De offline effecten van hersenstimulatie (type tDCS) op balanshandhaving na een beroerte. / The offline effects of brain stimulation (type tDCS) on balance control after stroke.

Gepubliceerd: 13-04-2016 Laatst bijgewerkt: 15-05-2024

Transcranial direct current stimulation (tDCS) is a noninvasive brain stimulation technique that increases (anodal tDCS) or decreases (cathodal tDCS) cortical excitability. We hypothesize that anodal tDCS shortens latencies of responses during both…

Ethische beoordeling	Positief advies
Status	Werving gestart
Type aandoening	-
Onderzoekstype	Interventie onderzoek

Samenvatting

ID

NL-OMON20568

Bron
Nationaal Trial Register

Verkorte titel
Effects tDCS after stroke

Aandoening

stroke, CVA, beroerte

Ondersteuning

Primaire sponsor: Radboudumc, Nijmegen, The Netherlands
Overige ondersteuning: Radboudumc, Nijmegen, The Netherlands

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

The main outcome variable is the reaction time in a simple reaction time task and the onset of postural responses.

Toelichting onderzoek

Achtergrond van het onderzoek

Transcranial direct current stimulation (tDCS) is a noninvasive brain stimulation technique that alters cortical excitability. In a previous study was shown that anodal tDCS facilitates balance recovery responses in young healthy people. Here, we investigate whether facilitation of balance responses also occurs in people after stroke. Furthermore, we investigate the effect of cathodal tDCS on the same balance responses and the relation between tDCS effects and structural imaging markers.

Doel van het onderzoek

Transcranial direct current stimulation (tDCS) is a noninvasive brain stimulation technique that increases (anodal tDCS) or decreases (cathodal tDCS) cortical excitability. We hypothesize that anodal tDCS shortens latencies of responses during both simple reaction time tasks and balance recovery responses. We do not expect that cathodal tDCS will shorten these motor responses. Furthermore, we hypothesize that the effects of tDCS will be more variable in people after stroke compared to healthy controls.

Onderzoeksopzet

week 1: Intake measurement (stroke participants)

week 2: MRI scan (stroke participants)

week 3: tDCS measurement 1 (stroke and control participants)

week 4: tDCS measurement 2 (stroke and control participants)

week 5: tDCS measurement 3 (stroke and control participants)

Onderzoeksproduct en/of interventie

transcranial direct current stimulation (tDCS); 2mA for 15 minutes. Anodal, cathodal and sham stimulation will be applied on M1 in a random order across participants.

Contactpersonen

Publiek

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Wetenschappelijk

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

People over 18 years old in the chronic phase after experiencing a supratentorial unilateral stroke (> 6 months ago) that resulted in a hemiparesis. Furthermore, healthy controls of similar age and young healthy controls (18-30 years) will be included.

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

With regard to the tDCS measurements:

- Neurological or orthopedic conditions affecting balance.

- Medication negatively affecting balance or reaction times.

- Disorders of hearing, which cannot be corrected to normal.

- Severe vision problems.

- Severe cognitive impairments.

- Serious head trauma or brain surgery.

- Large or ferromagnetic metal parts in the upper body (except for dental fillings and wire).

- Implanted cardiac pacemaker or neurostimulator (too close to the head) or Venous Access Port.

- Pregnancy.

- Skin diseases at intended electrode sites (tDCS or EMG electrodes).

- Any prescribed medication that can alter cortical excitability.

- Participated in a TMS or tCS study less than 1 year ago.

Additional criteria with regard to MRI measurement:

- Suffering from claustrophobia

- Suffering from epilepsy

- Cochlear implant

- Irremovable piercing or medical patch

- Any head, neck or shoulder surgeries in the past.

- BMI > 35

Onderzoeksopzet

Opzet

Type:	Interventie onderzoek
Onderzoeksmodel:	Cross-over
Toewijzing:	N.v.t. / één studie arm
Blindering:	Enkelblind
Controle:	Placebo

Deelname

Nederland

Status:	Werving gestart
(Verwachte) startdatum:	16-01-2016
Aantal proefpersonen:	45
Type:	Verwachte startdatum

Voornemen beschikbaar stellen Individuele Patiënten Data (IPD)

Wordt de data na het onderzoek gedeeld: Nog niet bepaald

Ethische beoordeling

Positief advies

Datum:	13-04-2016
Soort:	Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

ID: 42035
Bron: ToetsingOnline
Titel:

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL5684
NTR-old	NTR5828
CCMO	NL51735.091.15
OMON	NL-OMON42035

Resultaten

Samenvatting resultaten
N/A