Take it slow: Examining the efficacy of persuasive technology to alter eating rate

No registrations found.

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

Summary

ID

NL-OMON22911

Source
NTR

Health condition

eating behaviour; eating rate; food intake

Sponsors and support

Primary sponsor: Radboud University Nijmegen; Behavioural Science Institute

Roel Hermans (RU Nijmegen)
Sander Hermsen (HU Utrecht)
Jeana Frost (VU Amsterdam)
Source(s) of monetary or material Support: NWO: Food Cognition & Behaviour SlowControl

Intervention

Outcome measures

Primary outcome

- Total amount consumed (in grams)

- Average eating speed (number of servings per minute)

- Over speed ratio

Secondary outcome

- average meal duration

- average interval between servings

- Total fork servings

- Satiety

Furthermore, potential confounding variables such as palatability, mood, time of day, and meal enjoyment will be assessed. Finally, the DEBQ (Dutch eating behaviour questionnaire) will be assessed.

Study description

Background summary

This study tests the effect of vibrotactile feedback on eating rate. More specifically, we examine whether vibrotactile feedback delivered through the augmented fork decelerates eating rate during a single meal consumed in a controlled laboratory setting. We employ an experimental between-participants design with two conditions. Depending on condition, participants will eat a meal using the augmented fork with vibrotactile feedback (experimental condition) or using the same fork without feedback (control condition). We will test whether people in the experimental condition eat less / slower than those in the control condition.

Study objective

Over 41% of the Dutch population is overweight, a known risk factor for a range of debilitating conditions. Modifying behaviours associated with overweight, such as eating rate, or the speed at which people consume food, could reduce overweight and improve health. Eating rate is a basic determinant of appetite regulation, as people who eat more slowly feel sated earlier and eat less. Unfortunately without assistance, eating rate is difficult to modify due to its highly automatic nature.

The current study examines whether real-time vibrotactile feedback about eating rate delivered by a persuasive technology can alter eating behaviour in the lab.

Study design

All primary outcomes will be measured at one time point, during/ after the meal. On weekdays between 11.30 and 15.00h.

Secondary outcomes will also be measured at one time point. Except for satiey, this will be measure on 2 timepoints (before and after the meal).

Intervention

We test the effect of vibrotactile feedback on eating rate. More specifically, we examine whether vibrotactile feedback delivered through the augmented fork decelerates eating rate during a single meal consumed in a controlled laboratory setting. We employ an experimental between-participants design with two conditions. Depending on condition, participants will eat a meal using the augmented fork with vibrotactile feedback (experimental condition) or using the same fork without feedback (control condition). In the experimental condition, the fork alerts participants with the help of gentle vibrations when they are eating too fast. In the control condition, participants will use the same fork but will not be given any feedback on their eating rate. Participants will eat their meal alone in order to exclude potential social influence effects on intake or eating rate. Further, to rule out demand characteristics, participants in both conditions will be told that the fork will track their eating rate and that slow eating rate is beneficial for their health. In addition, in the experimental condition participants will be told that the fork will vibrate when they are eating too fast. Each participant will be served a standardized amount of a pasta dish (800g), from which they can help themselves. Each session will last approximately 45 minutes.

Contacts

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Eligibility criteria

Inclusion criteria

Both males and females, between 18 and 65 years old, fast eaters, BMI 18 > and < 35

Exclusion criteria

< 18 years, BMI < 18 and > 35

Study design

Design

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

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	13-05-2015
Enrollment:	128
Type:	Actual

Ethics review

Positive opinion

Date:	28-05-2015
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	NL5105
NTR-old	NTR5237
Other	NWO: Food Cognition & Behaviour : 057-14-010 / 2015/00386/NIHC

Study results

Summary results
Nog niet van toepassing