The effect of salt intensity on ad libitum intake of tomato soup in different meal settings.

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To quantify the effect of salt intensity (low salt intense versus high salt intense) in soup on ad libitum intake in both a pre-load and a mixed lunch setting.

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Other condition
Study type	Interventional

Summary

ID

NL-OMON33375

Source
ToetsingOnline

Brief title
Tomato-Lunch

Condition

- Other condition

Synonym
overweight

Health condition

obesitas

Research involving
Human

Sponsors and support

Primary sponsor: Wageningen Universiteit
Source(s) of monetary or material Support: NWO/STW,Campina,CSM,Friesland Nutrition,Numico,Unilever

Intervention

Keyword: ad libitum intake, salt intensity, sensory specific satiety

Outcome measures

Primary outcome

The primary outcome is the difference between ad libitum intake of low intense salt soup and ad libitum intake of high intense salt soup. This will be separately determined in the pre-load and mixed lunch setting.

Secondary outcome

1) The difference between eating rate of the intense salt soup versus high intense salt soup. This will be separately determined in the pre-load and mixed lunch setting.

2) The difference in ad libitum intake of low intense salt soup, ideal intense salt soup and high intense salt soup between the pre-load versus the mixed lunch setting (thus intake of low intense salt soup in the pre-load setting is compared with low intense salt soup in the mixed lunch setting, ect)

3) The difference in ad libitum intake and eating rate of ideal intense salt soup compared with both low intense salt soup and high intense salt soup.

4) The difference in consumption of sweet and savoury sandwich fillings after ad libitum intake of low intense salt soup versus high intense salt soup in the mixed lunch setting.

Study description

Background summary

The prevalence of obesity is increasing world wide. Meal size is considered as a major cause of overweight. Sensory specific satiety (which refers to the decrease in pleasantness of the eaten foods relatively to the uneaten foods) contributes to meal termination. Taste intensity is a food property that may influence sensory specific satiety. An increased taste intensity may decrease the pleasantness faster, this can result in less ad libitum intake. We use salt to manipulate taste intensity. In our previous study, we found no effect of salt intensity on ad libitum intake of tomato soup. Participants were in a quite hungry state and only received the soup for lunch. It is possible that meal termination in our previous study was less determined by sensory processes and more by internal hunger-signals. Therefore, the hypotesis will be tested again but this time within two different meal settings.

Study objective

To quantify the effect of salt intensity (low salt intense versus high salt intense) in soup on ad libitum intake in both a pre-load and a mixed lunch setting.

Study design

A cross-over intervention study consisting of three different test conditions: ad libitum intake of 1) low intense salt soup 2) ideal intense salt soup 3) high intense salt soup. The three corresponding salt concentrations are individually determined. These conditions are tested within two meal settings 1) a pre-load followed by intake of the soup 2) intake of soup whereafter a mixed lunch is served. In total, participants receive six lunch sessions. Ad libitum intake of the low intense salt soup is compared with ad libitum intake of high intense salt soup. The ideal intense salt soup is added as a positive control.

Intervention

The ad libitum intake of the low intense salt soup (reference treatment) will be compared with the ad libitum intake of the high intense salt soup (index treatment).

Study burden and risks

The study is non-therapeutic to the participants. The risk associated with participation is negligible and compared to other studies the burden can be

considered low.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

Healthy (as jugded by the participant)
Age: 18-35 year
Non-smoking
BMI between 18.5 and 25 kg/m2.

Exclusion criteria

People who score of <5 at a 9-point pleasantness scale for creamy tomato soup
Diabetics
People suffering from kidney diseases
People who followed a diet during the last two months
People who have a restraint eating behaviour
People with swallowing problems

Study design

Design

Study type:	Interventional
Intervention model:	Crossover
Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Basic science

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	28-04-2009
Enrollment:	40
Type:	Actual

Ethics review

Approved WMO

Date:	17-04-2009
Application type:	First submission
Review commission:	METC Wageningen Universiteit (Wageningen)

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

ID: 20176
Source: NTR
Title:

In other registers

Register	ID
CCMO	NL27244.081.09
OMON	NL-OMON20176