

Digestion of cow and goat casein

Published: 01-11-2019

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

Ethical review	Approved WMO
Status	Suspended
Health condition type	Protein and amino acid metabolism disorders NEC
Study type	Interventional

Summary

ID

NL-OMON28580

Source

NTR

Brief title

Vision

Condition

- Protein and amino acid metabolism disorders NEC

Synonym

No health condition - digestion of two types of casein in healthy young men

Health condition

'gastric emptying' and 'amino acid absorption'

Research involving

Human

Sponsors and support

Primary sponsor: Ausnutria BV

Source(s) of monetary or material Support: Ausnutria BV

Intervention

- Food (substances)

Explanation

Outcome measures

Primary outcome

Gastric emptying and amino acid absorption

Secondary outcome

Intragastric layer formation

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 β -casein and less α 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 30g of caprine casein or 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 hour. These may all cause minimal discomfort. There is no benefit to participation for the participants, the group is only related insofar as they are healthy males.

Contacts

Public

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Scientific

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Eligibility criteria

Age

Adults (18-64 years)
Adults (18-64 years)

Inclusion criteria

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

Exclusion criteria

• Bovine milk allergy or intolerance (self-reported) • Caprine milk allergy or intolerance (self-reported) • Lactose intolerance (self-reported) • 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 • Being vegan • Participating in other research • 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 phase: N/A

Study type:	Interventional
Intervention model:	Crossover
Allocation:	Randomized controlled trial
Masking:	Single blinded (masking used)
Control:	N/A , unknown
Primary purpose:	Basic science

Recruitment

NL	
Recruitment status:	Suspended
Start date (anticipated):	22-11-2019
Enrollment:	18
Type:	Actual

IPD sharing statement

Plan to share IPD: No

Ethics review

Approved WMO	
Date:	23-09-2019
Application type:	First submission
Review commission:	METC Oost-Nederland
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Study registrations

Followed up by the following (possibly more current) registration

ID: 48463

Bron: ToetsingOnline

Titel:

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

No registrations found.

In other registers

Register	ID
NTR-new	NL8137
Other	METC Wageningen : 70239
CCMO	NL70239.081.19
OMON	NL-OMON48463

Study results