

MRI-guided transcranial magnetic stimulation on artificial centre embedding grammars

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Ethical review	Approved WMO
Status	Pending
Health condition type	Other condition
Study type	Observational non invasive

Summary

ID

NL-OMON32070

Source

ToetsingOnline

Brief title

TMS-ACEG

Condition

- Other condition

Synonym

fundamental cognitive neuroscience

Health condition

fundamentele cognitieve neurowetenschappen

Research involving

Human

Sponsors and support

Primary sponsor: FC Donders Centre for cognitive neuroimaging

Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: Artificial Grammal Learning, Inferior Frontal Cortex, Repetitive Transcranial Magnetic Stimulation

Outcome measures

Primary outcome

See objective.

Secondary outcome

Not applicable

Study description

Background summary

The human capacity to implicitly acquire knowledge of structured patterns has recently been studied using functional magnetic resonance imaging (fMRI) and it was found that classification performance related to the left inferior frontal region (Brodmann's area [BA] 45).

Study objective

The two main objectives of this experiment is firstly to replicate the finding that repetitive transcranial magnetic stimulation (rTMS) of the inferior frontal cortex (IFC) can interfere with artificial syntactic classification and secondly to investigate whether subject can implicitly acquire the embedded recursive structure in grammatical strings.

Study design

The investigation spans over 5 days of acquisition by exposure to grammatical exemplars from the formal grammar. On day five, repetitive transcranial magnetic stimulation (rTMS) is applied while classification behaviour is studied. Two sessions of rTMS classification will be given, one in the morning and one in the afternoon, to the left and to the right inferior frontal cortex

respectively, in order to wash out possible carry-over effects.

Study burden and risks

TMS itself is not painful or invasive. However, some test persons complain about a (light) headache some time after the stimulation. Unwanted side-effects has never been described with the stimulation parameters used in this study.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age

Adults (18-64 years)

Elderly (65 years and older)

Inclusion criteria

Right handed

Exclusion criteria

History of epelepsia

Study design

Design

Study type:	Observational non invasive
Intervention model:	Other
Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Other

Recruitment

NL	
Recruitment status:	Pending
Start date (anticipated):	01-10-2007
Enrollment:	40
Type:	Anticipated

Ethics review

Approved WMO	
Application type:	First submission
Review commission:	CMO regio Arnhem-Nijmegen (Nijmegen)

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
CCMO	NL19731.091.07