

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

Gepubliceerd: 27-03-2009 Laatste bijgewerkt: 18-08-2022

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

Ethische beoordeling	Positief advies
Status	Werving gestopt
Type aandoening	-
Onderzoekstype	Interventie onderzoek

Samenvatting

ID

NL-OMON26872

Bron

Nationaal Trial Register

Verkorte titel

N/A

Aandoening

diabetes
suikerziekte

Ondersteuning

Primaire sponsor: Prof. dr. H. Pijl

Overige ondersteuning: CMSB

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

Toelichting onderzoek

Achtergrond van het onderzoek

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.

Doel van het onderzoek

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

Onderzoeksopzet

Start date 20-01-2009.

Onderzoeksproduct en/of interventie

Drinking nutridrink or water while a FMRI is being made.

Contactpersonen

Publiek

M.A. Wijngaarden
Leiden University Medical Center
Dept of Endocrinology and Metabolism, C4-67
Albinusdreef 2
Leiden 2333 ZA
The Netherlands
+31715265304

Wetenschappelijk

M.A. Wijngaarden
Leiden University Medical Center
Dept of Endocrinology and Metabolism, C4-67
Albinusdreef 2
Leiden 2333 ZA
The Netherlands
+31715265304

Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

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.

Belangrijkste redenen om niet deel te kunnen nemen

(Exclusiecriteria)

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.

Onderzoeksopzet

Opzet

Type:	Interventie onderzoek
Onderzoeksmodel:	Cross-over
Toewijzing:	Gerandomiseerd
Blinding:	Open / niet geblindeerd
Controle:	Geneesmiddel

Deelname

Nederland	
Status:	Werving gestopt
(Verwachte) startdatum:	20-01-2009
Aantal proefpersonen:	10
Type:	Werkelijke startdatum

Ethische beoordeling

Positief advies	
Datum:	27-03-2009
Soort:	Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

Geen registraties gevonden.

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL1643

Register

NTR-old

Ander register

ISRCTN

ID

NTR1741

METC LUMC : P08.224

ISRCTN wordt niet meer aangevraagd

Resultaten

Samenvatting resultaten

N/A