

The effects of snack consumption during two months on body weight

Submission date

14/05/2009

Recruitment status

No longer recruiting

☐ Prospectively registered

☐ Protocol

Registration date

17/06/2009

Overall study status

Completed

☐ Statistical analysis plan

☒ Results

Last Edited

03/06/2020

Condition category

Nutritional, Metabolic, Endocrine

☐ Individual participant data

Plain English summary of protocol

Not provided at time of registration

Study website

<http://www.voedingscentrum.nl/Voedingscentrum/English>

Contact information

Type(s)

Scientific

Contact name

Prof Cees de Graaf

Contact details

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Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers

NL22403.081.08; METC-WU / 08/04

Study information

Scientific Title

The effects of two months of snack consumption during a meal or in between meals on energy balance: a randomised parallel 2 x 2 factorial single-centre trial

Acronym

Snack study

Study objectives

There is controversy about the influences of snack consumption on energy balance. Short term intervention studies demonstrate no energy intake compensation, which suggests that eating in between meals result in higher daily energy intake. Epidemiological studies however, do not show a clear relation between snack consumption and overweightness.

The aim of the current experiment is to investigate the long term effects of moments of snack consumption on compensation behaviour and energy balance in a free living situation. In addition, we will focus on the effects of energy density on energy balance.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Medical Ethical Testing Committee (METC), Wageningen University (t.a.v. Prof. CPGM de Groot), Department of Human Nutrition, approved in May 2008 (ref: NL22403.081.08)

Study design

Randomised parallel 2 x 2 factorial single-centre trial

Primary study design

Interventional

Secondary study design

Randomised controlled trial

Study setting(s)

Other

Study type(s)

Other

Participant information sheet

Health condition(s) or problem(s) studied

Obesity, overweight

Interventions

Snacks are consumed either with a meal or between meals and the snacks have either a low (less than 4 kJ/g) or high (greater than 12 kJ/g) energy density. Subjects consume the snacks daily for 8 weeks. The energy content of the snacks in each study group is 25% of the participant's daily energy needs.

Intervention Type

Other

Phase

Not Applicable

Primary outcome measure

Change in weight after two months of intervention. The change in weight will be compared between the 4 groups. Body weight is assessed in week 1 and in week 8 on a digital scale to the nearest 0.01 kg. Body weight is also assessed twice a week during the 8 weeks of intervention to keep track of changes over time.

Secondary outcome measures

1. Observed energy intake on two days in week 1 and on two days in week 8
2. Body composition assessed with air displacement plethysmography on one morning in week 1 and on one morning in week 8
3. Level of physical activity is assessed on 7 days in week 1 and 7 days in week 8 by means of an activity diary and by a pedometer

Overall study start date

06/10/2008

Completion date

03/12/2008

Eligibility**Key inclusion criteria**

1. Age: 18 - 35 years
2. Body mass index (BMI): 18.5 - 23 kg/m²
3. Healthy men and women

Participant type(s)

Patient

Age group

Adult

Lower age limit

18 Years

Sex

Both

Target number of participants

80

Total final enrolment

82

Key exclusion criteria

1. Weight change of greater than 1 kg in last three months
2. Smoking
3. Following an energy restricted diet during the last six months
4. Gastro-intestinal diseases
5. Diabetes, thyroid diseases, or any other endocrine disorders
6. Lack of appetite for any (unknown) reason
7. Restraint eating (men: score greater than 2.26; women: score greater than 2.80 on Dutch Eating Behaviour Questionnaire (DEBQ), norm table of 2005)
8. Participation in a different study, performed by the Department of Human Nutrition

Date of first enrolment

06/10/2008

Date of final enrolment

03/12/2008

Locations**Countries of recruitment**

Netherlands

Study participating centre**Wageningen University**

Wageningen

Netherlands

6700 EV

Sponsor information**Organisation**

Wageningen University (Netherlands)

Sponsor details

Department of Human Nutrition

PO box 8129

Wageningen

Netherlands

6700 EV

Sponsor type

University/education

Website

<http://www.wageningenuniversiteit.nl/UK/>

ROR

<https://ror.org/04qw24q55>

Funder(s)

Funder type

Research organisation

Funder Name

Dutch Nutrition Centre (Netherlands)

Results and Publications

Publication and dissemination plan

Not provided at time of registration

Intention to publish date**Individual participant data (IPD) sharing plan****IPD sharing plan summary**

Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	01/02/2010	03/06/2020	Yes	No