Diurnal and segmental variation in glucose sensing

Gepubliceerd: 23-05-2008 Laatst bijgewerkt: 13-12-2022

What is the effect of carbohydrate infusion on food choice, food intake, satiety, hormones, dependent on the time of day and segment of the small intestine?

Ethische beoordeling	Positief advies
Status	Werving nog niet gestart
Type aandoening	-
Onderzoekstype	Interventie onderzoek

Samenvatting

ID

NL-OMON20753

Bron
NTR

Verkorte titel
N/A

Aandoening

obesity, nutrient sensing, obesitas, nutrient perceptie

Ondersteuning

Primaire sponsor: Maastricht University
Overige ondersteuning: Maastricht University

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

Endpoints of the research are differences in satiety, food intake, and changes in hormone concentrations between the conditions.

Toelichting onderzoek

Achtergrond van het onderzoek

Overweight is a big and still growing health-related problem. For many years research has been conducted to gain insight into the effects of specific nutrients that may influence hunger related feelings and food intake. The small intestine has proven to be of great importance for the satiating effects of nutrients. Recent findings showed that infusion of fat in the small intestine lowers feelings of hunger and lowers energy intake. Little is known about the effects of carbohydrates (glucose) on the small intestine. It is known that the human body reacts differently to an oral glucose load in the morning compared to an oral glucose load in the evening. Possibly these differences can be partially explained by different effects of glucose on the small intestine. The aim of this research is to determine the effect of glucose in the small intestine on the secretion of hormones, appetite related feelings and food intake, and whether these effects differ between time of day (morning vs evening) and segment of the small intestine (duodenum vs ileum).

Doel van het onderzoek

What is the effect of carbohydrate infusion on food choice, food intake, satiety, hormones, dependent on the time of day and segment of the small intestine?

Onderzoeksopzet

1 day for tube positioning, 3 testdays

Onderzoeksproduct en/of interventie

The subjects receive in the duodenal as well as in the ileal study:

- an oral glucose drink in the morning and in the evening

- an infusion with glucose in the duodenum or ileum, in the morning and in the evening

- an infusion with saline in the duodenum or ileum, in the morning and in the evening

Contactpersonen

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Wetenschappelijk

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

1. Healthy male or female

2. Age 18-55 years

3. Body Mass Index (BMI) of 18-29 kg/m2

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

1. Evidence of severe diseases, allergy, major surgery and/or laboratory assessments which might limit participation in or completion of the study protocol.

2. Gastrointestinal or hepatic disorders influencing gastrointestinal absorption or transit.

3. Use of psychotropic drugs.

4. Use of alcohol in excess of 21 units/week for males and 14 units/week for females.

5. Concomitant medication that can increase gastric pH, or alter gastric emptying, or alter intestinal transit, or influence satiety/energy intake.

6. Pregnancy, lactation, wish to become pregnant during study, or having a positive pregnancy test at inclusion.

7. Reported unexplained weight loss/gain of more than 2 kg in the month before the study enrollment.

8. Score > 9 on Factor 1 (dietary restrained) of the Dutch translation of the Three Factor eating Questionnaire (TFEQ).

9. Blood donations less than three months previous to study enrollment.

10. One or more of the following dietary habits: medically prescribed diets, weight reduction diets, or vegetarian/macrobiotic/biologically dynamic food habits.

11. Reported working on late/night shifts.

Onderzoeksopzet

Opzet

Type:	Interventie onderzoek
Onderzoeksmodel:	Cross-over
Toewijzing:	Gerandomiseerd
Blindering:	Enkelblind
Controle:	Placebo

Deelname

Nederland

Status:	Werving nog niet gestart
(Verwachte) startdatum:	01-07-2008
Aantal proefpersonen:	36
Type:	Verwachte startdatum

Ethische beoordeling

Positief advies

Datum:	23-05-2008
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	NL1275
NTR-old	NTR1321
Ander register	MEC : 08-3-033
ISRCTN	ISRCTN wordt niet meer aangevraagd

Resultaten

Samenvatting resultaten
N/A