

## Treating chronic pain using navigated transcranial magnetic stimulation

### **Purpose of the treatment period**

Repetitive transcranial magnetic stimulation (rTMS) therapy is used in treatment of chronic pain.

Mapping of the motor cortex takes around 2 hours, and the actual treatments take 30 minutes.

### **Before the examination and the treatment**

Pain intensity must be monitored daily for two weeks before beginning the treatment period (the intensity of pain is marked in the attached monitoring form).

Your hair should be clean. No hair styling products should be used. Jewellery and other metal objects must be removed from the head and neck.

You may eat and drink as usual prior to the examination and treatments. You may also take your prescribed medication according to your doctor's instructions. Please take information about your medication with you to the examination.

### **Examination and treatment period**

Before the actual therapy begins, the motor cortex is mapped. Surface electrodes that measure muscle activity are attached on the

skin of the face or upper limbs or lower limbs depending on the location of the pain that is treated. A so-called stimulation coil will be moved around near the head to activate the motor cortex. The surface electrodes measuring muscle activity are used to register muscle responses that correspond to motor cortex activation.

The actual treatment period contains 10 treatments on consecutive weekdays (treatment is not given on weekends or public holidays). During every treatment, the magnetic stimulation is directed to the target that was chosen when mapping the motor cortex.

Your pain intensity and general condition are also monitored during the treatment period. You will be given a new monitoring form for this purpose on your first treatment day. Based on the monitoring, we are able to assess the effectiveness of the treatment and arrange any changes to the treatment protocol when necessary. The treatment period can be suspended as necessary, if adverse effects occur (such as pain becoming worse). Mild headache (due to sitting at fixed position) and head skin hypersensitivity may appear during the treatment. The usefulness of possible further therapy is assessed on a case-by-case basis at the end of the two-week treatment period.

## **Contraindications for the examination**

The examination cannot be performed if you have

- a pacemaker
- a central nervous system stimulation device
- an inner ear prosthesis
- metal objects, such as clips, in the head area
- an artificial heart valve made of metal
- an insulin pump
- or, if you are pregnant.

Please notify us if you have epilepsy and remember to bring your epilepsy medication with you to the examination.

## **Other things to note**

Please take your Kela-card or identification with you.

You will not be charged for the examination separately.

Cancel the appointment if you cannot come. If you do not cancel, you will be charged a fine.