

Surgery for tremor

i Information for patients
Neurology



PROUD TO MAKE A DIFFERENCE

SHEFFIELD TEACHING HOSPITALS NHS FOUNDATION TRUST



Why am I being considered for deep brain stimulation (DBS) or lesioning?

The operation may help if:

- Tablets are not effective.
- Your tremor affects your quality of life.

Your neurologist and neurosurgeon will talk to you about the benefits and side effects of deep brain stimulation surgery for tremor.

What does surgery do?

The surgeon decides with you which type of surgery will be performed to achieve the best results. Surgery is believed to work by cancelling out abnormal signals that cause your condition. The procedures are:

- **Lesioning:** this involves making a small burn in a particular part of your brain to control symptoms.
- **Deep brain stimulation:** this requires two operations. An electrode, which is a small wire, is placed deep into your brain and a small electric current is passed through it. The electrodes are joined to a small external battery which you will carry with you until the second stage. This second stage involves placing the electrodes under the skin and connecting them to a small battery placed in your chest or abdominal wall.

Both lesioning and deep brain stimulation have advantages and disadvantages. Neither is a cure, but most people find that their tremor improves immediately after the operation.

Before surgery you will need to have had:

- **Brain scans:** these record the structure of your brain and are used to help your surgeon target the area for surgery.
- **Neuropsychological tests:** these measure memory, mood and concentration.
- **Nursing assessment:** this involves an assessment of your tremor and how this affects your quality of life.

Please be aware that the above assessments may take several months to complete.

After the tests you will have another appointment with the neurosurgeon to discuss your test results and any concerns that you may have. If surgery is right for you then you will need to attend a pre-operative assessment shortly before surgery.

What happens during my hospital stay?

You will be admitted the day before surgery. This will give you a chance to discuss any further questions or concerns you may have. You can expect to stay in hospital for about 5-10 days depending on the type of procedure you undergo.

What happens on the day of the operation?

Deep brain stimulation first stage:

You will not be able to eat or drink from midnight. The specialist nurse will meet you in theatre and will stay with you throughout the operation.

Once in theatre, a frame will be fitted to your head under local anaesthetic. You will then go to X-ray for a brain scan called a CT, which is a short 3 minute scan.

The surgeon uses the frame and the information from the scan to enable him to place the electrode in the area of the brain which is causing your tremor. This part of the procedure is usually done whilst you are awake as this will allow us to assess the effect of the surgery on your tremor. The operation itself takes about 2 hours. Every effort is made to ensure you are comfortable during surgery.

Second stage:

This is done whilst you are asleep and involves placing the electrodes under the skin and attaching them to a battery placed in your chest or abdominal wall. This is normally carried out a week after the first stage.

Lesioning:

The operation is very similar to the first stage of DBS but instead of the electrode being left in the brain it is used to make a small burn which destroys the area causing your tremor. This is completed in one procedure and it is hoped you would return home within 5 days of the operation.

What are the risks of surgery?

There are some risks linked with surgery, although the numbers are small. The Neurosurgeon will discuss these with you before you decide to have surgery.

Possible risks may include:

- Bleed or stroke from electrode insertion
- Wound infection or infection of the electrodes or battery. This may require the removal of the device (DBS only)
- Breaking or fault of the lead, which may require replacement
- Confusion
- Mood changes, such as depression or anxiety, have been reported
- Headaches

Side effects of deep brain stimulation may include:

- Speech problems
- Unsteadiness with walking
- Incomplete relief of your tremor
- Abnormal muscle spasm or reduced coordination
- Jolting or shocking sensation
- Tingling sensations

Many side effects related to stimulation can be managed by adjusting the stimulator settings but sometimes speech and balance problems can persist.

Will I need to have further tests after surgery?

You will be followed up on a regular basis after your surgery. In the first few months you may need to attend more often as your stimulator may need to be adjusted to get the best control of your symptoms. This will usually be carried out by the nurse specialist. The specialist nurse will provide on-going support and advice and if you have any worries you can ring on the number listed below.

The battery of the stimulator will eventually need replacing but normally lasts about 3-5 years. If the battery lasts less than 3 years you will be offered the option of a rechargeable battery as this will last at least 10 years. The specialist nurse will discuss this with you and show you what is involved with charging the battery.

Further Information

Contact Movement Disorder Nurses on:

- **0114 271 1704**

Monday to Friday, 8.30am to 4.30pm except bank holidays.

At busy times your call may go to an answerphone but please leave a message and we will get back to you as soon as we can.

You are encouraged to call the service as needed.

National Tremor Foundation

Website: www.tremor.org.uk



**Sheffield
Hospitals
Charity**

To help support your local hospitals visit
sheffieldhospitalscharity.org.uk

Registered Charity No. 1165762



Yes I donate
ORGAN DONATION

**Alternative formats can be available on request.
Please email: sth.alternativeformats@nhs.net**

© Sheffield Teaching Hospitals NHS Foundation Trust 2019

Re-use of all or any part of this document is governed by copyright and the "Re-use of Public Sector Information Regulations 2005" SI 2005 No. 1515. Information on re-use can be obtained from the Information Governance Department, Sheffield Teaching Hospitals. Email sth.infogov@nhs.net