Service:
Pain Service

Spinal Cord Stimulator for Pain Relief

Exceptional healthcare, personally delivered
Spinal cord stimulation has been offered to you as a treatment for your pain. This leaflet tells you about Spinal Cord Stimulation, the procedures and the after care.

**Spinal Cord Stimulation**

Spinal cord stimulation works by sending small electrical impulses to your spinal cord. An electrode is placed over the spinal cord and is powered by a battery which is implanted in the buttock or abdomen. Stimulation helps to block the pain signals travelling to the brain. It may feel like a tingling sensation which may help reduce your pain. You may not feel any tingling sensation. The amount your pain may be reduced varies from person to person.

**Stage One - Trial Stimulation**

To establish if spinal cord stimulation may give you pain relief you will have a trial period of stimulation.

This involves an electrode being inserted under local anaesthetic over your spinal cord. The procedure is performed with you awake as we need you to be able to tell us in which areas you are experiencing the stimulation and whether or not they are in the area of your pain.

You will be required to lie face down. This may be from one to two hours. You will have a needle placed in the back of your
hand through which you will be given a dose of antibiotics. A needle will be placed in your back and a fine wire is threaded up through this needle. You may experience pain in your back/neck or leg/arm during the passage of this wire. When this has reached a suitable position as judged by the image on an x-ray screen, you may be tested with a trial stimulation.

We will keep you as comfortable as possible. The procedure can feel uncomfortable but in rare circumstances it can be quite painful when the electrode is introduced and may leave you uncomfortable for a time after the procedure.

When a suitable position for the electrode has been achieved, the wire is then brought out through the skin and attached to your back with a stitch.

When we have moved you onto a trolley we will attach the lead to a temporary battery and give you a remote control type device to trial the stimulation. We like you to have a trial of about 5-10 days. This is best done at home where you can continue the activities that may make your pain worse. You should keep the stimulator on whilst you are in pain. There is no limit to the length of time the stimulator can be on. If you live locally you will be able to go home later on the day of your procedure. If you live a distance away then you will need to stay overnight.

You will return to the pain clinic for us to remove the lead and to determine whether or not the pain is relieved at all.
Following your trial
You will need to remain lying down on the trolley or bed for 1 to 2 hours and gently mobilise for the rest of the day.
You should try and resume some normal activity the next day and for the remainder of the trial.

Ongoing
The injection site may be sore once the local anaesthetic has worn off. You can take painkillers for this.

- The dressings should be kept dry and intact.
- Your activities need to be restricted to avoid the lead moving.
- Do not raise your arms above your head.
- Do not twist, bend or stretch at the waist.
- Do not lift heavy items.
- Avoid sitting for long periods of time or driving a car.
- Be careful not to catch the lead, make sure it is tucked inside your clothes and secured well to your body.

Stimulation
If you are feeling tingling this may increase when you bend back or when you lie down or sit. (Decrease the stimulation by lowering the amplitude)
Stimulation may decrease when you stand up. (Increase the stimulation by increasing the amplitude).
If the stimulation is uncomfortable at any time turn the stimulator off.

If you are at home for the trial and experience any of the following you should go to your nearest Accident and Emergency centre or GP who will contact the Neurosurgical team.

- Increasing severe pain in the back or neck.
- New Pain/ weakness/ numbness in the legs or arms.
- Feeling unwell/ flu like/ high temperature
Stage two - Permanent system

If the trial was a success then you will go on to have a full implant of the system. This may be performed under General Anaesthetic/ sedation or local anaesthetic. A small incision will be made in your back and the electrode will be implanted against your spinal cord. The connecting wire will be placed under the skin and attached to a battery. You will have a further incision in your skin either in your buttock or your abdomen to place the battery.

The Stimulator is programmed post operatively and you will be able to go home the following day. The stimulation may not be as good immediately after this stage as when the temporary wire was in place but stimulation should improve over the next few weeks as healing takes place. The sutures or clips will be removed by the practice nurse 7 to 10 days after the operation.

Complications

As with all surgery there are a number of potential complications, some of which are fairly common.

- Infection. Approximately 5% incidence. This would require the system being removed.
- Bleeding.
- Failure to relieve pain or increase in pain.
- No stimulation or intermittent stimulation.
- Headache.
- Allergic reaction.
- Stimulation in the wrong area.
- Stimulation failure.
- Nerve damage - rare.
- Paralysis. This is very rare.

Following your implant of a spinal cord stimulator

You will remain in bed until the day following surgery and then gently mobilised. The Nurse Specialist or company technician will programme your stimulator and show you how to use your hand held programmer.

You can use your programmer to:

- Turn your generator on and off.
- Increase and decrease the voltage within the boundaries set.

The hand held programmers are expensive. We therefore advise that you have it insured. Please inform us if you have any problems with your programmer.

What can I expect when I initially go home?

You may feel tired for about two to four weeks after the implant but it is important to build up you physical strength if possible by walking for brief periods of time each day.
You must inform your G.P and Nurse Specialist if you notice any of the following, which may indicate an infection that needs treatment.

- Any leakage from either wound. This may be brown, green or clear.
- Redness or any swelling/pain at the wound site.
- Any raised temperature.

For 4 to 6 weeks after implant it is important to avoid the following activities to prevent the lead from moving.

- Avoid putting your arms above your head.
- Try to avoid bending and twisting and lifting heavy weights.
- Do not sit for too long in a chair.
- Avoid driving for at least two weeks.
- Do not operate motor vehicles, power tools or equipment while your stimulator is on. Turn the stimulator off to reduce safety risks associated with sudden sensation changes.
- Continue to take your normal pain medication for the first 6 weeks.

General advice

- Advice should be sought regarding Magnetic Resonance Imaging (MRI) as it can cause harm to you and the generator.
- Diagnostic ultrasound is permissible but therapeutic ultrasound is not.
- If you need further surgery you must inform the surgeon that you need BIPOLAR diathermy.
- Stimulators may activate airport detectors and anti-theft devices in shops. These along with strong magnets can turn the generator off.
- It is important to carry your identity card and programmer with you at all times.

**Who will be responsible for my care?**

After your permanent spinal cord stimulator has been implanted, you will not receive a routine follow-up in the joint pain neurosurgery clinic with Dr Love-Jones or Mr Williams. A telephone follow-up with the specialist nurses Rose Marriott or Nicola Wade will be arranged and if any reprogramming is required this will be done by the Nurse specialist’s or company representatives. If you have a problem with your stimulator or you think it is not working properly then you can contact the pain clinic nurses on 01174147379 and appropriate arrangements for assessment will be made.

If your GP would like any information you may give them the relevant contact details.
Contact details

Nurse specialists  01174147379

Mr Williams / secretary 01174146706

Dr Love-Jones / secretary 01174147364

N.B. It is very important that you inform us if you are taking any of the following anticoagulation/ blood thinning drugs before your procedure. These may include:-

Warfarin, clexane, clopidogrel, rivaroxaban, dipyridamol, dabigatran.

Please note that this list is not exhaustive.

References

www.medtronic.co.uk
www.Bostonscientific.com
www.nice.org.uk
www.nevro.com
www.abbott.co.uk
www.polarmedical.co.uk
NHS Constitution. Information on your rights and responsibilities.
Available at www.nhs.uk/aboutnhs/constitution
If you or the individual you are caring for need support reading this leaflet please ask a member of staff for advice.