Morfologie en functie van de hypothalamus na inname van water en drinkmaaltijd.

No registrations found.

Ethical review	Positive opinion
Status	Recruitment stopped
Health condition type	-
Study type	Interventional

Summary

ID

NL-OMON26872

Source
Nationaal Trial Register

Brief title
N/A

Health condition

diabetes
suikerziekte

Sponsors and support

Primary sponsor: Prof. dr. H. Pijl
Source(s) of monetary or material Support: CMSB

Intervention

Outcome measures

Primary outcome

Hypothalamic neuronal activity as measured with FMRI.

Secondary outcome

N/A

Study description

Background summary

It has long been recognized that the hypothalamus plays a crucial role in metabolism. It is thought that the hypothalamus and brain stem get input from the periphery about the available food sources and that, thereafter, efferent neuroendocrine systems come in action to regulate food intake.

Several groups have focused on the effect of glucose ingestion on blood oxygen level-dependent (BOLD) signals in the hypothalamus (detected by MRI). Although there have been some contradicting papers, most studies found that the BOLD signal is diminished after the ingestion of glucose.

In future studies it would be more elegant to study the effects of a mixed meal on hypothalamic neuronal activity (before and after interventions), since this resembles the physiological stimulus (food) more closely. Thus far, the effects of a mixed meal on hypothalamic neuronal activity as measured by fMRI (BOLD) have not been established. Therefore, we will study the effects of a mixed meal versus water on hypothalamic neuronal activity.

Study objective

We hypothesize that the hypothalamic neuronal activity in response to water is different in response to a mixed meal.

Study design

Start date 20-01-2009.

Intervention

Drinking nutridrink or water while a FMRI is being made.

Contacts

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Eligibility criteria

Inclusion criteria

1. Healthy males;

2. Age 19-29;

3. BMI 19-25 kg/m2;

4. Stable weight for the last 2 years;

5. Caucasian;

6. No family history of DM2.

Exclusion criteria

1. Use of medication known to affect glucose metabolism (for example prednison) or lipid metabolism;

2. History of genetic or psychiatric disease (e.g. fragile X syndrome, major depression) that

affects the brain;

3. Significant chronic disease;

4. Galactosemia;

5. Renal or hepatic disease;

6. Recent weight changes or attempts to lose or gain weight (> 3 kg weight gain or loss, within the last 3 months);

7. Smoking (current);

8. Alcohol consumption of more than 28 units per week at present or in the past;

9. Recent blood donation (within the last 3 months);

10. Contra-indication to MRI scanning:

A. Claustrophobia;

B. Pacemakers and defibrillators;

C. Nerve stimulators;

D. Intracranial clips;

E. Intraorbital or intraocular metallic fragments;

F. Cochlear implants;

E. Ferromagnetic implants.

Study design

Design

Study type:	Interventional
Intervention model:	Crossover
Allocation:	Randomized controlled trial
Masking:	Open (masking not used)
Control:	Active

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	20-01-2009
Enrollment:	10
Type:	Actual

Ethics review

Positive opinion

Date:	27-03-2009
Application type:	First submission

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
NTR-new	NL1643
NTR-old	NTR1741
Other	METC LUMC : P08.224
ISRCTN	ISRCTN wordt niet meer aangevraagd

Study results

Summary results

N/A