

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

Submission date
27/06/2007

Recruitment status
No longer recruiting

☐ Prospectively registered

☐ Protocol

Registration date
27/06/2007

Overall study status
Completed

☐ Statistical analysis plan

☐ Results

Last Edited
13/11/2008

Condition category
Nutritional, Metabolic, Endocrine

☐ Individual participant data

☐ 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

Protocol serial number

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

Study type(s)

Quality of life

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(s)

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 ($p < 0.05$).

Key secondary outcome(s)

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

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

Healthy volunteers allowed

No

Age group

Adult

Sex

All

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)

ROR

<https://ror.org/05wp7an13>

Funder(s)**Funder type**

Industry

Funder Name

Skånemejerier (Sweden)

Results and Publications**Individual participant data (IPD) sharing plan****IPD sharing plan summary**

Not provided at time of registration