GABAergic involvement in conscious perception

Published: 18-04-2025
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The primary objective is to investigate the involvement of the GABA-A receptor in behavioral and neural measures of conscious perception, cognition, and decision-making.

Ethical review	Approved WMO
Status	Pending
Health condition type	Other condition
Study type	Interventional

Summary

ID

NL-OMON57473

Source
ToetsingOnline

Brief title
GABA and conscious perception

Condition

- Other condition

Synonym
Not applicable

Health condition

Geen aandoening, dit onderzoek richt zich op de werking van het gezonde brein.

Research involving
Human

Sponsors and support

Primary sponsor: Universiteit van Amsterdam
Source(s) of monetary or material Support: ERC-beurs

Intervention

Keyword: Consiousness, Neuromodulation, Neuroscience, Recurrent processing

Outcome measures

Primary outcome

Primary study parameters include behavioral reaction times and performance

scores, eye-tracking and EEG- and fMRI-measures.

Secondary outcome

Not applicable

Study description

Background summary

Preliminary evidence suggest that the gamma-aminobutyric acid type A (GABA-A) receptor is involved in conscious perception. The exact involvement of GABA-A receptors in recurrent processing remains elusive and the link to conscious experience severely underspecified. The aim of the proposed study is to provide evidence for this hypothesis.

Study objective

The primary objective is to investigate the involvement of the GABA-A receptor in behavioral and neural measures of conscious perception, cognition, and decision-making.

Study design

This study will use a within-subject, double-blind, placebo-controlled randomized crossover design.

Intervention

Participants will receive 1.5 mg lorazepam or placebo on two different test sessions, in a randomized order.

Study burden and risks

Participants will have to visit the lab 3 times. One of these visits is the initial intake session, the others are testing days. On these testing days, participants will perform simple computer tasks, while their brain activity is measured with EEG or fMRI. In addition, participants will receive 1.5 mg lorazepam or placebo on each testing day. Before and after testing days, participants have to adhere to some simple restrictions concerning the intake of alcohol, drugs and caffeine and operating motorized vehicles.

The used product can cause side-effects, including drowsiness and dizziness. Previous studies using single doses of this product show, however, that it is well-tolerated. Considering the extensive exclusion criteria, screening procedure, constant monitoring of participants and the fact that they only receive single, subtherapeutic doses of these products, we do not expect any serious side-effects.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)

Inclusion criteria

Healthy volunteers between 18 and 30 years old;
BMI between 18.5 and 30.

Exclusion criteria

Allergy for memantine, lorazepam, or one of the inactive ingredients of these products;
Current or history of any medical or psychiatric disorder or disease.

Study design

Design

Study type:	Interventional
Intervention model:	Crossover
Masking:	Double blinded (masking used)
Control:	Uncontrolled
Primary purpose:	Other

Recruitment

NL

Recruitment status:	Pending
Start date (anticipated):	01-09-2024
Enrollment:	160
Type:	Anticipated

Medical products/devices used

Registration:	No

Ethics review

Approved WMO

Date:	18-04-2025
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	NL86602.018.24