

# The role of the dopamine D2 receptor system in pornographic addiction - A [11C]-Raclopride PET study

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<b>Ethical review</b>	Approved WMO
<b>Status</b>	Recruitment stopped
<b>Health condition type</b>	Other condition
<b>Study type</b>	Observational invasive

## Summary

### ID

NL-OMON40724

### Source

ToetsingOnline

### Brief title

D2 receptor imaging in pornographic addiction.

### Condition

- Other condition

### Synonym

compulsive pornography use, excessive pornography use

### Health condition

gedragsverslavingen

### Research involving

Human

## Sponsors and support

**Primary sponsor:** Universitair Medisch Centrum Groningen

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

## Intervention

**Keyword:** addiction, brain, dopamine, pornography

## Outcome measures

### Primary outcome

The main study parameters are the [11C]-raclopride binding potential in the striatum in subjects with pornographic addiction and control subjects.

### Secondary outcome

The secondary study parameters are cerebral blood flow measurements using ASL-MRI, the scores on the modified Compulsive Internet Use Scale, and questionnaires assessing impulsiveness and sensation seeking.

## Study description

### Background summary

The excessive and uncontrollable use of internet pornography may lead to significant impairments in social, occupational and other important areas of functioning. Whether the use of (internet) pornography may indeed become addictive remains a matter of debate. Although hypersexuality disorders, including pornographic addiction, have been conceptualized as obsessive-compulsive, impulse-control and addictive disorders, neuroimaging studies providing linkages to these concepts are lacking. Reduced striatal D2 receptor availability, imaged using [11C]-raclopride positron emission tomography, has been a consistent and often replicated finding in subjects with substance use disorder (e.g. cocaine, methamphetamine, alcohol and heroin) and behavioral addictions such as pathological gambling and obesity (addiction to food). The potential finding of reduced D2 receptor availability in subjects with a pornographic addiction in this study may help to conceptualize it as being an addiction.

## Study objective

The primary objective is to determine the dopamine D2 receptor availability in subjects with pornographic addiction and to compare the availability with control subjects. The secondary objectives are to correlate the dopamine D2 receptor availability to prefrontal cerebral blood flow, the severity of addiction as measured by the Compulsive Internet Use Scale (CIUS), and personality traits of impulsivity and sensation seeking.

## Study design

This study is designed as prospective, parallel-group study comparing the availability of the dopamine D2 receptor in the brain striatum in subjects with pornographic addiction and control subjects, using [11C]-raclopride PET.

## Study burden and risks

The subjects are exposed to radioactivity with minor to moderate risk, according to the International Commission on Radiological Protection (ICRP62). Subjects do not benefit from the study, but their participation may lead towards a better understanding of pornographic addiction and may lead towards improved treatment strategies.

## Contacts

### Public

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### Scientific

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## Trial sites

## Listed location countries

Netherlands

## Eligibility criteria

### Age

Adults (18-64 years)

Elderly (65 years and older)

### Inclusion criteria

Subjects with pornographic addiction

- male sex
- age between 18 and 45
- a modified CIUS score > 3; Control subjects:
- male sex
- age between 18 and 45
- a modified CIUS score of 1

### Exclusion criteria

- lifetime DSM-IV axis I disorder,
- drug dependence or abuse; including alcohol (i.e. drinking more than 30 drinks per month or any illicit drug use during the past 30 days);
- active medical condition;
- treatment in the last 6 months with antidepressants, neuroleptics, sedative hypnotics, glucocorticoids, appetite suppressants, sex hormone, opiate or dopamine medications
- use of psychoactive medications within the past 30 days;
- lifetime history of seizure disorder or closed head trauma;
- participation in a scientific research study (<1 year) involving radiation
- Contra-indications for MRI-scanning

## Study design

### Design

Study type: Observational 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):	02-03-2017
Enrollment:	28
Type:	Actual

## Medical products/devices used

Product type:	Medicine
Brand name:	3,5-dichloro-N-((1-ethyl-2-pyrrolidiny)-methyl)-2-hydroxy-6-methoxy-benzamide
Generic name:	[11C]-Raclopride

## Ethics review

Approved WMO	
Date:	04-06-2014
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)
Approved WMO	
Date:	19-11-2014
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)
Approved WMO	
Date:	29-06-2016
Application type:	Amendment
Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)
Approved WMO	
Date:	11-11-2016
Application type:	Amendment

## 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
EudraCT	EUCTR2014-001284-12-NL
CCMO	NL48500.042.14