



A patient's guide to the

Frequently asked questions Spinal cord stimulators

What is spinal cord stimulation (SCS)?

Spinal Cord Stimulation is a safe treatment used to treat patients in whom chronic pain has significantly limited their activities of daily living. This may include conditions such as Neuropathic pain (nerve related pain), failed back surgery syndrome, complex regional pain syndrome, post-traumatic neuropathic pain (see the link to NICE guidelines at the end of this document where further information may be obtained).

The Implant is an electrical device that can change some of the pain messages that your body is sending to your brain, and reduce the amount of pain that you are experiencing. The stimulator works by sending very small amounts of electricity to parts of the spinal cord. You will feel this as slight tingling over the area that is usually painful.

What is a spinal cord stimulator?

There are usually 5 parts to a Spinal Cord Stimulator:

- 1.** A very small computer like device that controls everything. It's about the size of a box of matches (around 4x5 cm), the doctor will usually place it either under the skin in your upper gluteal (buttock) area or in an area as discussed with you prior to implant.
- 2.** 1 or 2 thin wires that sit in your epidural space that delivers a tiny amount of electricity to the spinal cord very accurately and safely.
- 3.** An extension lead that connects the computer like device to the wires in your epidural space (if required).
All of the above parts are carefully placed inside you during the operation.
- 4.** The 4th part is a hand held controller that you use to switch the machine on or off and to adjust it until you feel a pleasant tingling in the area where you normally feel pain. This is the size of a mobile phone.
- 5.** Charging Device to charge the internal battery, if you have a rechargeable device.

Please Note:

The hand held device and the charging device will need to be added to your house insurance in case they are lost or damaged.

The implant must be kept charged at all times and must never be left to go fully undischarged/Flat.

Is Spinal Cord Stimulation safe?

Side effects can occur. See below for safety information.

When you come to see the doctor in the clinic all of the risks and side effects will be discussed with you. It is important that if you have any questions you ask them at this time. Spinal Cord Stimulators have been used in thousands of people over the last 40 years and have been helpful in 5 to 7 out of every 10 patients, across the globe.

It is important to remember that this treatment is reversible. You can have it switched off or completely removed at any point.

What does spinal cord stimulation feel like?

The sensation is different for everyone. Most people describe it as a pleasant tingling. The tingling should be felt in the area that you usually feel pain and it should be a pleasant feeling. Depending on the type of SCS device used, some devices may not cause a tingling sensation.

Does spinal cord stimulation (SCS) require major surgery?

Not necessarily, but it is usually done in a theatre where it is clean and we have all equipment available. You will have conscious awake sedation that is administered intravenously, during the spinal cord stimulator insertion that will help you tolerate the procedure and be able to inform the Doctor of any changes to your pain symptoms.

Standard fasting guidelines are maintained i.e. no solids, milk etc., for 6 hours prior to the procedure. Clear fluids may be taken up to 2 hours prior to the procedure in small amounts. Please bear in mind you will be on the theatre table prone (on your tummy / face down). If you have a history of reflux, hiatus hernia, acid peptic disease please let us know and also let the anaesthetist know on the day of the procedure or during pre assessment.

Kindly take your regular pain medications prior to the procedure on the day. If you are on any anticoagulant medication (drugs to thin your blood), e.g. warfarin, aspirin, Clopidogrel or newer oral anticoagulants, these need to be stopped in discussion with your clinician/cardiologist and responsible prescriber including your GP as early as possible prior to surgery.

How many surgical procedures are required?

The surgery is usually done in two steps.

Stage 1: Trial

This lets you and the doctor trial the SCS to determine if it is going to give you enough pain relief and if you like it.

During the trial you will have one or two SCS leads implanted into the epidural space with it connected to an external pulse generator (EPG) – a device that sends electrical signals through the SCS leads.

The SCS leads are secured to your back with sutures at the entry point and dressings such as mepore, duoderm or c-view to hold it in place. If you have an allergy or are sensitive to the adhesives in dressings or had an allergic response in the past kindly inform the Chronic Pain team at RNOH at the earliest.

As a result of the dressings used to secure the SCS trial lead and EPG in place during the trial, we advise to refrain from having a shower or bath for the two week period. A sponge bath may be suitable for this period. The trial period is generally for two weeks allowing you an opportunity to evaluate the therapy and decide if it works for you and more importantly if you would like to have it permanently implanted in your body at a later date.

Removal of trial equipment:

If you are having an SCS percutaneous trial (through the skin trial), the leads will be removed from your body at 2 weeks. This is a Day case procedure carried out in a sterile area.

Stage 2: Permanent implant

If all goes well during the trial period and you decide to have the device implanted in your body then you will return to theatre after four to six weeks to implant the permanent equipment of the SCS.

Where are the leads placed?

Spinal cord stimulators - SCS

Spinal cord stimulator leads are placed in the epidural space. The epidural space runs from your neck along the length of your spine. It contains the nerves that connect your spine to your upper and lower body. The leads are placed into the epidural space through a needle. The doctor will also use an x-ray machine to help guide them. This is done under sedation.

Surgically placed SCS

These leads are only for select complex patients and are slightly different. They will be positioned by a surgical procedure under general anaesthesia. This will be discussed with you if you are being offered this type of procedure. The procedure is carried out by your Pain doctor and a Spinal surgeon.

Where is the computer placed?

It is usually placed in your upper outer aspect of the buttock. It can also be placed in the lower tummy area on rare occasions. You and your doctor can discuss this when you come to Clinic.

Are there any side effects or risks?

As with any surgical procedure there is a small possibility of infection i.e. a 4% to 5% chance. Every effort is made to avoid this by using a sterile technique.

There is also a slight risk of bleeding or of injury to or around the spinal cord.

The leads may move (migrate), there may be a failure in capturing the area of pain, inadequate pain relief, unpleasant sensation, allergic reaction to the system, nerve damage (temporary or permanent), paralysis (chance is 2 patients per million). Some people do not find that SCS helps their pain.

There is also a risk that there may be a Dural tear (the covering that surrounds the spinal column) and subsequent Cerebrospinal Fluid (CSF) leak potentially leading to a post Dural puncture headache and this will be treated accordingly. In some instances the headaches can be persistent despite treatment.

Will I feel the device under my skin?

Once your wounds have healed, most patients say it is easy to forget that the SCS is there. But you may have some discomfort while the wounds are healing. This is perfectly normal and is a sign that healing is taking place. Very occasionally some patients feel some discomfort at the internal battery implant site. The device is placed 1 to 2 cm below the skin to allow for effective charging.

How soon after surgery can I return to a more active lifestyle?

Your doctor will discuss with you what you should and should not be doing, and when it is safe for you to start with activities such as swimming or exercise classes on an individual basis.

We would suggest that you gradually start gentle exercise such as walking. This will help you to build up your strength again. It is important to restrict any sudden jerky movements of the spine (for SCS), during the trial and during the first 6 months after an implant to prevent migration of the leads. This would possibly allow for it to be set in its position to optimise benefits.

Following surgery we ask that you do not do the following:

- Lift Heavy Objects
- Lift arms above head height
- Extreme sports/Physical exercise
- Any excessive twisting/turning
- Remove any wound dressings

Pregnancy

We would ask that if our female patients fall pregnant to discontinue using the stimulator but to continue keeping the device charged. Further advice will be given to you on discussion with your chronic pain consultant or nurse.

Frequently Asked Questions About Daily Living With SCS

The following are frequently asked questions (FAQs) about daily living with a spinal cord stimulation system.

Do I have to use the stimulator all day?

You can use the SCS all the time if you need to. Some patients find that they just want to use it to get pain relief during the day and they turn it off at night. Other patients do have the SCS switched on while they are asleep. You and your doctor will be able to discuss and try different ways of using the machine that is most suitable for you.

Can I actually control the SCS?

Yes. It will depend on the type of SCS you have and you will be able to discuss this further with your doctor. You will have the ability to turn the SCS on and off and also to adjust the tingling feeling that you feel over the area that is usually painful. Different patients require different programs and this will be discussed with you during the meeting with your doctor and the company representative of the SCS device.

Can I shower or swim with the stimulator?

You will not be able to shower during the trial period, which is usually 1 to 2 weeks. Once the SCS has been completely placed under your skin you will be able to shower again when your wounds have fully healed. You should not swim during this time either and should not start swimming for 6-8 weeks after the SCS has been put in, but we will advise on an individual patient basis. We advise that the stimulator must be switched off whilst swimming.

Is it safe to use household appliances or cellular equipment with my stimulator?

Yes. It is safe to use pagers, computers and normal household equipment (including microwave ovens).

Department stores and airport security gates or theft detectors may affect your SCS. They may increase or decrease the tingling feeling that you will feel over the area that you usually feel pain. These along with strong magnets may also switch the device off at times. This does not harm the SCS but we would advise that you turn the SCS off before passing through devices like these. Kindly consult with the company representative of the device being used when you meet with them prior to your trial.

Can I drive with the stimulator on?

No. Your SCS should not be used while you are driving or operating heavy machinery. If you are driving you need to turn the SCS off.

You will also need to inform the DVLA and your insurance company. You can ride as a passenger with the SCS on.

Will spinal cord stimulation allow me to return to work?

Your doctor will help you make this decision. Some patients, depending on the type of work they do, are able to return to work, but you will need to discuss this further when you come to the pain clinic.

Can I travel with the stimulator?

Yes. Metal detectors and anti theft devices may sense your SCS. When you have the SCS put in we will give you an identification card that you should carry with you at all times. Then if you do find that you experience problems when you are trying to pass through these devices you can present your identification card. Security staff will know what to do when they see your identification card as they are used to seeing thousands of people who fly with implantable devices such as SCS.

When flying you should follow the flight crew's special instructions and turn the SCS off for take-off, landing and when the seat belt sign is switched on.

Who is responsible for my care in the future after the SCS implant - will I have any further appointments under the pain clinic?

You are under the care of the Pain Management Centre at RNOH once you are seen at our pain centre for your Spinal Cord Stimulator.

Once the permanent implant is carried out you will have a follow up in the Outpatient Pain Clinic or via telephone at 1 month, 6 months and 1 year to ensure all is well. As long as the scs is working as it should we do not need to make any further appointments. However if at any point you require help or assistance with the scs you can contact the chronic pain team on our Helpline No. 020 8909 5669.

Who do I contact if I run into problems with the equipment in the future?

The Pain Management Centre will provide you our answerphone facility where a message can be left as above.

You may also choose to bleep the Chronic Pain nurses (bleep 831, 707 or 795) or Pain Fellow (bleep 629) through the RNOH switch board.

If URGENT assistance is required out of hours or on the weekends following the implant (either trial lead or permanent), the on-call anaesthetic registrar may be contacted through switchboard at the RNOH. Kindly note this is only for urgent matters and urgent advice.

With the Stimulator you will be given the programmer to control your SCS device and also a charging device. Whilst we can cover costs for malfunction of the equipment for the 1st year, unfortunately we cannot cover costs of accidental damage or loss. We currently advise patients to put the programmer and charging device on to their home insurance policies.

Failure to do so may lead to a delay in the replacement of the device. If you have any further questions please do not hesitate to contact us.

Is this a validated therapy?

Yes NICE has validated this therapy for specific patient groups as mentioned previously. A link to this document is provided below.

www.nice.org.uk/TA159

TA159

Pain (chronic neuropathic or ischaemic) - spinal cord stimulation (TA159)

Where may I find further information regarding Spinal Cord Stimulators?

Further information may be obtained at the British Pain Society website by scrolling down the patient publications to the section illustrated below titled "[Spinal Cord Stimulation for pain: information for patients](#)"

www.britishpainsociety.org/patient_publications.htm

If you do not have access to a computer, please ask a friend to print the above documents for you or ask the Pain Clinic to print them off for you.

