

The influence of Deep Brain Stimulation on the critical elements of cognitive control in Obsessive-Compulsive Disorder Patients.

Published: 15-10-2014

Last updated: 22-04-2024

In the proposed study, we will experimentally elucidate the effect of DBS on various critical dimensions of cognitive control including: the free will experience, instrumental learning, environmental change detection and working memory.

Ethical review	Approved WMO
Status	Will not start
Health condition type	Cognitive and attention disorders and disturbances
Study type	Observational non invasive

Summary

ID

NL-OMON40558

Source

ToetsingOnline

Brief title

How DBS affects cognitive control in OCD patients

Condition

- Cognitive and attention disorders and disturbances

Synonym

neurotic anxiety, Obsessive-Compulsive Disorder

Research involving

Human

Sponsors and support

Primary sponsor: Academisch Medisch Centrum

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

Intervention

Keyword: Cognition, Control, DBS, OCD

Outcome measures

Primary outcome

Changes in the neural correlates related to specific aspects of cognitive control.

Secondary outcome

Find what is common and different in the cognitive control network among a number of other compulsive disorders.

Study description

Background summary

'Cognitive control' refers to a set of skills that allow us to flexibly adapt our behavior in the context of our external environment and internal goals. This ability is central to our notions of consciousness, agency, and will. Moreover, functions critical in our daily life such as environmental change detection, instrumental learning and attention/ working memory depend critically on control processes. The loss of cognitive control is a major component of many neuropsychiatric diseases, such as OCD. It has been reported that OCD patients are likely to experience *an important loss of freedom*, in their everyday lives (DSM IV).

Deep Brain Stimulation (DBS) of the Nucleus Accumbens (NAcc) treatment has been found to be a very promising experimental option for certain groups of treatment refractory OCD patients (Denys et al., 2010). This treatment involves chronically stimulating the NAcc with the goal of modulating aberrant brain activity, often resulting in substantial symptom improvement. Although the stimulation is believed to modulate brain areas involved in cognitive control, there has yet to be any investigation on how DBS influences any aspects of cognitive control.

Study objective

In the proposed study, we will experimentally elucidate the effect of DBS on various critical dimensions of cognitive control including: the free will experience, instrumental learning, environmental change detection and working memory.

Study design

Observational study without invasive measurements.

Study burden and risks

The risk associated with participation can be considered negligible and the burden can be considered minimal.

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

The presence of a primary diagnosis for OCD and treated with NAcc DBS. To be tested against healthy controls, and those diagnosed with OCD, misophonia, ADHD, and BDD.

Exclusion criteria

Abnormal hearing or (uncorrected) vision.

History of neurological/endocrine treatment or current neurological/endocrine treatment.

Average use of more than 3 alcoholic beverages daily.

Use of recreational drugs over a period of 72 hours prior to each test session, and use of alcohol within the last 24 hours before each measurement.

Irregular sleep/wake rhythm

Study design

Design

Study type:	Observational non invasive
Intervention model:	Parallel
Allocation:	Randomized controlled trial
Masking:	Single blinded (masking used)
Control:	Active
Primary purpose:	Basic science

Recruitment

NL	
Recruitment status:	Will not start
Enrollment:	568
Type:	Actual

Ethics review

Approved WMO

Date: 15-10-2014

Application type: First submission
Review commission: METC Amsterdam UMC

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	NL44841.018.13