Cognitive and electrophysiological correlates of sleep onset

Published: 03-01-2012
Last updated: 29-04-2024

Our aim with this research program is to understand (1) cognitive processes during sleep onset, (2) (advanced, functional) EEG-correlates of sleep onset, (3) their interaction and (4) how these relate to the resting state.

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Sleep disorders and disturbances
Study type	Observational non invasive

Summary

ID

NL-OMON35793

Source
ToetsingOnline

Brief title
CECOS

Condition

- Sleep disorders and disturbances

Synonym
psychophysiological insomnia, sleeping disorder

Research involving
Human

Sponsors and support

Primary sponsor: Vrije Universiteit
Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: Cognition, EEG, Sleep onset

Outcome measures

Primary outcome

Characterize and relate EEG, RSQ50 scores and their interaction during sleep

onset and resting wakefulness.

Secondary outcome

Extract relevant EEG and cognitive parameters that can be used to successfully

predict sleep onset and/or provide feedback on.

Study description

Background summary

Insomnia is a prevalent disorder that is frequently pharmacologically treated. Hallmark of the disorder is the inability to fall and/or stay asleep, which is often accompanied by cognitive hyperarousal. Knowing more about the cognitive and EEG predictors of the sleep onset period may help characterize the disorder further and also derive more effective strategies to guide subjects towards more efficient sleep. Furthermore, mapping EEG and cognitive correlates will potentially guide the development of alternative treatment methods such as EEG-based biofeedback.

Study objective

Our aim with this research program is to understand (1) cognitive processes during sleep onset, (2) (advanced, functional) EEG-correlates of sleep onset, (3) their interaction and (4) how these relate to the resting state.

Study design

Nine sessions of sleep onset matched to nine sessions of wakefulness, simialr to the protocol employed by Raymann et al. (2005). Each session is recorded using high-density EEG and followed by the RSQ50 (Linkenkaer-Hansen, 2011).

Study burden and risks

Subjects will visit the lab on two consecutive days. Each day nine measurements will be made, which will alltogether last a maximum of 8 hours. During each measurement the subject will be lying in a comfortable bed for a maximum of 30 minutes. Afterwards a computerized version of the questionnaire will be administered. Mounting of the EEG-cap will take 45 minutes in total, the cap itself consist of 256 sensors, distributing the weight of the head comfortably. Preparation of the subject only entails washing the hair * no other possibly discomforting actions (e.g. skin scrubbing etc.) are necessary. We judge subject discomfort to be minimal.

Contacts

Public
Vrije Universiteit

De Boelelaan 1085
1081 HV Amsterdam
NL
Scientific
Vrije Universiteit

De Boelelaan 1085
1081 HV Amsterdam
NL

Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

* Healthy human individuals
* Dutch or English speaking
* Non-smoking
* Age 18-55
* No history of prior neurological problems (e.g. epilepsy, head trauma etc.)
* Having signed informed consent

Exclusion criteria

History of drug abuse
Psychiatric disorders
Sleep disorders
Medication
History of epilepsy

Study design

Design

Study type: Observational non invasive

Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Diagnostic

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	28-03-2012
Enrollment:	15
Type:	Actual

Ethics review

Approved WMO

Date:	03-01-2012
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	NL36820.029.11