



The British Pain Society

Stimulating the spinal cord to
help with pain - information for patients

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

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The Chair of the publication working group has considered the review of this publication and as no new evidence is currently available the guidelines still stand. The publication will next be reviewed in late 2013.

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Stimulating the spinal cord to help with pain – information for patients

Your hospital specialist team thinks that you might benefit from having a spinal-cord stimulator.

This leaflet tells you about having a spinal-cord stimulator. It gives you some of the information you might need before you can decide that a spinal-cord 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 used to be.

We know that being in pain for a long time changes the way people live their lives and the way they feel about themselves. It's not unusual to feel frustrated, angry, worried, or helpless.

Spinal-cord stimulators and pain

First of all, it's important that you know what a spinal-cord stimulator can and can't do for you.

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

Having a spinal-cord stimulator fitted can help you deal with some of the difficulties of living in pain.

When the spinal-cord 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 about themselves, and the complicated feelings that often come with with being in pain can start to go away.

What is a spinal-cord stimulator?

There are different types of spinal-cord stimulators. Ask your specialist to tell you about the type they use. Whatever type of spinal-cord stimulator you have, they all work in similar ways.

There are usually four parts to a spinal-cord stimulator.

1. **A very small computer that controls the stimulating system.**
This is about the size of a box of matches, and the surgeon will usually place it under the skin of your abdomen or the side of your chest. The computer has its own battery and some can be recharged.
2. **An electrode that sits near your spinal cord.**
This sends tiny amounts of electricity to your spinal cord. This is very accurate and safe.
3. **An extension lead.**
This connects the computer to the electrode in your spine.

All of these parts are carefully placed inside you during the operation. The electrode is sometimes put in while you are under a local anaesthetic, but you will usually need a general anaesthetic for the other parts of the stimulating system to be put in.

4. **A hand-held controller.**

You can use this to switch the spinal-cord stimulator on or off and to adjust it 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.

How does a spinal-cord stimulator work?

Electricity has been used to treat pain for centuries. Over the last 40 years, we have started to understand how electricity actually works to treat pain. We now know that if we send small amounts of electricity to specific parts of the spinal cord this can change the way which pain signals are processed and this 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 spinal-cord stimulator is successful, you will feel the tingling instead of the pain.

How effective are spinal-cord stimulators?

As with any operation, not everyone benefits. Spinal-cord stimulators help some people more than others.

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

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

What are the risks of having a spinal-cord stimulator?

There are risks with any operation.

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

It is important that you ask your specialists about how common the following problems are.

- The electrode in your spine may move and you may need more surgery to reposition it (usually no more than one more operation). Usually about a quarter of patients need more surgery.
- 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 spinal-cord stimulator to be able to effectively treat the infection.
- As with any operation on the spine, there is a chance that the spinal cord or the spinal nerves will be damaged. 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 types of spinal-cord stimulators and different operations to place one of them inside you.

If you would like to know more, ask your specialist about what the operation would involve for you. You will get help from a specialist team of professionals who are used to helping patients with pain, to help you make your decision.

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 and safe process, but you should avoid extreme activity (for example contact sport, such as rugby or football) for the first two months after the operation as the electrode may move and you may need 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 spinal-cord stimulator. Generally, you should not have an MRI scan, except in rare circumstances. Normal x-rays are generally safe. Other scanners in airports and in some shops can also change the settings of a spinal-cord stimulator. In general, any sign that gives a warning for people with heart pacemakers also applies to people with spinal-cord stimulators.

- **Short-wave diathermy.**

Some health-care professionals, such as physiotherapists, use a treatment called 'short-wave diathermy'. This treatment can be dangerous for people who have a spinal-cord stimulator.

If at any time you develop a problem with your spinal-cord stimulator, it's important that you contact your surgeon or a member of the team. Make sure you get a contact phone number before you leave the hospital.

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The Neuromodulation Society of UK and Ireland also helped us produce this leaflet, by giving us their expert knowledge.

We have also produced recommendations for health-care teams in the booklet 'Spinal cord stimulation for the management of pain: recommendations for best clinical practice'.

This leaflet and the recommendations for health-care teams are part of a series of documents about managing pain. These are available from our website at www.britishpainsociety.org.



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