The relation between cortical pathway activation and face processing in Autism Spectrum Disorder*

Published: 07-12-2010
Last updated: 04-05-2024

To study the relation between face processing and activation in cortical pathways in adults with Autism Spectrum Disorder.

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Developmental disorders NEC
Study type	Observational non invasive

Summary

ID

NL-OMON39371

Source
ToetsingOnline

Brief title
Visual perception in Autism Spectrum Disorder

Condition

- Developmental disorders NEC

Synonym
Autism Spectrum Disorder; Autism

Research involving
Human

Sponsors and support

Primary sponsor: Universitair Medisch Centrum Utrecht
Source(s) of monetary or material Support: NWO

Intervention

Keyword: Autism, electroencephalography, Face processing, neural mechanisms

Outcome measures

Primary outcome

Brain activity will be measured using Electroencephalography (EEG). Special

interest will be in activity related to:

- face processing (negative peak approximately 170 ms after stimulus

presentation)

- feedforward pathway activation

- feedback pathway activation

- horizontal pathway activation

Secondary outcome

Behaviour will be measured in two tasks during the visual perception experiment:

A. Categorization of faces, houses, objects, and stimuli containing lines

B. Categorization of characteristics of a circle, which will be presented along

with the faces, houses, objects, and stimuli containing lines

Study description

Background summary

For typically developed persons, faces hold important social and biological information, which is crucial in social behaviour and communication. Different aspects of face processing, i.e. face categorization and perception, require differential activation in cortical pathways in the visual cortex. These pathways seem to be activated abnormally in persons with Autism Spectrum Disorder, where some aspects of face processing are impaired as well. The current study aims to investigate how activation in cortical pathways is

related to face processing in ASD.

Study objective

To study the relation between face processing and activation in cortical pathways in adults with Autism Spectrum Disorder.

Study design

An observational study with a between- and within-subject design, with a comparison between adults with and without Autism Spectrum Disorder. Adults will participate once in a visual perception task at the University Medical Centre (UMC) Utrecht. During the task, behaviour and electrical brain activation will be registered.

Study burden and risks

Participants do not directly benefit from the research project. The risk of participation is neglectable, and the burden is minimal; it will take 2-5 hours (dependent on the available diagnostic information) and, on request, the participant can visit our lab twice. Research is group related, meaning that the research question can not be answered without participation of the population to which the research question is applicable (patients with Autism Spectrum Disorder).

Contacts

Public
Universitair Medisch Centrum Utrecht

Heidelberglaan 2
Utrecht 3584 CS
NL
Scientific
Universitair Medisch Centrum Utrecht

Heidelberglaan 2
Utrecht 3584 CS
NL

Trial sites

Listed location countries

Netherlands

Eligibility criteria

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

Inclusion criteria

Healthy participants: Healthy adults
Patients: Adults, with a diagnosis of Autism Spectrum Disorder, being diagnosed by a registered medical professional at the UMC Utrecht.

Exclusion criteria

Healthy participants: a diagnosis of Autism Spectrum Disorder or any other type of psychiatric disorder
Patients: diagnosis of any type of psychiatric disorder, except of Autism Spectrum Disorder; use of medication

Study design

Design

Study type:	Observational non invasive
Intervention model:	Other
Allocation:	Non-randomized controlled trial
Masking:	Open (masking not used)
Control:	Active
Primary purpose:	Other

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	14-03-2011
Enrollment:	60
Type:	Actual

Ethics review

Approved WMO Date:	07-12-2010
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Utrecht (Utrecht)
Approved WMO Date:	30-03-2011
Application type:	Amendment
Review commission:	METC Universitair Medisch Centrum Utrecht (Utrecht)
Approved WMO Date:	22-04-2013
Application type:	Amendment
Review commission:	METC Universitair Medisch Centrum Utrecht (Utrecht)

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	NL33256.041.10