stage I") may also be performed in the operating room. You may be asleep for the procedure and similar steps will be performed as with the PNE. However, the wire that is placed in the operating room will be placed under the skin and connected to a temporary battery outside the body through a small incision. The device can be tested for longer, often 1-3 weeks. If your symptoms improve, you will need a second procedure to connect the lead to an internal battery that is placed in the upper buttock ("Stage II"). If your symptoms do not improve, the wire will be removed in the operating room.

References:

Gross, C; Habli, M; Lindsell, C. [Sacral Neuromodulation for Nonobstructive Urinary Retention: A Meta-Analysis](#). *Female Pelvic Medicine & Reconstructive Surgery*. 2010;16(4):249-253.

Noble, KL.; Buono, K. [Sacral Nerve Stimulation as a Therapy for Patients With Refractory Voiding and Bowel Dysfunction](#). *Obstetrics & Gynecology*. 2018;132(6):1337-1345.

Wieslander, CK.; Weinstein, MM.; Handa, VL. [Pregnancy in Women With Prior Treatments for Pelvic Floor Disorders](#). *Female Pelvic Medicine & Reconstructive Surgery*. 2020;26(5):299-305.

After the procedure

Your device will be set up for you and you will receive detailed instructions on what to expect and who to contact with questions or problems. You will be able to go home on the same day as your procedure. You should expect about a 2-inch cut on the upper buttock and small cuts near the tailbone which will be closed with sutures or glue. You will likely return to normal activity within a few days of the surgery, with small limitations such as no tubs/swimming, or heavy lifting. You may be prescribed antibiotics to take during the placement process.

Complications are rare but may include pain or soreness near incisions, bleeding, and infection. Rarely, the device may need to be removed if it is infected or not functioning properly.

Newer devices may be used with magnetic resonance imaging (MRI) but may need special arrangements. Patients should inform their doctors and the radiology department that they have the sacral neuromodulation device before receiving an MRI.

You will follow closely with your doctor while you learn to manage your device, and then once a year to make sure you are doing well and to check the battery life.

Three Takeaways

- 1. Sacral neuromodulation is a minimally invasive surgical procedure that can manage certain bladder and bowel conditions.**
- 2. A test phase will be used to determine if you are likely to respond to the treatment before undergoing the full procedure.**
- 3. Newer devices are MRI compatible, which may be discussed with your health care provider.**