The role of specific brain regions in false auditory perceptions using tDCS

No registrations found.

Ethical review	Not applicable
Status	Recruiting
Health condition type	-
Study type	Interventional

Summary

ID

NL-OMON29461

Source
NTR

Brief title
tDCS in false signal detection

Health condition

None

Sponsors and support

Primary sponsor: Department of Psychology, Durham University, UK;
University Medical Center Groningen
Source(s) of monetary or material Support: For the UK part: Wellcome Trust Centre (grant no: WT108720)
For the NL part: University Medical Center Groningen

Intervention

Outcome measures

Primary outcome

Effect of tDCS on detection bias

Secondary outcome

Effect of tDCS on task sensitivity and raw false alarm rate

Study description

Background summary

Transcranial direct current stimulation (tDCS) is a noninvasive brain stimulation technique.Previously we effect of tDCS detection bias during signal detection task. The present study will replicate and extend a previous study into the effect of tDCS applied to the left superior temporal gyrus on basic auditory signal detection, as well as testing whether any effect is specific to speech-based stimuli. Control condition is now both placebo and active.

Study objective

1) There will be an effect of anodal stimulation to the left STG with reduced response bias on the signal detection task

2) This effect is specific for speech signal detection.

Study design

Participants recruitment immediately after METC approved;

2. Measurements finalized as soon as enough participants are found;

3. Primary and secondary outcomes up to 6 months after the data were collected for the last subject.

Intervention

transcranial direct current stimulation

Contacts

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Eligibility criteria

Inclusion criteria

1) There will be a main effect of stimulation condition; specifically, that anodal stimulation to the left STG will lead to a reduced response bias (â, see section 2.6.1) on the signal detection task, compared to the other conditions.

2) We will also test for an interaction between stimulation condition and stimulus type; that is, to test for a difference in the effect of stimulation on response bias (â) to voice and tone stimuli. If any effect of stimulation is specific to voice stimuli, this would imply the effects are due to stimulation of language specific areas of cortex (e.g., Wernicke's area). In contrast, if there is an effect of stimulation on all types of auditory signal detection, this would imply a more general effect of stimulation on auditory stimuli.

Exclusion criteria

1) (suspected) pregnancy

2) not signing the informed consent

3) family history of epilepsy

4) non-removable metallic objects on the head or arms,

5) a history of skin conditions (e.g., eczema).

Study design

Design

Study type:	Interventional
Intervention model:	Crossover
Allocation:	Non controlled trial
Masking:	Double blinded (masking used)
Control:	N/A , unknown

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	20-04-2018
Enrollment:	108
Type:	Anticipated

Ethics review

Not applicable

Application type:	Not applicable

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
NTR-new	NL6925
NTR-old	NTR7121

Register	ID
Other	: UMCG Research Register: 201700875

Study results