Oro-sensory exposure, eating rate and satiation

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

Samenvatting

ID

NL-OMON21159

Bron NTR

Verkorte titel Fudge study

Aandoening

obesity

Ondersteuning

Primaire sponsor: Wageningen University Overige ondersteuning: NWO

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

The main study outcomes are intake from the chocolate custard (measured from ad libitum amount) and insulin, glucose, PP and ghrelin responses at fixed time points, that is T=-4, -2,

0, 2, 4, 6, 8 (min) and variable time point, after the last bite at the end of the meal (t= +/-10).

Toelichting onderzoek

Achtergrond van het onderzoek

Foods that can be eaten at a fast rate - with low mastication effort - lead to shorter orosensory exposure (OSE) per unit of food consumed. This results in a decreased satiation response and consequently higher subsequent food intake. Oro-sensory exposure and ingestion rate play an important role in controlling intake and are closely related. Based on the findings of our previous study we concluded that increasing mastication duration decreases intake. However, it remains unclear whether an increase in mastication duration leads to a decrease in food intake because of enhanced oro-sensory exposure or because of decreased ingestion rate. Therefore the mechanisms by which both factors act on food intake and the underlying physiological mechanisms remain unclear.

Therefore the objective of this study is to determine the independent and additive effects of oro-sensory exposure duration and ingestion rate on satiation in relation to the cephalic endocrine and metabolic responses.

Doel van het onderzoek

We expect that increased oro-sensory exposure and decreased ingestion rate equally and additively increase satiation (lowering intake). In addition, we expect that increased orosensory exposure (mastication) increases initial hormone responses of insulin and PP (cephalic phase) and decreases ghrelin levels more independent of the ingestion rate and that this leads to a decrease in intake.

Onderzoeksopzet

not applicable

Onderzoeksproduct en/of interventie

Participants will eat chocolate custard with fudge pieces or fudge/caramel sauce (long vs. short orosensory exposure (OSE) in a slow or fast rate until they are satisfied. The 5 conditions of this study are: 1) short OSE, fast ingestion 2) short OSE, slow ingestion, 3) Long OSE, fast ingestion, 4) Long OSE slow ingestion and 5) control condition for the hormone measures: no treatment.

Contactpersonen

Publiek

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Wetenschappelijk

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

- Male
- Between 18-35 years old at the day of inclusion
- Able to understand and speak English fluently or without difficulty (self-report)
- BMI 18.5-27 kg/m2
- Good general health and appetite (F1 questionnaire self-report)

• Commonly (5 out of 7 week days) eating three meals a day every day around approximately the same times. (This is a Self-report question; see F1 questionnaire).

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

• Difficulties with swallowing, chewing and or eating in general

• Suffering from an endocrine or eating disorder, gastrointestinal illness or illness of the thyroid gland, respiratory disease or diabetes.

- Having taste or smell disorders (self-report)
- Braces (not including a dental wire) or oral piercing
- Smoking
- Consuming on average more than 21 glasses of alcohol per week (21)
- Not willing to stop using drugs during the study period (from inclusion till last test session)
- Use of medication that may influence study outcomes (self-report see F1 questionnaire)
- Allergies or intolerance to any ingredient of the test food.

• Having facial hair not willing to shave (because of stickers put on chin and nose for the video recordings)

- Not willing to eat the test food because of eating habits or believes.
- Followed an energy restricted diet during the last 2 months
- Gained or lost 5 kg of body weight over the last half year

• High restrained eater according to the Dutch Eating Behaviour Questionnaire (men: score>2.9)*. * This exclusion criterion will not explicitly be communicated to the participants to prevent desirable answers.

- Signed up for participating in another research study
- Employee of Human Nutrition department of Wageningen university

• Thesis student or intern at the chair group of Sensory Science and Eating Behaviour Human Nutrition (WUR).

• Intensive exercising more than 8 hours per week

• Low score (< -1) for liking the test food or more than a 2 point score difference between test foods (strong preference) on a nine point likert scale*

Participants who potentially want to participate in part B of this study:

- Recent blood donation (<1 month prior to the first study day)
- Planning to donate blood as a blood donor during the study

Exclusion after screening (participants of part A and B):

 \bullet By the researcher measured weight and height results in a BMI below 18.5 or above 27 kg/m2

Exclusion after screening (participants of part B):

- Hb value is not between 8.1-11.0 mmol/L
- Veins not suitable for placement of the intravenous cannula (judged by a research nurse)
- Fasted glucose level is below <3.5 mmol/l

• Blood pressure is below 90/60 mm hg (below 90 and/or below 60 mm hg) and/ or if the participant has a history of low blood pressure.

Onderzoeksopzet

Opzet

Туре:	Interventie onderzoek
Onderzoeksmodel:	Cross-over
Toewijzing:	Gerandomiseerd
Blindering:	Open / niet geblindeerd
Controle:	Geneesmiddel

Deelname

Nederland	
Status:	Werving gestart
(Verwachte) startdatum:	05-10-2017
Aantal proefpersonen:	60
Туре:	Verwachte startdatum

Ethische beoordeling

Positief advies Datum: Soort:

04-10-2017 Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

ID: 44445 Bron: ToetsingOnline Titel:

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL6544
NTR-old	NTR6732
ССМО	NL62157.081.17
OMON	NL-OMON44445

Resultaten