

SACRAL NEUROMODULATION

Sacral neuromodulation therapy, also known as sacral nerve stimulation, involves electrodes sending low-intensity electrical pulses to the sacral nerves located within the sacrum. These nerves are connected to your intestines, bladder and anal sphincter.

Neuromodulation will stimulate various muscles and will greatly improve the coordination of your intestinal, bladder and anal functions. This type of treatment is usually delivered in two stages:

- Test trial (PNE)
- Permanent implant of electrodes and neurostimulator

In some cases, the permanent implants are installed in two steps (first, the permanent electrodes; second, the neurostimulator). Your medical specialist in neurostimulation will inform you of the steps planned ahead for you.

TEST TRIAL (PNE)

A fine electrode is inserted at the sacral level under local anesthesia. The electrode is connected to an external neurostimulator worn on a belt, sling bag, or along the waistline. The neurostimulator sends electrical pulses to the sacral nerve through the electrode.

This test phase also helps your specialist to assess whether the pulses can improve your bladder or intestinal/anal symptoms. **The trial length varies from 7 to 20 days.**

The trial phase enables you to test the efficacy of the treatment and your tolerance to stimulation *before* permanent electrodes and a neurostimulator are implanted.

RECOMMENDATIONS DURING THE TEST TRIAL

1. **Do not bathe or shower.** Wash yourself with a facecloth to keep your dressings clean and dry at all times until the dressings and electrodes are removed.
2. **Reinforce the dressing if it peels off.** As needed, add other dressings on top of the one you already have. Never remove any dressing.
3. **Avoid wearing certain clothes and doing certain movements.** To prevent the temporary electrode from shifting, avoid:
 - wearing tight clothes and undergarments;

- bending forward;
- stretching or back rotations;
- making sudden, repetitive movements.

4. **Limit all housework and non-essential outside work.** Remember that you must not displace the temporary electrode.

5. **Walking is permitted.**

6. **Try to use the neurostimulator at all times.** Stimulation must remain comfortable and pleasant. As needed, use the remote control to adjust stimulation intensity. You can temporarily cease the stimulation if it causes pain.

Remote control: Refer to the manufacturer's user manual provided when the temporary electrode was installed.

7. **Keep a detailed log book.** Depending on your health problem, you might be asked to keep track of the observations below.

Stools: frequency, aspect and episodes of incontinence or constipation.

Urine: frequency, quantity, episodes of incontinence or retention, number of catheterizations required and urine volume during mictions or catheterizations, pain intensity.

PERMANENT IMPLANT OF ELECTRODES AND NEUROSTIMULATOR

During the final implant of the electrodes and neurostimulator, permanent electrodes will be installed on the sacral nerve(s). The electrodes will be connected to the internal neurostimulator implanted beneath the skin. This system is implanted above the buttock or sometimes at the abdominal level.

UNTIL THE DRESSINGS ARE REMOVED

1. **Wash yourself with a facecloth.** Your dressings must remain clean and dry. Do not bathe or shower. Once the dressings have been removed, you can only shower. Rinse the wounds thoroughly if they come into contact with soap.
2. **Reinforce the dressing(s) as needed.** If a dressing is soaked, schedule an appointment with your physician or your local CLSC. As a last resort, you can go to the emergency department to have your dressing changed (evenings, nights and week-ends).

If you have a two-stage surgical procedure (1. electrode implant and 2. permanent neurostimulator implant), regular dressing changes may be required by your specialist and performed by your CLSC throughout this period. Your medical specialist will file a request with your CLSC and you will be notified thereof.

If the permanent neurostimulator is implanted in a single procedure, the dressings will be removed 72 hours after your surgery. Do not rub your wounds. The removal of staples or stitches can be done at your CLSC 10 to 14 days after the procedure (a prescription will be given to you).

THE FIRST EIGHT WEEKS

1. **Avoid heavy loads.** Do not lift objects weighing more than 2.25 kg or 5 lb (children, groceries, etc.).
2. **Avoid sudden movements for at least 8 weeks.** Do not:
 - bend forward;
 - twist, stretch or rotate the trunk and pelvis floor muscles.

After this period, you may gradually start doing these movements again, exercising caution.

PERMANENT RECOMMENDATIONS (ALWAYS COMPLY)

1. **Avoid making sudden, repetitive movements.** Doing so can damage the device and the electrodes, depriving you of your treatment until repair options can be found (reprogramming or surgery).
2. **Do not manipulate or rub your sacral nerves stimulator through your skin.** You could damage it, displace it or irritate your skin. The device remote control should not be placed on top of other devices (e.g., pacemaker). Doing so could accidentally modify its programming.
3. **Readjust the stimulation as needed.** Stimulation can be increased or lowered after changing positions. Readjust the stimulation to a comfortable level as soon as you have changed position. If the stimulation becomes uncomfortable or is not felt at the correct site despite your attempts to adjust it, switch your neurostimulator OFF with the remote control and schedule an appointment with your medical specialist.
4. **Switch your neurostimulator OFF when driving (car, motorcycle, etc.).**
Recommended by the manufacturer. You can leave your device activated when you are a passenger.
5. **Notify health care professionals that you are wearing a permanent internal neurostimulator.** During your appointment with a physician, dentist, physiotherapist or any other expert, show them your neurostimulator ID (provided during the implant procedure).

Certain examinations or procedures can affect the neurostimulator's functions or even break it. For example, these include: magnetic resonance imaging (MRI), X-rays, ultrasounds, lasers, TENS, radiofrequency, electrocautery.

Confirm with the health care professional concerned that you can be given the scheduled examination. If you require an emergency examination, ask that your neuromodulation medical specialist or your neurostimulator manufacturer be consulted to clarify the precautions that need to be taken with your device model.

Every type of diathermy (shortwave, microwave or therapeutic, electromagnetic wave or electrical current therapy) is contraindicated.

There is a risk of burning, severe injury and permanent damage.

6. **Bring your remote control or any other neurostimulation device with you to all of your medical appointments and examinations.**
7. **Use of household appliances.** You can use your household appliances (microwave oven, lawnmower, etc.) and office devices (tablet, computer, etc.).

However, avoid direct contact between your neurostimulator and other devices (e.g., using your neurostimulator to support your tablet). There is a risk of the device breaking, deprogramming or malfunctioning.

Some types of equipment emit a strong electromagnetic field, which can affect your neurostimulator (e.g., high-voltage power plant).

If you experience any unusual discomfort when approaching a device or equipment, move away and switch your neurostimulator OFF.

8. **Adapt your method of carrying your cell phone.** The manufacturer recommends that you carry your cell phone on the side opposite to your neurostimulator.
9. **Regularly check your remote-control batteries** (icon on remote control screen). When required, replace with good-quality, non-rechargeable batteries.
10. **Keep your remote control away from water** (e.g., sink, toilet bowl, etc.). Contact with water might break it.
11. **Switch your neurostimulator OFF if you have to pass through a commercial anti-theft system.** Walk normally through the middle of the device. Remain as far as possible from the sides of the detector and do not remain within proximity of the device. Once you have passed through the detector, switch your neurostimulator back ON.
12. **If you take a plane.** Upon arriving at the airport, switch your neurostimulator OFF and place your remote control in your carry-on luggage. During the security check, show your neurostimulator ID card to the officers. Inform them that you cannot cross the security gate as it could damage your device or affect the stimulation. You must request a manual search (pat-down).

If a security officer uses a wand metal detector, he must avoid waving it slowly over the insertion site of the various neurostimulator components (back, side, abdomen). Once you have cleared the security check, you can reactivate your neurostimulator.

SIGNS AND SYMPTOMS YOU NEED TO MONITOR

Consult a physician if any of the following occur:

Surgical wound that shows signs of:

- Redness
- Pain
- Heat
- Swelling
- Opening of the wound despite sutures
- Foul odour or foul discharge on the dressing

Chills and fever (above 38.5°C or 101.3°F)

More intense or unusual pain at the implantation site.

DO YOU HAVE ANY QUESTIONS

For any emergency, please go to the emergency department of Hôpital Fleurimont or of Hôtel-Dieu de Sherbrooke. If your health status does not permit you to go there, then go to your nearest hospital emergency department.

Your local CLSC: During business hours

Info-Santé 811: 24/7

Urology department (Dr. Le Mai Tu and Dr. Salima Ismail): 819-346-1110, ext. 74595

General surgery department (Dr. Nathalie McFadden): 819-346-1110, ext. 14483

Medtronic customer service: 1-888-660-4616 or [medtronic.com](https://www.medtronic.com)

REFERENCES

Medtronic Canada website:
https://www.medtronic.com/ca-en/index.html?intcmp=mdt_com_country_selector_dro_pdown_atlasr22017

APPOINTMENTS and INFORMATION

Schedule an appointment or obtain information via the appointment centre by dialling 819-564-5210 or the reception desk of your medical specialist.

NOTES

Authors

Mélanie Gilbert, infirmière clinicienne
Service de neuromodulation

Approbation

Départements d'urologie et de chirurgie générale

Revision and layout

Service des communications
Direction des ressources humaines, des communications et des affaires juridiques

© Centre intégré universitaire de santé et de services sociaux de l'Estrie – Centre hospitalier universitaire de Sherbrooke, 2020

santeestrie.qc.ca

September 2023 – 4-6-11427 (french version) | 4-6-114258 (english version)