The effects of four dosages of ethanol on simulated driving performance and event-related potentials

Published: 04-07-2006
Last updated: 14-05-2024

Investigating the effects of alcohol on simulated driving and the effects of alcohol on attentional processes during driving, indicated by ERPs recorded during an auditory oddball task presented during driving and non-driving.

Ethical review	Not approved
Status	Will not start
Health condition type	Other condition
Study type	Interventional

Summary

ID

NL-OMON30165

Source
ToetsingOnline

Brief title
Effects of alcohol on driving and ERPs

Condition

- Other condition

Synonym
drinking, driving under influence

Health condition

alcoholgebruik

Research involving
Human

Sponsors and support

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

Intervention

Keyword: Alcohol, Attention, Driving, ERPs

Outcome measures

Primary outcome

The primary study parameters of the study are the steering error of the

simulated driving task, de amplitudes of the recorded event-related potentials,

and the reaction times of the auditory oddball-task.

Secondary outcome

N.v.t.

Study description

Background summary

Driving distraction is one of the most common causes of traffic accidents. Alcohol has a detrimental effect on attention. To get more insight in the effects of alcohol on driving and the attentional processes during driving, Event-Related Potentials (ERPs) will be recorded to an auditory oddball paradigm which will be presented during driving in a Divided Attention Steering Simulator (DASS). Previous studies indicate that alcohol has an effect on ERPs measured during an auditory oddball task. In the present study the effects of 4 dosages alcohol (0,0 - 0,5 - 0,8 - 1,0 * BAC) on simulated steering performance and ERPs measured during an oddball paradigm will be investigated.

Study objective

Investigating the effects of alcohol on simulated driving and the effects of alcohol on attentional processes during driving, indicated by ERPs recorded during an auditory oddball task presented during driving and non-driving.

Study design

Participants take part in the study for 2-6 weeks. Each participant will participate 4 days (3,5 hours per day). Participation will include doing a simulated driving task, an auditory oddball paradigm and doing the simulated driving task while an auditory oddball paradigm is presented simultaneously and ERPs are recorded.

Intervention

Intervention will consist of four dosages of alcohol: (0,0 - 0,5 - 0,8 - 1,0 * BAC).

Study burden and risks

The risk for the volunteer is very small. There is no risk involved in performing the computertest (simulated driving test) during which ERPs are measured. The alcohol dosages are relatively low and correspond with the normal use of social drinkers.

Contacts

Public
Universiteit Utrecht

Sorbonnelaan 16
3584 CA Utrecht
Nederland
Scientific
Universiteit Utrecht

Sorbonnelaan 16
3584 CA Utrecht
Nederland

Trial sites

Listed location countries

Netherlands

Eligibility criteria

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

Inclusion criteria

Social drinker (mean of 7-42 glasses of alcohol per week), no psychological or physical complaints, possesion of a valid drivers license, normal static binocular acuity, normal hearing

Exclusion criteria

Psychological or physical complaints, use of medication, excessive use of alcohol and/or drugs

Study design

Design

Study type: Interventional

Masking:	Single blinded (masking used)
Control:	Uncontrolled
Primary purpose:	Other

Recruitment

NL

Recruitment status:	Will not start
Enrollment:	24
Type:	Anticipated

Ethics review

Not approved

Date:	04-07-2006

Application type:	First submission
Review commission:	METC NedMec

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	NL11559.041.06