# Gastric emptying and protein absorption of caprine and bovine casein protein

Published: 19-09-2019
Last updated: 15-05-2024

The study aims to quantify differences in gastric digestion and absorption of caprine and bovine casein protein

| | |
|---|---|
| **Ethical review** | Approved WMO |
| **Status** | Recruitment stopped |
| **Health condition type** | Other condition |
| **Study type** | Interventional |

## Summary

### ID

NL-OMON48463

**Source**
ToetsingOnline

**Brief title**
vision study

### Condition

- Other condition

**Synonym**
normal diagestion

**Health condition**

gezonde deelnemers

**Research involving**
Human

### Sponsors and support

**Primary sponsor:** Wageningen Universiteit
**Source(s) of monetary or material Support:** Ausnutria BV

## Intervention

**Keyword:** absorption, gastric emptying, protein digestion

## Outcome measures

### Primary outcome

gastric emptying t50

amino acids concentration over time in the blood

### Secondary outcome

intragastric layering over time

# Study description

### Background summary

A suggested benefit of caprine (CAP) over bovine milk (BOV) has been hypothesized to be an accelerated gastric emptying of CAP. Due to more *-casein and less *s1-casein in caprine milk less coarse coagulates are thought to be formed in the stomach, which may facilitate enzymatic digestion and gastric emptying.

This may provide benefits for specific groups, for example patients who struggle to meet protein intakes as protein. However, thus far, no in vivo clinical data on digestion of caprine versus bovine casein is available.

### Study objective

The study aims to quantify differences in gastric digestion and absorption of caprine and bovine casein protein

### Study design

Intervention study with a balanced cross-over design

### Intervention

300mL vanilla flavoured drink with either 30r of caprine casein of bovine casein

**Study burden and risks**

The risks associated with participation are negligible, as both phlebotomy and MRI are eminently safe medical techniques, and the stimuli consist of normally consumed food products. The burden associated with participation consists of two visits, which both require an overnight fast, 8 blood draws (10 mL per draw, totalling 80 mL) and multiple MRI scans over the period of 1 hours. These may all cause minimal discomfort. These is no benefit to participation for the participants, the group is only related insofar as they are healthy males.

# Contacts

**Public**
Wageningen Universiteit

stippeneng 4
Wageningen 6708WE
NL
**Scientific**
Wageningen Universiteit

stippeneng 4
Wageningen 6708WE
NL

# Trial sites

## Listed location countries

Netherlands

# Eligibility criteria

**Age**
Adults (18-64 years)
Elderly (65 years and older)

## Inclusion criteria

* Male
* 18 - 55 yr old
* In self-reported health
* BMI between 18 and 25kg/m2

### Exclusion criteria

* Bovine milk allergy or intolerance (self-reported)
* Caprine milk allergy or intolerance (self-reported)
* Lactose intolerance (self-reported)
* Disorders of the upper ingestive tract resulting in difficulties chewing/swallowing.
* Unexplained weight change
* Gastric disorders or regular gastric complaints, heart burn for example
* Use of proton pump inhibitors or other medication which alters the normal function-ing of the stomach
* Smoking
* Having a contra-indication to MRI scanning (including, but not limited to):
* Pacemakers and defibrillators
* Intraorbital or intraocular metallic fragments
* Ferromagnetic implants
* Claustrofobia

## Study design

### Design

| | |
|---|---|
| Study type: | Interventional |
| Intervention model: | Crossover |
| Masking: | Single blinded (masking used) |
| Control: | Uncontrolled |
| Primary purpose: | Other |

### Recruitment

NL

| | |
|---|---|
| Recruitment status: | Recruitment stopped |
| Start date (anticipated): | 22-11-2019 |
| Enrollment: | 18 |

| | |
|---|---|
| Type: | Actual |

## Ethics review

| | |
|---|---|
| Approved WMO Date: | 19-09-2019 |
| Application type: | First submission |
| Review commission: | METC Wageningen Universiteit (Wageningen) |

## Study registrations

### Followed up by the following (possibly more current) registration

No registrations found.

### Other (possibly less up-to-date) registrations in this register

ID: 28580
Source: NTR
Title:

### In other registers

| Register | ID |
|---|---|
| CCMO | NL70239.081.19 |
| Other | nog geen nummer toegewezen |
| OMON | NL-OMON28580 |