The effects of quark ingestion with or without prior exercise on muscle protein synthesis rates in young and older men.

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We hypothesize that the ingestion of quark will increase post-prandial muscle protein synthesis at rest in both young and older men. In addition, we hypothesize that exercise will augment the post-prandial muscle protein synthetic response to quark...

Ethische beoordeling	Positief advies
Status	Werving gestart
Type aandoening	-
Onderzoekstype	Interventie onderzoek

Samenvatting

ID

NL-OMON22192

Bron
NTR

Verkorte titel
Quark

Aandoening

Muscle mass growth; which can be related to sarcopenia

Ondersteuning

Primaire sponsor: The collaboration project is co-funded by the PPP Allowance made available by Health~Holland, Top Sector Life Sciences & Health, to stimulate public-private partnerships. Maastricht University and Friesland campina
Overige ondersteuning: Maastricht University

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

Muscle protein synthesis

Toelichting onderzoek

Achtergrond van het onderzoek

An important determinant to maintain and/or increase skeletal muscle mass in rest and after (resistance) exercise is dietary protein intake. Especially with aging ingestion of high-quality dietary proteins is a strategy to counteract sarcopenia. In this regard, milk protein has been studied frequently and is considered as a high-quality protein source. However, little is known about other milk-derived protein sources such as quark. Therefore, the aim of the present study is to assess the capacity of quark to stimulate post-prandial and post-exercise skeletal muscle protein synthesis when compared to basal, post-absorptive muscle protein synthesis in young and older males.

Doel van het onderzoek

We hypothesize that the ingestion of quark will increase post-prandial muscle protein synthesis at rest in both young and older men. In addition, we hypothesize that exercise will augment the post-prandial muscle protein synthetic response to quark ingestion in both young and older men.

Onderzoeksopzet

Muscle biopsies taken at -150, 0, and 240 min.

Onderzoeksproduct en/of interventie

Exercise and quark intake

Contactpersonen

Publiek

Maastricht University
wesley Hermans

0433881810

Wetenschappelijk

Maastricht University
wesley Hermans

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

• Healthy males
• Age between 18 and 35 y or 65 and 85 y inclusive
• BMI between 18.5 and 30 kg/m2

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

• Allergies to milk proteins
• Lactose intolerant
• Smoking
• Phenylketonuria
• Diabetes Mellitus (diagnosed, or fasting glucose >7.0 mmol/L, or HbA1c >6.5)
• Diagnosed GI tract disorders or diseases
• Arthritic conditions
• A history of neuromuscular problems
• Any medications known to affect protein metabolism (i.e. corticosteroids, non-steroidal anti-inflammatories, or prescription strength acne medications).
• Use of certain anticoagulants (use of thrombocyte aggregation inhibitors such as acetylsalicylic acid and carbasalaatcalcium is permitted. Use of other thrombocyte aggregation inhibitors will be discussed with the responsible physician)
• Blood donation within 2 months of study initiation
• Hypertension (according to WHO criteria; >90/140 mmHg)
• Recent participation in amino acid tracer studies (less than 1 year ago)
• Physical activity (not training more than 3 times per week and no structured resistance training.)

Onderzoeksopzet

Opzet

Type:	Interventie onderzoek
Onderzoeksmodel:	Parallel
Toewijzing:	Niet-gerandomiseerd
Blindering:	Open / niet geblindeerd
Controle:	N.v.t. / onbekend

Deelname

Nederland

Status:	Werving gestart
(Verwachte) startdatum:	21-02-2020
Aantal proefpersonen:	29
Type:	Verwachte startdatum

Voornemen beschikbaar stellen Individuele Patiënten Data (IPD)

Wordt de data na het onderzoek gedeeld: Nog niet bepaald

Ethische beoordeling

Positief advies

Datum:	21-02-2020
Soort:	Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

Geen registraties gevonden.

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL8403
Ander register	METC azM/UM : METC19-074

Resultaten