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Effect of breakfast cereals compared with corn flakes on blood glucose, gastric emptying and satiety in healthy subjects

Submission date	Recruitment status	[ ] Prospectively registered
27/06/2007	No longer recruiting	[ ] Protocol
Registration date	**Overall study status**	[ ] Statistical analysis plan
27/06/2007	Completed	[ ] Results
Last Edited	**Condition category**	[ ] Individual participant data
13/11/2008	Nutritional, Metabolic, Endocrine	[ ] Record updated in last year

Plain English summary of protocol
Not provided at time of registration

Contact information

Type(s)
Scientific

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Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers

NTR971

Study information

Scientific Title
Effect of beta-glucan breakfast cereals compared with corn flakes on post-prandial blood glucose, gastric emptying and satiety in healthy subjects: a randomised crossover blinded trial

Study objectives
The aim of this study was to evaluate the effect of beta-glucan on the rate of gastric emptying, post-prandial glucose response and satiety in healthy subjects.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Not provided at time of registration

Study design
Randomised, double-blind, crossover trial

Primary study design
Interventional

Secondary study design
Randomised controlled trial

Study setting(s)
Other

Study type(s)
Quality of life

Participant information sheet

Health condition(s) or problem(s) studied
Gastric emptying, post-prandial blood glucose

Interventions
Twelve healthy subjects were assessed using a randomised crossover blinded trial. The subjects were examined after an eight-hour fast and assessment of normal fasting blood glucose level. Gastric emptying rate was calculated as the percentage change in the antral cross-sectional area 15 and 90 minutes after ingestion of vanilla yoghurt with flakes containing 4 g beta-glucan (GER1) or vanilla yoghurt with Kellogg's cornflakes (GER2). Significant differences were evaluated with Wilcoxon t-test.

Intervention Type
Drug

Phase

Not Specified

Drug/device/biological/vaccine name(s)
Beta-glucan

Primary outcome measure
The beta-glucan effect on the rate of gastric emptying was statistically not significant compared with cornflakes. Consumption of beta-glucan lowered the post-prandial glucose response significant ($p < 0.05$).

Secondary outcome measures
The effect of beta-glucan on satiety was not statistically significant.

Overall study start date
01/04/2003

Completion date
01/01/2004

Eligibility

Key inclusion criteria
Healthy subjects without symptoms or a prior history of gastrointestinal disease, abdominal surgery or diabetes mellitus were included in the study.

Participant type(s)
Patient

Age group
Adult

Sex
Both

Target number of participants
12

Key exclusion criteria
1. Diabetes mellitus
2. Prior abdominal surgery
3. Symptoms of gastrointestinal disease
4. Obesity

Date of first enrolment
01/04/2003

Date of final enrolment
01/01/2004

Locations

Countries of recruitment
Netherlands

Sweden

Study participating centre
Malmo University Hospital
Malmo
Sweden
205 02

Sponsor information

Organisation
Malmö University Hospital (Sweden)

Sponsor details
Department of Medicine
Ingang 35
Malmö
Sweden
205 02

Sponsor type
Hospital/treatment centre

Website
http://www.hand.mas.lu.se/malmo_unv_hosp.htm

ROR
https://ror.org/05wp7an13

Funder(s)

Funder type
Industry

Funder Name
Skånemejerier (Sweden)

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