

# Spinal cord stimulation

## Pain Management

### Patient Information Leaflet

#### Introduction

Welcome to The Dudley Group NHS Foundation Trust pain management service. This leaflet will provide you and your relatives with information about spinal cord stimulation. It includes what this is, the benefits and risks and what happens during the procedure.

#### What is spinal cord stimulation?

Spinal cord stimulation is a safe and effective means of managing pain for some people with long-lasting pain. It has been used for managing pain conditions since the early 1970s.

The treatment involves putting an electrode or electrodes into the epidural space in your back. This is the same place where you may have had a lumbar epidural. The surgeon will use X-rays to find the exact place where the electrodes need to be placed.

The electrodes transmit small electrical impulses. These block pain signals and prevent them from reaching the brain. The electrodes are connected to a small internal battery unit. This is connected to a hand-held controller which is controlled by you.

## What are the benefits?

It can be used to treat a variety of long lasting pain conditions including:

- Combination of complex back and leg pain
- Complex regional pain syndrome or complex nerve-related pain conditions
- Peripheral vascular disease which is a condition where a build-up of fatty deposits in blood vessels restricts blood supply to the legs and causes pain
- Angina that cannot be treated by surgery

The spinal cord stimulator will not take away all of your pain but it is hoped that your pain will be reduced by at least half.

The insertion of a spinal cord stimulator is a reversible procedure. Therefore it can be taken out, if needed, without causing damage to your spine or spinal cord.

## Why do I need spinal cord stimulation?

- The pain you have is not being effectively managed by medication.
- Injections have only produced short term or no reduction in your pain levels.
- Experience and research has shown that people who have pain similar to yours have responded well to this form of pain relief.

## What are the risks of having this treatment?

As with any surgical procedure, the insertion of a spinal cord stimulator has some risks. It is important that we make you aware of these.

## **The risks of having a general anaesthetic are:**

- Reaction to the drugs used.
- Chest infection after the procedure. This is more likely if you smoke.
- A heart attack.
- Blood clots – also known as deep vein thrombosis (DVT). When you are not active for a period of time, blood moves more slowly around your body which can trigger a blood clot.

We will assess whether you may be at risk of this. If necessary, we may recommend that you wear compression stockings, and have an injection of a blood-thinning medication each day you are in hospital.

## **The risks of having a spinal cord stimulator fitted are:**

### **Frequent risks**

- Headache.
- Problems with the cannula used to give antibiotics and fluid after the procedure, for example, it may get blocked. If this happens, we may need to take the cannula out and put it in again.
- Infection in or around the cannula site.
- The electrode leads may move or not work. This may need another operation to correct it.

### **Occasional risks**

- Bleeding which may lead to bruising.
- Development of new pain in your back where the electrodes are.
- Failure to relieve the pain.

## Rare risks

- Collapse.
- An abnormal collection of blood outside a blood vessel if you have a lot of bleeding. This is known medically as a haematoma.
- Allergic reaction to the electrodes. They may have to be removed.
- Spinal cord injury leading to paralysis which could be either permanent or temporary.
- Infection that could lead to meningitis.
- The spinal cord stimulator may fail and have to be replaced.

## X-ray precautions:

- The procedure uses X-rays and these use a small amount of radiation which may add slightly to the normal risk of cancer.
- Every effort is made to keep radiation doses low. The amount of radiation you are exposed to during the procedure is the equivalent to between a few months and a few years of exposure to natural radiation from the environment.

For more information visit:

<https://www.gov.uk/government/publications/medical-radiation-patient-doses/patient-dose-information-guidance>

**Female patients – due to the use of X-rays during the procedure, you must tell us if you are or might be pregnant before you come for the procedure. If you are not sure, we will offer you a pregnancy test.**

## What are the alternatives?

You do not have to have this procedure and your consultant will discuss alternative treatments with you appropriate to your condition. If you prefer, you can continue to take painkilling medication without having any other treatment.

## How is the procedure carried out?

The procedure is normally carried out in two separate sessions, one week apart.

### Stage one – the trial

The trial stage allows both you and your clinical team to decide if this is the most appropriate and effective form of treatment for you. It gives you the chance to see if the stimulation covers all areas of your pain and what the stimulation feels like. It may be that you do not like it and do not wish to proceed. The trial normally takes place for one week and you will need to stay in hospital during that time.

The first stage is the most complicated as it involves inserting the electrode(s) into the epidural space. This is carried out using a local anaesthetic to numb the area. It is important that you are awake for this part of the procedure as you need to be able to describe where and what you are feeling.

To insert the electrode(s), the surgeon will make a small cut in your back. The surgeon will close this with surgical staples which will need to be removed seven to 10 days after surgery.

### Stage two – full implant

The second stage is when the system is fully implanted and connected to the internal pulse generator and battery unit. You will have a general anaesthetic for this procedure so you will be asleep for this stage.

The procedure involves the surgeon making a cut into the skin in your stomach area (abdomen). The surgeon forms a pocket to take the receiver which is the part that contains the pulse generator and battery unit. The electrodes are connected to extension wires and connected to the receiver.

The surgeon will also make a small cut on your side for the electrode wires to come out. The surgeon will close both the cut on your abdomen and the small cut on your side with surgical staples. They will put a small dressing over the areas. The staples will need to be removed seven to 10 days after surgery.

## What happens after surgery?

It is quite normal to have pain after this type of procedure in both your back and abdomen. Bruising is common. You may have discomfort for up to six weeks.

It is important to remember that the stimulator will not relieve this pain as it is from surgery. Therefore, you will need to take other pain relief (always read the label; do not exceed the recommended dose).

## What should I do at home?

At home you should gradually increase your level of activity. It is advisable to have someone with you for the first few weeks after your procedure as you gradually build up your activity. **Do not** take up any new exercise or do exercise you are not used to. **Avoid overdoing it too soon.**

Remember to have correct posture at all times. Avoid lifting heavy objects and twisting your body round, always face the object that you need.

If you do not do any exercise to improve your general fitness and well-being, you may not feel any major benefit from this treatment. Please remember, this treatment only manages your symptoms; it is not a cure for your pain.

## Follow up

We will ask you to come back to see members of the pain team about three to four weeks after the procedure to see how you are getting on.

A representative from the implant company may also get in touch with you. For some systems, they are the first place to call if you have a problem with the function of the system. For any other problems, contact the pain management team.

## **Important**

If you have to attend a physiotherapy appointment, please tell them you have a spinal cord stimulator as this may affect treatment options they can offer.

If you need to have an MRI scan, please tell the doctor or nurse you have a spinal cord stimulator. You cannot have MRI scans with some types of stimulator.

## **What if I have problems?**

You can contact the clinical nurse specialists in the pain management team (9am to 5pm, Monday to Friday) by:

- Calling **01384 244735** and leaving a message on the answerphone or
- Ringing the switchboard number 01384 456111 below and asking them to bleep the number 5064

Out of these hours, you will need to contact your GP or NHS 111.

## **Can I find out more?**

The following website has more information on spinal cord stimulation:

### **The British Pain Society**

<https://www.britishpainsociety.org/british-pain-society-publications/patient-publications/>

If you have any questions, or if there is anything you do not understand about this leaflet, please contact:

Clinical nurse specialists in pain management on 01384 244735 or ring the switchboard number and ask them to bleep the number 5064 (9am to 5pm, Monday to Friday)

Russells Hall Hospital switchboard number: 01384 456111

**This leaflet can be downloaded or printed from:**

<http://dgft.nhs.uk/services-and-wards/pain-management/>

If you have any feedback on this patient information leaflet, please email [dgft.patient.information@nhs.net](mailto:dgft.patient.information@nhs.net)

**This leaflet can be made available in large print, audio version and in other languages, please call 0800 073 0510.**

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此宣传单可提供大字版本、音频版本和其它语言版本，请拨打电话：0800 073 0510。

Ulotka dostępna jest również w dużym druku, wersji audio lub w innym języku. W tym celu zadzwoń pod numer 0800 073 0510.

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Aceasta broșura poate fi pusă la dispoziție tipărită cu caractere mari, versiune audio sau în alte limbi, pentru acest lucru vă rugăm să sunați la 0800 073 0510.

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