

Single-pulse transcranial magnetic stimulation (sTMS) for migraine

This leaflet explains more about sTMS, including the benefits, risks and provision of the device. If you have any further questions, please speak to a doctor or nurse caring for you.

What is a migraine?

A migraine is a common condition characterised by recurrent, throbbing headaches that can last for hours or days. The headaches are often accompanied by nausea, and sensitivity to light and sound. Some people experience an aura before the migraine headache begins. This can include disturbances of vision or smell, or dysphasia (difficulties with speech). Migraine attacks occur when certain areas of the brain become over-active. One of them is the cortex, which is the outer area of your brain.

Current treatments for migraine include **acute** (also known as abortive) treatments and **preventive** treatments. Acute treatments aim to stop episodes and manage symptoms using medications such as Triptans, analgesics (painkillers) and anti-emetics (for sickness). Preventive treatments aim to reduce the frequency and severity of the migraines. Common preventive treatments include beta-blockers, anticonvulsants, calcium channel blockers, antidepressants, devices that emit a magnetic and/or electrical stimulation (both invasive and non-invasive devices), as well as minimally invasive procedures such as nerve blocks and botulinum toxin type A injections.

What is sTMS?

sTMS is a non-invasive technique which uses magnets to apply pulses to the cortex. These pulses aim to lessen over-activity in this area and therefore reduce pain signals in the brain.

sTMS is delivered using a handheld, portable device that you can control yourself, and enables you to deliver the treatment at home. To carry out the treatment, the device is held against the scalp, at the back of the head, and single or repeated pulses are delivered by pressing a button on the device. The intensity and duration of the pulse is fixed, but your specialist will advise you on how frequently to use the device.

You may continue to use regular medications to prevent migraines in accordance with the treatment plan your doctor has given.

Why should I have sTMS?

sTMS is a non-invasive treatment for chronic migraines, used frequently as an alternative to medications, invasive procedures and injections. Your suitability for this treatment will be decided by your Headache Specialist, however take a list of questions you would like to ask and please tell us if you need us to explain something more clearly.

sTMS treatment may be particularly helpful when medications should not be used either because of their side effects, or because of other health issues (for example, in pregnancy).

How well does sTMS work?

sTMS can be used in two ways:

- **Acutely** at the start of a migraine episode, or during the aura before your migraine headache, with the intention of stopping or reducing the severity of the episode, or
- **Preventively** at regular, planned intervals, with the intention of reducing the frequency and/or severity of your migraines.

sTMS is not intended to provide a cure for migraine, however clinical trials and real-life data have shown that in around half of patients, sTMS has a good effect as a preventive treatment, reducing migraine severity and increasing headache-free days. This is similar to the response to current preventive drug therapies. It may also reduce or end your need for acute medications.

What are the risks?

In a randomised controlled trial no serious adverse events were reported.

Some minor side effects may include:

- tingling
- light-headedness
- drowsiness
- tiredness
- mild dizziness.

These have been shown to occur in fewer than one in ten people, and did not require further medical attention.

When used during pregnancy, no side effects have been recorded for either the mother or baby.

Your consent (permission) and commitment

You will need to provide written consent before the treatment is started.

You should be aware that the Trust pays the rental cost of the sTMS device. The hospital will complete a registration form for the device and agree to certain rental conditions offset by the company (eNeura). If you would like to know more about this arrangement please discuss it with the clinician in your initial consultation.

What happens during treatment?

Following your consultation with the specialist clinician, you will be contacted by the company (eNeura) and they will arrange a delivery for the sTMS device to your personal address. Once you receive the device you can start the trial of the treatment plan as explained by the specialist clinician and outlined in the copy of the prescription given to you in clinic. For example:

- Acute treatment: deliver two sequential pulses every 15 minutes, for one to two hours.
- Preventive treatment: deliver two pulses, twice daily

During treatment, you will need to understand and agree to follow the treatment plan in your daily life, provided by the clinician. To properly assess the effect of treatment, you will need to use the device consistently for at least three months. Failure to comply with the recommended treatment dosage or treating period may result in your treatment being stopped and the device returned.

Please do not hesitate to contact the Headache Centre at St Thomas' Hospital if:

- you are unsure whether it is having any impact on your migraines
- you are experiencing any problematic side effects.

Additionally you will be provided with details of someone to contact at the company (eNeura) if:

- you are unsure of how to use the device
- you are having technical issues with the device.

We ask all of our headache patients to complete **headache diaries**. These can be used to identify headache patterns, trigger factors and assess an individual's response to a particular treatment. You will be given a headache diary in clinic and we will ask you to complete this every day before and during the treatment. You will also be asked to complete a Headache Impact Test (HIT-6). This information will be collected in clinic during appointments. Failure to bring your headache diary to clinic means that it is difficult for the clinician to assess your response to sTMS and may result in the treatment being stopped.

Will I have a follow-up appointment?

You will receive a follow-up appointment initially at three months, and then at regular intervals during the treatment at the St Thomas' Headache Centre. During your follow-up appointment, your specialist will review your headache diary and evaluate how well the treatment is working.

Useful sources of information

The Migraine Trust www.migrainetrust.org

eNeura – Manufacturer of the sTMS device www.eneura.co.uk

Contact us

If you have any questions or concerns about your treatment, please contact the nurse via our voicemail on **020 7188 4714** or via email at headachenurse@gstt.nhs.uk. We prioritise by clinical urgency, but aim to respond to all messages within a couple of days. Our current office hours are Monday to Friday, 9am to 5pm.

If you have any administrative queries regarding appointments or admissions, please call **020 7188 8877** or email gst-tr.PainAppointmentAndAdmissions@nhs.net

If you have a significant medical problem or require urgent medical assistance, please then contact your GP in the first instance. If it is an emergency, call 999 for an ambulance.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.guysandstthomas.nhs.uk/leaflets

Pharmacy Medicines Helpline

If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline.

t: 020 7188 8748 9am to 5pm, Monday to Friday

Your comments and concerns

For advice, support or to raise a concern, contact our Patient Advice and Liaison Service (PALS). To make a complaint, contact the complaints department.

t: 020 7188 8801 (PALS) **e:** pals@gstt.nhs.uk

t: 020 7188 3514 (complaints) **e:** complaints2@gstt.nhs.uk

Language and accessible support services

If you need an interpreter or information about your care in a different language or format, please get in touch:

t: 020 7188 8815 **e:** languagesupport@gstt.nhs.uk

NHS 111

Offers medical help and advice from fully trained advisers supported by experienced nurses and paramedics. Available over the phone 24 hours a day.

t: 111

NHS Choices

Provides online information and guidance on all aspects of health and healthcare, to help you make choices about your health.

w: www.nhs.uk

Get involved and have your say: become a member of the Trust

Members of Guy's and St Thomas' NHS Foundation Trust contribute to the organisation on a voluntary basis. We count on them for feedback, local knowledge and support. Membership is free and it is up to you how much you get involved. To find out more, and to become a member:

t: 0800 731 0319 **e:** members@gstt.nhs.uk **w:** www.guysandstthomas.nhs.uk/membership

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