

## Recruitment of volunteer subjects for research project:

### Seeking hand-amputated subjects for study with experimental treatment of phantom limb pain

Up to 50-80 % of persons with amputations experience pain in the part of the body that is missing. This type of pain is termed phantom limb pain and has been shown to be very difficult to treat. The purpose with this study is to investigate if electrical stimulation provided via nerve electrodes implanted in the upper arm can alleviate the phantom limb pain. The study is led by neuro surgeon Preben Sørensen and will be conducted at the Neuro Surgical Ward at Aalborg University Hospital.

To participate in the experiment you need to be above 18 years of old and have a one-sided amputation below the shoulder joint, and in general you should experience severe phantom limb pain at more than once a week.

Initially the study will take place over four month. First we will monitor your phantom limb pain, then we will implant nerve electrodes into the upper arm on your amputated side. After this, you will receive daily stimulation therapy during a period of four weeks. You will experience the stimulation as sensory input (e.g. touch, movement and vibration) arising from your amputated hand. After the four weeks we will stop the therapy and monitor for how long any effect of the treatment persist.

To assess the effect of the treatment, we will monitor your phantom limb pain and psychical wellbeing via questionnaires. In addition we will map the parts of your brain which related to your amputated hand, this will be done via electrical measurements (EEG) and 3D scanning techniques (fMRI) prior to and after the four weeks of stimulation therapy.

In the case the therapy is effective for alleviating your phantom limb pain, we can, if you should wish so, choose to reinstate the therapy at a later stage over a longer duration.

You can receive up to 100 DKR per hour for documented lost earnings during your participation, in addition you will get travel expenses in relation to the study refunded. In the case you are unable to perform the daily trip to Aalborg University Hospital, we have the opportunity to provide accommodation in Aalborg during parts of the course of the study.

(Please note that you must have a valid work permit if you come from a so-called third country.)

The experiment has been approved by The North Denmark Region Committee on Health Research Ethics, project number N-20150019

If you are interested, please do not hesitate to contact:

Preben Sørensen  
Chief surgeon, Clinical lecturer, Research Manager  
Neurokirurgisk afdeling NNH  
Klinisk Institut, Aalborg Universitetshospital  
Hobrovej 18-22,  
9000 Aalborg  
E-mail: [prebsoe@rn.dk](mailto:prebsoe@rn.dk)  
Phone: 97660000