

Neuromodulation

Spinal Cord Stimulator



Information for patients

Bring this booklet with you to your family doctor appointments and to all of your appointments at the Neurosciences Ambulatory Clinic (NAC).

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What is a Spinal Cord Stimulator?

A spinal cord stimulator is used to deliver electrical impulses that travel along the electrodes into a specific zone of your spinal cord. These pulses interrupt the pain sensations.

You were seen in the Neuromodulation Program at the Neuroscience Ambulatory Clinic (NAC) to find out if a Spinal Cord Stimulator is a good option to help manage your pain.

This handout will give you information on the next steps.

If you have further questions or you have not received your follow-up appointment(s) within 4 weeks, please call the Neuromodulation Office at 905-521-2100, ext. 44591.

Please note:

- The hospital's phone number is a blocked number. If your home phone does not allow blocked callers, please call us to provide an alternative phone number.
- Please have your voicemail turned on so we can leave you a message. If we are unable to leave a message, we will call your next-of-kin listed in your profile.
- If we are not able to speak with you on the phone, you will need to come to the clinic for an additional visit. We will send you a letter in the mail.



Contact information

Clinic Nurse: _____

Booking Clerk: 905-521-2100, ext. 46755

A yellow sticky note with a red pushpin at the top left corner. The text on the note reads "Important Information".

Important
Information

Bring this booklet with you to your family doctor's appointment and to all of your appointments at the Neurosciences Ambulatory Clinic.

What are the next steps?

Your surgeon and neuromodulation pain specialist have agreed that a spinal cord stimulator may help control your pain. Before you decide to have the procedure, you must attend a visit with one of our psychologists. The psychologist will help you determine if this procedure is right for you, if you have other issues that may impact the success of spinal cord stimulation, and if you can reach your pain control goals. You will be given a package for your Pre-Op Clinic appointment at this visit.

Once the appointment is booked a team member will call you with the date and time.

Next steps:

1. Attend a Pre-Op Clinic visit located at 690 Main Street West, Hamilton (corner of Main Street West and Macklin Street). It is in the same building as the Urgent Care Centre. Parking available on site for a flat rate of \$8.00.
2. Receive a phone call visit to teach you about the Trial Phase.
3. Have a procedure to insert temporary or permanent spinal cord stimulator leads. You will use the leads for one week during the Trial Phase.
4. Attend an appointment at the NAC to evaluate your Trial Phase.
5. Have surgery to insert the spinal cord stimulator.
6. Attend a follow-up appointment after your surgery with your surgeon and neuromodulation pain specialist.
7. Attend an appointment at the NAC in about 6 weeks after your surgery to teach you about your spinal cord stimulator.
8. Receive device monitoring, ongoing care and re-programming as needed.

Step 1 – Pre-Op Clinic appointment

Your Pre-Op Clinic appointment is at 690 Main Street West, Hamilton. It is in the same building as the Urgent Care Centre. You need to attend this appointment before your procedure.

Step 2 – Phone call visit with nurse

The Neuromodulation Nurse will discuss with you the trial phase and implantation and answer questions you may have. This may be over the phone or in person. Many of these details can be found in this booklet. Make sure you have this booklet with you to make any notes.

Setting realistic goals for your pain management with your health care team is key to the success of this treatment.

Step 3 – Trial Device

This is the Trial Phase for Spinal Cord Stimulator to see if this treatment will work for you.

You will have a procedure at the Hamilton General Hospital to implant the wires spinal cord stimulator leads and connect them to an external impulse generator. The trial will involve the use of temporary leads (the leads are not fixed/anchored inside the body) or permanent leads (the leads are fixed/anchored inside the body) depending on what the Neuromodulation Team thinks is best for you.

You will go through a trial phase using the device for one week.

During the week you will need to complete a diary that includes information about your:

- pain scores
- activity level
- medication



The trial phase involves a phone visit mid-way to discuss your progress.

Preparing for your procedure – Trial Device

Day of your procedure

Come to the Hamilton General Hospital and go to Patient Registration on the Main Level. From there you will go to Medical Day Care.

During your procedure

You will be given intravenous sedation and local anesthesia (freezing). The health care team will make you as comfortable as possible during the procedure.

You will be awake during the procedure to give feedback on the stimulation and your area of pain. The health care team will talk to you to help you understand what you are feeling. It may take more than one attempt to test the stimulation. Fine tuning of the stimulation will happen in Medical Day Care.

How long will the procedure last?

The procedure could take up to 2 hours.

Going home

See information on pages 7 to 9.

Step 4 – Evaluation of the trial phase

During the trial phase, a nurse will call you every 2 to 3 days to assess how you are doing.

You will also be given an appointment for the NAC in one week. At this visit the doctor will assess how the trial phase went:

- If the temporary leads helped control your pain, you will be scheduled for surgery to implant a permanent device. The temporary leads will be removed at this visit.
- If your procedure used permanent leads, you will need to have surgery:
 - to implant the permanent device – if the trial was a success
 - to remove the leads - if the trial was not a success

Step 5 – Surgery for the permanent device

The night before your surgery

You may eat or drink until 12:00 midnight the night before your surgery.

The day of your surgery

The Pre-Op Clinic will give you instructions on what medications you may take the morning of your surgery. Take with only a sip of water.

Bring:

- All of your current medications in their current original containers.
- Comfortable walking shoes.
- Loose fitting clothing.

Leave money, credit cards, jewelry and valuables at home.

When you arrive at the Hamilton General Hospital, go to Patient Registration on the Main Level. After you have registered, you will go to the Same Day Surgery on the 3rd floor. You will be asked to change into a hospital gown. An intravenous line (IV) will be started in one of your arms.

During your surgery your family may wait in the 3rd floor patient waiting room. The doctor will speak to your family after your surgery is done.

During your surgery

You will be taken from Same Day Surgery to the operating room for the implant of the permanent device. Depending on what type of trial you had, you may need new spinal cord epidural permanent leads and an impulse generator, or just an impulse generator. This will be discussed with you ahead of the surgery.

When the leads are in place, the surgeon will make a pocket to put the device in so it is underneath your skin. You will have sutures (stitches) where the permanent device is placed.

You may be awake during the procedure to give feedback on the stimulation and your area of pain as in the trial. The health care team will talk to you to help you understand what you are feeling. It may take more than one attempt to test the stimulation. When the leads are in place, the surgeon will insert the battery. You will receive conscious sedation which may cause you to sleep during the procedure.

The surgery will last 1 to 2 hours.

Going home



(after insertion of the temporary leads AND after surgery to implant the permanent device)

Expect to have some pain at the incision.

Do not reduce your regular pain medications unless told by your doctor or nurse.



You will need to make an appointment with your family doctor to remove your sutures in about 10 days after your procedure.

Incision care

- Keep the incision clean and dry. **Do not shower or bathe during the trial period.** You may take a sponge bath.
- **If you are in a trial, do not remove the dressing.** You may add dressing to the existing dressing to reinforce it or keep it in place. If it is uncomfortable and needs to be changed, call the Neuromodulation Nurse to change it.
- Take your antibiotics.
- Do not put the patient programmer directly over the incision until you are healed.

Watch the insertion site for signs and symptoms of infection.
Signs of infection are:

- redness or heat around the incision
- green, yellow or white drainage from your incision
- opening of your incision
- fever (38.5°C or 100°F) and chills

If you have any of these signs or symptoms during a trial and you are taking antibiotics, call the Neuromodulation Nurse right away or go to the Emergency Department and have them remove the leads.

It is important that you take the antibiotics prescribed for you as directed by your doctor until they are finished.

Headache after your procedure

You may develop a headache during the first few hours to a few days after your procedure that may last for several days. However, this is rare. The headache may be mild to severe and may get worse when you sit or stand, and get better when you lay flat. You may have had a cerebral spinal fluid (CSF) leak that was not seen during surgery and only appeared afterwards. These tips may help to ease a headache:

- **Drink plenty of liquids:** Drink more liquid than usual after your procedure. Ask how much liquid is right for you. Caffeine may be used to treat a headache. Drinks, such as coffee, tea, or some sodas, have caffeine. Caffeine is also available over the counter in tablet form. Ask about using caffeine to treat your headache. Do **not** drink alcohol.
- **Acetaminophen (Tylenol®):** You may take as directed for headache if not taking any other medications that contain acetaminophen (too much acetaminophen can cause liver damage).
- **Lie down:** If you have a headache after your lumbar puncture, it may be helpful to lie down and rest.
- **Call:** 905-521-2100, ext. 44591 if your headache is severe or the headache lasts longer than 2 days. If unable to reach the Neuromodulation Team, call your doctor.

Go to the Emergency Department or call 911 right away if:

- You have a severe headache that does not get better after you lie down.
- You have a fever.
- You have a stiff neck or have trouble thinking clearly.
- Your legs, feet, or other parts below the waist feel numb, tingly, or weak.
- You have bleeding or a discharge coming from the area where the needle was put into your back.
- You have severe pain in your back or neck.
- You have increasing pain at the incision site.

Activity

- Do not put your arms over your head. No overhead reaching.
- Do not stretch, reach, pull or twist your arms.
- Do not lift more than 5 pounds (2.2 kilograms).
- Avoid sitting too long. When you are tired, lie down.
- Sleep on your side. Do not sleep on your stomach.
- Move by log rolling – this means keeping your shoulders and hips together as a unit as you roll. Your shoulders and knees should always point in the same direction.
- Do not drive with the stimulator on.
- Speak to your doctor before doing any activities that you think may damage the device.

Step 6 and 7 – Follow-up visits at the NAC and device orientation

You will come back for a follow-up visit at the NAC after your surgery. Your device will be programmed and you will be taught about how to use your device. There may be more than one visit for this until you are comfortable with the use of the device and programmer.


Step 8 – Device monitoring, ongoing care and reprogramming

You will be contacted by the clinic regularly (about once a year) to check in to see if your stimulator is still working for you. You can also contact the program at any time to help with reprogramming.

Stimulator lead revision

You may need to have a stimulator lead revision if:

- Your pain control is not as effective as it once was.
- The area of stimulation has moved or become uncomfortable.
- It no longer provides any stimulation.

 <p>Important Information</p>	<p>It is very important in keeping your system charged, and not letting it run down to 0.</p> <p>Rule of Thumb: Monitor your stimulator daily and try to keep it half full.</p>
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Your doctors will discuss the need for a lead revision in detail with you. It is similar to having a new device insertion. The surgeon, in the operating room, will move the leads or add new ones. As during the initial trial, the doctor will stimulate the leads and see if it reduces your pain. If it works, the doctor will give you anesthesia, open the battery pocket and connect the leads.

Preparing for your spinal cord stimulator revision:

- You will have an appointment at the Pre-Op Clinic located at 690 Main Street West, Hamilton. It is in the same building as the Urgent Care Centre.
- Do not eat or drink anything from midnight, the night before your revision.
- Take the medications that we have discussed with you with a sip of water only on the morning of the revision.
- Remove all rings, watches, jewelry. Leave all valuables at home.
- Do not wear contact lenses.
- You will need to bring your Health Card with you.

- Wear loose, comfortable clothing.
- **Bring your spinal cord stimulator programmer with you to the hospital.**
- **Make sure that your implanted battery is fully charged before coming in for your revision.**
- You will be given a prescription for antibiotics and pain medications (if needed) on the day of the revision. You may have this prescription filled at the Hamilton General Drugstore located on the Main Level across from Patient Registration (open 9 am to 5 pm) or your own pharmacy. You may want to bring your drug card with you if required by your insurance company.

The day of your surgery:

- Go to Patient Registration on the Main Level at the Hamilton General Hospital. You will go to Same Day Surgery when you have registered.
- The surgery will take 1 to 2 hours.
- You may be awake for the revision and then tested to make sure we are capturing your pain. You may discuss this at your visit with the surgeon.
- You will be discharged home the **same day** as your revision once you feel well enough to go home.
- **You will need to have an adult bring you home after the revision and stay with you until you feel well enough to care for yourself.** Expect to have some discomfort for a few days following the revision.

Going home after your spinal cord stimulator revision



Go to an Emergency Department (preferably the Hamilton General Hospital if you are able) **right away** if you have:

- A fever, neck stiffness, headache that will not go away or increasing pain that is not controlled by your medications.
- Increasing redness around the incision, yellow or green discharge from your incision or uncontrollable drainage from your wound.

You will need to make follow up appointment to check your wound and remove sutures or staples, if needed, about 10 days after your revision with your family doctor.

Medications

- Take your usual medications as you normally take them unless otherwise instructed.

Incision care

- Keep your incision clean and dry
- Do not take a shower for 5 days then shower and clean dry dressing
- If there are steri-strips on your wound, wait until you see your family doctor in 10 days to have them removed.
- If you or your care giver are concerned that the dressing is becoming loose, or saturated with discharge, you can gently remove the soiled dressing and replace it with a clean dressing that you can purchase from the drug store.
- Wash hands before changing your dressing and after applying it.
- Sponge bathe only until you see your family doctor.

Activity

- Do not put your arms over your head. No overhead reaching.
- Do not stretch, reach, pull or twist your arms.
- Do not lift more than 5 pounds (2.2 kilograms).
- Avoid sitting too long. When you are tired, lie down.
- Sleep on your side. Do not sleep on your stomach.
- Move by log rolling – this means keeping your shoulders and hips together as a unit as you roll. Your shoulders and knees should always point in the same direction.
- Do not drive with the stimulator on.
- Speak to your doctor before doing any activities that you think may damage the device.

Replacement of device

Rechargeable devices will last for up to 9 years. Then a new device will have to be inserted. If the leads are still in place and working, the surgeon will open the pocket where the impulse generator is implanted and put a new one in.

Removal of device

Hopefully the stimulator works well for you for a long time. You can discuss options and removal of the device with your doctors.

Call the nurse or your pain specialist if:

- You need re-programming.
- You have any questions.



Important

If you move or change phone numbers, or if you get a new family doctor, please call the clinic to inform them of this change.

This is important for future appointments, and if we are informed of any problems with your device.

Magnetic Resonance Imaging (MRI)

Depending on the type of device, you most likely can have an MRI after the stimulator is put in. You will receive a temporary card with handwritten information on the day of your surgery. You will receive a permanent card from the manufacturer in about 8 weeks. The doctor ordering your MRI will indicate on the referral form that you have a device, and may ask you for information about the make and model of device at that time.

You must take that card with you to an MRI and show the MRI technologist. He/she will look up your leads and implantable pulse generator (IPG) to make sure it is okay to have the MRI.

You will need your programmer to put your spinal cord stimulator in MRI mode. Directions on how to do this are in your programmer guide book.

Travelling with a spinal stimulator

You must take your charging system with you when you travel with your spinal cord stimulator.

You will need to recharge your battery to avoid running out of battery charge. As a rule, it is best to top up the charge of your battery when it becomes half-way down.



Important

Information about the device is on the card which will be mailed to you by the manufacturer.

Bring this card with you when you travel. It also will contain contact information if you have problems with your device when you travel.

