# Radiation-detector controlled electrophysiological reactivity (EEG and ECG) due to mobile phone radiation

Published: 30-07-2013 Last updated: 24-04-2024

The main objective of this study is to investigate whether radiofrequency electromagnetic radiation, induced by a mobile phone placed on the body, causes a change in electrophysiology.

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Other condition
Study type	Interventional

# Summary

### ID

NL-OMON38568

**Source** ToetsingOnline

**Brief title** Electrophysiological reactivity due to mobile phone radiation

### Condition

• Other condition

**Synonym** changes in electrical heart and brain activity (ECG and EEG)

#### **Health condition**

tijdelijke verandering van elektrofysiologische uitkomstmaten (ECG, EEG, respiratie en GSR)

#### **Research involving**

Human

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# **Sponsors and support**

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

### Intervention

Keyword: ECG, EEG, Mobile phone, radiation

### **Outcome measures**

#### **Primary outcome**

A change in one of the following parameters due to mobile phone radiation:

- ECG (heart rate)

- EEG (power of the different band widths)

#### Secondary outcome

not applicable.

# **Study description**

#### **Background summary**

Mobile phones are used worldwide and its usage is still increasing. Also due to mobile phones, people are nowadays almost continuously exposed to radiofrequent electromagnetic radiation.

The problem with research published thus far about the possible effects of mobile phone radiation is, that in many of them, there were suspected conflicts of interest. Furthermore, most of the studies investigated averaged condition effects, in which the effects of the electrophysiological parameters (EEG and/or ECG) were quantified with the aid of an averaged estimation of the exposure condition (in which the radiating mobile phone was present). In this study we will also examine, next to these averaged condition effects, the effects directly following radiationpeaks.

EEG and ECG signals are nested within each test subject, that is why we will use multilevel analysis, to take this nesting into account.

#### **Study objective**

The main objective of this study is to investigate whether radiofrequency

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electromagnetic radiation, induced by a mobile phone placed on the body, causes a change in electrophysiology.

### Study design

Single-blind, randomised intervention study

#### Intervention

Placement of a dialling mobile phone on the body.

#### Study burden and risks

The experiments involve non-invasive measurements, without any risks. Furthermore, there are no benefits to subjects and / or risks associated with participation in this study. The exposure to electromagnetic radiation is comparable to normal mobile phone usage.

# Contacts

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# **Trial sites**

# **Listed location countries**

Netherlands

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# **Eligibility criteria**

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

### **Inclusion criteria**

Female, 18-30 years old, good understanding of the dutch language

### **Exclusion criteria**

cardiac or neurological abnormalitie/disease in the medical history

# Study design

### Design

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

### Recruitment

NL	
Recruitment status:	Recruitment stopped
Start date (anticipated):	09-12-2013
Enrollment:	65
Туре:	Actual

# **Ethics review**

Approved WMO Date:

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30-07-2013

Application type: Review commission: First submission METC academisch ziekenhuis Maastricht/Universiteit Maastricht, METC azM/UM (Maastricht)

# **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** ClinicalTrials.gov CCMO ID NCT01872806 NL44004.068.13