The effect of transcranial direct current stimulation on motor learning after stroke

https://neurodegenerationresearch.eu/survey/the-effect-of-transcranial-direct-current-stimulation-on-motor-learning-after-stroke/

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Country

United Kingdom

Title of project or programme

The effect of transcranial direct current stimulation on motor learning after stroke

Source of funding information

The Stroke Association

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€ 62,679

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01/03/2014

Total duration of award in years

2

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Research Abstract
Rehabilitation of movement after stroke requires re-learning of normal movement patterns that have been lost due to the brain injury i.e. motor learning. Strategies which increase the rate of motor learning may result in greater functional independence and reduced burdens on carers and the NHS. Transcranial direct current stimulation (TDCS) is a safe, non-invasive technique with the potential to boost motor learning and recovery. Depending on the arrangement of electrodes, TDCS can increase or decrease motor cortex (M1) excitability. We want to investigate the effect of different TDCS electrode arrangements on motor learning in stroke survivors. Stroke survivors with residual upper limb impairment will perform a motor learning

task with the paretic arm that involves movement of a computer mouse to targets in a repeating pattern. Four TDCS conditions will be studied; i) anodal to the affected M1, ii) cathodal to the unaffected M1, iii) bilateral and iv) sham. The study will help determine the optimal method for boosting the rate of motor learning and investigate the relationship between motor learning and function. This will help to inform design of a clinical trial to investigate incorporating TDCS with the best electrode position into the rehabilitation programme after stroke.

Further information available at:

Types:
Investments < €500k

Member States:
United Kingdom

Diseases:
N/A

Years:
2016

Database Categories:
N/A

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