# The Neurobiology of Being in Love

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The purpose of this research is the studying the neurobiology of being in love and related aspects, such as age, duration of the relation, differences in sex, jealousy and the ending of a relationship.

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Other condition
Study type	Observational non invasive

# Summary

### ID

NL-OMON34071

**Source** ToetsingOnline

**Brief title** The Neurobiology of Being in Love

# Condition

• Other condition

#### Synonym

n.a.

#### **Health condition**

geen

**Research involving** Human

### **Sponsors and support**

Primary sponsor: Universitair Medisch Centrum Groningen Source(s) of monetary or material Support: Ministerie van OC&W

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### Intervention

Keyword: age, fMRI, jealousy, lovesickness

### **Outcome measures**

#### **Primary outcome**

The differences/similarities in brain activity in men and women being in love,

the effect of age and the influence of the duration of the relationship will be

related, also cultural influences will be included.

The pattern of brain activity after voluntary or forced ending of a

relationship will be related to the pattern of brain activity of depressive

patients.

#### Secondary outcome

n.a.

# **Study description**

#### **Background summary**

Very little neurobiological research is performed being in love/lovesickness. The few available fMRI-studies concerned especially young people. One study investigated with women if a relation after 20 yerars still generates identical patterens as with youn people being in love. It is unclear if the brain of men shows the same patterns of activity after a relation of 20 years. Moreover not studied at all are the effects of cultural differences, age, jealousy and sexe on brain activity during being in love. There is also information lacking about the effect of ending a relationship and till what degree this pattern of brainactivity shows similarities with depression.

#### **Study objective**

The purpose of this research is the studying the neurobiology of being in love and related aspects, such as age, duration of the relation, differences in sex, jealousy and the ending of a relationship.

### Study design

The study consists of a pilot followed by projects. Each project consist of two parts on different days: a preparation part outside the MRI scanner, the second paart inside the scanner.

The preparation consists of an intake interview, filling in two questionnaires about being in love, the duration of the relationship and a questionnaire about present mood. Duration is maximum of 60 minutes.

During the second part, consisting the fMRI study, pictures of (un)familiair people and of the loved one will alternated be shown: a neutral condition with which a blanc background will be presented with a fixation crosse. Total duration of one project for one subject will be 150 minutes.

#### Study burden and risks

There are no risks connected to this research.

Subjects will be exposed to a magnetic field of 3 Tesla and rapid alternating magnetic gradients and radiofrequencyfields. These field intensities are being used on routine baiss in fMRI and MRI research. Up till now no side effects have been prescribed. In rare accasions a perifere nerv (abdomen) is stimulated by the changing magenetic gradients. This causes an itchy feeling, but is not harmful.

# Contacts

#### **Public** Universitair Medisch Centrum Groningen

Ant. Deusinglaan 2 9713 AW Groningen NL **Scientific** Universitair Medisch Centrum Groningen

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# **Trial sites**

# **Listed location countries**

Netherlands

# **Eligibility criteria**

#### Age

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

### **Inclusion criteria**

The inclusion criteria for the pilot are according the definitions of project 1, beschreven in deelproject 1, age group:18-25 y.o.a.;Project 1.

- 1. Healthy heterosexual men and women
- 2. Between 18 25 y.o.a (group A)
- 3. Between 40 48 y.o.a (group B)
- 4. Duration of relationship 1 3 months
- 5. Passionate Love Scale (PLS) score >> 6; Project 2.
- 1. Healthy heterosexual women
- 2. Between 18 25 y.o.a.
- 4. Finished relationship << 1 month
- 5. Passionate Love Scale (PLS) score << 6 ;Project 3.
- 1. Healthy heterosexual men and women
- 2. Between 18 25 y.o.a.
- 3. 2nd and/or 3rd generation Chinese, Turkish or Maroccan Dutchman/Dutchwomen
- 4. Passionate Love Scale (PLS) score >> 6

### **Exclusion criteria**

- 1. MR incompatible implants in the body
- 2. Neurological or psychiatrical complaints in present or past
- 3. Use of medication which may influence task performance
- 4. Claustrophobia
- 5. The wish not te be informed in case of discovered brain abonormalities
- 6. (Suspected) pregnancy
- 7. Red tattoos
- Extra Exclusiecriterium voor deelproject 2:
- Deelname aan deelproject 1, groep A.
- Extra Exclusiecriterium voor deelproject in groep B:
- Vrouwelijke deelnemers in menopauze

# Study design

## Design

Study type: Observational non invasive	
Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Other

### Recruitment

NL	
Recruitment status:	Recruitment stopped
Start date (anticipated):	16-05-2011
Enrollment:	132
Туре:	Actual

# **Ethics review**

Approved WMO	
Date:	09-05-2011
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)

# **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

ССМО

**ID** NL34689.042.10