

Does oat-based milk take longer than fruit juices to empty from the stomach?

Submission date 02/06/2021	Recruitment status No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
Registration date 03/06/2021	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
Last Edited 27/11/2023	Condition category Digestive System	<input type="checkbox"/> Individual participant data

Plain English summary of protocol

Background and study aims

Many patients are subjected to unnecessarily long fasting periods before anesthesia and surgery. Current guidelines recommend a minimum of 6 hours fasting for solid and semi-solid food such as milk or yoghurt, which usually leads to fasting overnight even if the surgery is scheduled in the afternoon. Some paediatric centers have reduced the minimum fasting time to 4 hours for a "light breakfast" of a limited amount of food. However, there is not enough evidence to determine how much food is safe with a 4 hour limit.

The primary aim is to determine if 500 mls of either oat-based drink or fruit juice is emptied from the stomach after 4 hours. The secondary aim is to investigate if oat-based drink or fruit juice of the same caloric content have similar gastric emptying rates.

Who can participate?

Healthy adult volunteers

What does the study involve?

Participants will ingest 500 ml of one of 4 different fluids after an overnight fast. Changes in gastric cross-sectional area are monitored repeatedly during four hours using gastric ultrasound. The volunteers will repeat the procedure for all 4 fluids in a randomised order.

What are the possible benefits and risks of participating?

None

Where is the study run from?

Uppsala University Hospital (Sweden)

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

January 2021 to March 2022

Who is funding the study?

Uppsala University (Sweden)

Who is the main contact?

Dr Peter Frykholm, peter.frykholm@surgsci.uu.se

Contact information

Type(s)

Scientific

Contact name

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Additional identifiers

Protocol serial number

Okabereplika 1.1

Study information

Scientific Title

Gastric emptying of non-clear fluids: a comparison of vegetable-based milk product with isocalorically adjusted clear fluids

Study objectives

Gastric emptying is similar after ingestion of fluids of different composition but with the same volume and the same caloric content.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Approved 21/03/2021, Swedish Ethical Review Authority (Etikprövningsmyndigheten, Box 2110, 750 02, Uppsala, Sweden; +46 10-475 08 00; registrator@etikprovning.se), ref: #2021-00623

Study design

Randomized cross-over single blind controlled trial

Primary study design

Interventional

Study type(s)

Other

Health condition(s) or problem(s) studied

Determination of the rate of gastric emptying of two different types of fluid in healthy volunteers

Interventions

16 healthy volunteers will ingest 500 ml of one of 4 different fluids after an overnight fast. Changes in gastric cross-sectional area are monitored repeatedly for four hours using gastric ultrasound. The volunteers will repeat the procedure for all 4 fluids in a randomised order. The ultrasound operator is blinded to the type of fluid ingested.

Randomisation in blocks of four using the website <https://www.Randomize.org>. Each subject picks a sealed envelope that includes the order in which he will take his drinks. The envelope is opened by a researcher not involved in the ultrasound exams that particular day.

Intervention Type

Supplement

Primary outcome(s)

Gastric antral surface area (cm²)

Measurement method: the abdomen is scanned with a curvilinear probe, the antrum is identified in the same plane as either the aorta, the superior mesenteric artery or the lower vena cava. The image is frozen and the cross-sectional area (CSA) is delineated using the ultrasound machine's internal software application.

Measurements are taken at baseline (before ingestion of study drink), and up to 360 minutes after ingestion if needed, but until the antral CSA reaches baseline +/- 5%.

Key secondary outcome(s)

Gastric antral surface area (cm²) measured as above at baseline and 10, 20, 30, 40, 50, 60, 100, 140, 180, 210, 240, 270, 300, 330 minutes after ingestion

Completion date

31/03/2022

Eligibility

Key inclusion criteria

Healthy adults without ongoing medication or medical condition associated with delayed gastric emptying

Participant type(s)

Healthy volunteer

Healthy volunteers allowed

No

Age group

Adult

Sex

All

Total final enrolment

16

Key exclusion criteria

1. Diabetes
2. Gastrointestinal motility disorder
3. Pregnancy beyond the 2nd trimester
4. Medications that delay gastric emptying
5. Previous abdominal surgery
6. Morbid obesity

Date of first enrolment

03/06/2021

Date of final enrolment

03/01/2022

Locations**Countries of recruitment**

Sweden

Study participating centre**Uppsala University**

Uppsala University Hospital

Dept of Surgical Sciences

Uppsala

Sweden

752 85

Sponsor information**Organisation**

Uppsala University

ROR

<https://ror.org/048a87296>

Funder(s)

Funder type

University/education

Funder Name

Uppsala Universitet

Alternative Name(s)

upsalauni, Uppsala Universitet, Sweden, Uppsala University, UU

Funding Body Type

Government organisation

Funding Body Subtype

Universities (academic only)

Location

Sweden

Results and Publications

Individual participant data (IPD) sharing plan

All data generated or analysed during this study will be included in the subsequent results publication

IPD sharing plan summary

Other

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		25/11/2023	27/11/2023	Yes	No
Participant information sheet			08/07/2021	No	Yes
Protocol file			08/07/2021	No	No