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Investigation of food Taste on Satiety and food preference

Submission date
11/05/2011

Recruitment status
No longer recruiting

Registration date
26/05/2011

Overall study status
Completed

Last Edited
27/11/2015

Condition category
Mental and Behavioural Disorders

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[X] Results
[ ] Individual participant data

Plain English summary of protocol

Background and study aims
Taste plays an important role in what we decide to eat or drink. It is also thought that different types of taste, such as sweet or savoury, can influence our appetite and the amount we actually eat. Studies have shown that sweet-tasting foods can increase the appetite, and so we are likely to eat more. There have been very few studies testing the effects of savoury-tasting foods on appetite however. The aim of this study is to compare the effects of sweet and savoury pre-loads (flavoured drinks before meals) on feelings of hunger and food intake.

Who can participate?
Health women between the ages of 18 and 30.

What does the study involve?
Participants are randomly allocated to one of three groups. Those in the first group are given a sweet-tasting milk-based drink, flavoured with chocolate and sweetened with sucrose (sugar). Those in the second group are given a savoury-tasting milk-based drink flavoured with mushroom and monosodium glutamate (MSG). Those in the third group are given a bland-tasting milk-based drink containing powdered skimmed milk and corn flour. Participants in all three groups are then given a very large portion of food (including both sweet and savoury tastes) and told to eat as much as they like. The amount of food the participants in each group eat is then recorded. This exercise is repeated every day for four days. Throughout the 4 days, participants are interviewed to find out how full they are feeling before and after the meals.

What are the possible benefits and risks of participating?
Not provided at time of registration.

Where is the study run from?
Institute of Psychological Sciences, Leeds (UK)

When is the study starting and how long is it expected to run for?
March 2008 to August 2008

Who is funding the study?
1. Ajinomoto Inc. (Japan)
2. Biotechnology and Biological Sciences Research Council (UK)
3. European Union (Belgium)

Who is the main contact?
Dr Graham Finayson

Contact information

Type(s)
Scientific

Contact name
Dr Graham Finlayson

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Additional identifiers

Protocol serial number
08073-01

Study information

Scientific Title
Influence of savoury or sweet food on sensory regulation of appetite and liking and wanting for foods: a single centre cross-sectional randomised cross-over study

Acronym
TasteSat

Study objectives
1. Savoury taste will have a stronger modulating effect on food preference than sweet or bland taste
2. Individual differences in psychological eating behaviour traits will moderate the effect of taste on satiety and food preference

Ethics approval required
Old ethics approval format

Ethics approval(s)
Institution of Psychological Sciences Ethics Committe, University of Leeds, 11th March 2008, Ref: 08073-01

Study design
Single centre cross-sectional randomised crossover study

Primary study design
Interventional

Study type(s)
Screening

Health condition(s) or problem(s) studied
Eating attitudes and behaviours

Interventions
In the randomised cross-over study participants will be given iso-energetic, equi-palatable, liquid preloads made from commercially available foods and manipulated according to taste (flavour).

30 participants randomised to
1. Savoury taste
2. Sweet taste
3. Bland taste (control) in counterbalanced order

Intervention Type
Other

Phase
Not Applicable

Primary outcome(s)
1. Food intake at one's pleasure (ad libitum): multi item test meal (buffet)
2. Foods of known macronutrient and energy composition, each item weighed before and after consumption to the nearest 0.1g

Key secondary outcome(s))
1. Food selection according to taste (savoury or sweet) and fat content (>50% or <25% energy) of items consumed in test meal
2. Subjective appetite (hunger, fullness, prospective consumption) using visisal analogue scales (VAS) score (0 = not at all, 100 = extremely) at 0, +10, +20, +30 minutes following preload consumption
3. Food preferences using computerised task to assess images of foods varying according to taste (savoury or sweet) and fat content (>50% or <25% energy)
4. Liking measured by (VAS) score (0 = not at all, 100 = extremely) at +10 minutes following preload consumption
5. Wanting measured by paired choice reaction time task

Completion date
04/08/2008

Eligibility

Key inclusion criteria

1. Female, in good general health, aged 18-30 years
2. Non-obese (< 30kg/m2)
3. Acceptance of the study foods

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 years

Upper age limit
30 years

Sex
Female

Key exclusion criteria
1. Currently following a weight loss/maintenance routine
2. History of eating or psychological disorders in previous 3 years

Date of first enrolment
17/03/2008

Date of final enrolment
04/08/2008

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
Institute of Psychological Sciences
Leeds
United Kingdom
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Sponsor information

Organisation
Ajinomoto Co., Inc. (Japan)

ROR
https://ror.org/044mkdq33

Funder(s)

Funder type
Research council

Funder Name
Ajinomoto Inc. (Japan)

Funder Name
Biotechnology and Biological Sciences Research Council (BBSRC) (UK) (BB/G005524/1)

Alternative Name(s)
UKRI - Biotechnology And Biological Sciences Research Council, BBSRC UK, Biotechnology and Biological Sciences Research Council (BBSRC), BBSRC

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
United Kingdom

Funder Name
European Union (EU) (Belgium) - Seventh Framework Programme (FP7/2007-2013, grant:266408)

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	01/01/2012		Yes	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes