



Spinal cord stimulation for pain Information for patients

Prepared by the British Pain Society
and the Society of British Neurological Surgeons

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Spinal cord stimulation

Information for patients

Your hospital specialist team believes that you might benefit from having a spinal cord stimulator (often just called ‘a stimulator’).

You’ve probably got lots you want to know about the operation before you can commit yourself.

This leaflet tells you about spinal cord stimulation. It gives you some of the information that you might need before you can decide that a stimulator might be the right thing for you.

Being in pain

You’ve almost certainly been in pain for a long time and you’ve probably noticed how much you’ve changed from the person you once were.

We know that being in pain for a long time changes the way that people live their lives and the way that they feel about themselves. It’s not at all unusual to experience all sorts of complicated feelings such as frustration, anger, worry, or a sense of helplessness and despair.

Spinal cord stimulation and chronic pain

We’ll talk more about what a spinal cord stimulator is in a moment.

First of all, it’s important that you know what spinal cord stimulation can and can’t do for you.

Having a spinal cord stimulator fitted can help you overcome some of the difficulties of living in pain

A stimulator is an electrical device that can change some of the pain messages that your body sends to your brain.

When the stimulator works well, it can dramatically change the feelings from your body. Even then, it's up to you to start to do more in your life. We know that when people do more, they feel better in themselves and the complicated feelings that often go alongside being in pain can begin to lift.

What is a spinal cord stimulator?

There are different sorts of spinal cord stimulator. Ask your specialist to tell you about the sort that they use; whatever sort you have, they all work in similar ways.

There are usually 4 parts to a spinal cord stimulator:

1. **A very small computer that controls the stimulating system.** It's about the size of a box of matches, and the surgeon will usually place it under the skin in your abdomen or the side of your chest. Some types of computer have their own internal battery; others rely on an external battery.
2. **An electrode that sits near your spinal cord** and that delivers tiny amounts of electricity to the spinal cord very accurately and safely.
3. **An extension lead** that connects the computer to the electrode in your spine.

All of these components are carefully placed inside you

A stimulator is a small, battery-powered device that is designed to deliver precise amounts of electricity to your spine. What you feel is under your control; you should adjust the stimulator until you feel a pleasant tingling covering the area of pain.

during the operation. The electrode is sometimes put in under local anaesthetic but you will usually need a general anaesthetic for the other parts of the stimulating system to be put in.

4. The 4th part is a **hand held controller** that you can use to switch the stimulator on or off and to adjust it until you feel a pleasant tingling in the area where you normally feel pain.

You can use the controller whenever you wish to turn the stimulator up or down until you feel a pleasant tingling in the area where you normally feel pain.

You can carry the controller around with you; it's about the same size as a personal stereo.

The transmitter component of the alternative externally-powered systems is very similar to this controller but it has to be left on while the stimulator is being used.

How does spinal cord stimulation work?

Electricity has been used to treat pain for centuries. Over the last 40 years, we've begun to understand how electricity actually works to treat pain. We now know that small amounts of electricity delivered very precisely to the spinal cord can alter the way in which pain signals are processed and can have a dramatic effect on pain in some people. What seems to be important is that you feel the gentle tingle of electricity in the area of your body that normally hurts. If the stimulator is successful you will feel the tingling instead of the pain.

How effective is spinal cord stimulation?

As with any operation, not everyone benefits. Spinal cord stimulation is of more help for people with some medical conditions than others.

Ask your specialist what their results are for people with your particular condition.

What are the risks of having a stimulator?

There are risks with any operation.

Most of the problems that can happen with spinal cord stimulation are quite minor, but there are a few rare problems that you should know about.

It is important that you ask your specialist about how common the following problems are in their hands:

- The electrode in your spine may move and you may need one further operation to reposition this, rarely more. Usually about a quarter of patients need further surgery.
- If you have a stimulator with an internal battery, the battery will need replacing every few years. This can usually be done under local anaesthetic.
- You may develop an infection as a result of the operation. Most infections don't cause serious problems but your doctors may need to take out all or part of the stimulator.
- As with any operation on the spine, there is a possibility of damage to the spinal cord or the spinal nerves. This happens very rarely, but it is of course something that we look out for in the first few hours after your operation.
- You may feel discomfort in the area around the scars.

I'd like to know more; how do I go about having the operation?

There are different sorts of spinal cord stimulator, and different operations to place them inside you.

If, having read this leaflet you would like to know more, ask your

specialist about what the operation would entail for you. The decision to go ahead with the operation is made by you with the help of a specialist team of professionals who are used to helping patients with pain.

After the operation

When you've had your operation, there are a few extra things that you should know about

- **For the first few weeks after the operation**, the electrode is gently becoming fixed into the tissues of the spine. This is a normal, safe process but you should avoid extreme activity for the first 2 months as the electrode may move, leading to the need for another operation to replace it.
- **Infections.** If you develop an infection in your skin or soft tissues at any time in the future, it's important that you have a short course of antibiotics. Ask your GP about this.
- **Body scanners.** Some types of body scanners can interfere with your stimulator. Generally, you should not have an MRI scan other than in rare circumstances; normal X rays are generally safe. Other scanners in airports and in some shops can also change the settings of a stimulator. In general, any sign that warns of the potential for a problem for people with heart pacemakers is also relevant to people with stimulators.
- **Short wave diathermy:** some healthcare professionals; physiotherapists for example, use a treatment called short wave diathermy. This treatment is potentially dangerous for people who are fitted with a spinal cord stimulator.

If you develop a problem with your stimulator at any time, it's important that you contact your surgeon, or a member of the team. Make sure you are given a contact telephone number before you leave hospital.

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The British Pain Society was also helped by the Neuromodulation Society of UK and Ireland (NS(UKI)) who provided expert contribution to and comment during preparation of this document.

The group has also produced recommendations to healthcare teams offering spinal cord stimulation in an accompanying booklet *Spinal cord stimulation for the management of pain: recommendations for best clinical practice*.

This patient information leaflet and the recommendations for healthcare professionals are part of a series of publications about managing pain. These are available from the British Pain Society website www.britishpainsociety.org



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