

Prolonged muscle protein synthetic response to the ingestion of a large amount of protein

Gepubliceerd: 25-04-2019 Laatste bijgewerkt: 18-08-2022

The ingestion of a large amount of protein will result in a higher muscle protein synthetic response over a prolonged period when compared to the ingestion of a moderate amount of protein

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

Samenvatting

ID

NL-OMON22927

Bron

Nationaal Trial Register

Verkorte titel

BBQ-studie

Aandoening

Not applicable

Ondersteuning

Primaire sponsor: Not applicable

Overige ondersteuning: Not applicable

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

Toelichting onderzoek

Achtergrond van het onderzoek

Exercise and protein intake are the main stimuli for muscle protein anabolism. Protein dose-response studies have shown that the ingestion of ~20-25 g protein maximizes muscle protein synthesis rates at rest and following exercise. However, these studies have only assessed the anabolic response over a relatively short 4 h period. However, little is known about the time course of the muscle protein synthetic response to the ingestion of a large amount of protein. We hypothesize that the ingestion of a large amount of protein (i.e 100 g) results in a prolonged muscle protein synthetic response as compared to a moderate amount of protein (i.e. 25 g) that is currently suggested to maximize the muscle protein synthetic response.

Doel van het onderzoek

The ingestion of a large amount of protein will result in a higher muscle protein synthetic response over a prolonged period when compared to the ingestion of a moderate amount of protein

Onderzoeksopzet

Acute tracer study (12-h interventional period).

Onderzoeksproduct en/of interventie

0 g protein
25 g protein
100 g protein

Contactpersonen

Publiek

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Wetenschappelijk

Maastricht University Medical Centre+
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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

- Male
- Aged between 18-40 years
- Healthy
- $18.5 \leq \text{BMI} \leq 30$

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

- Smoking
- Sports/exercise > 4 sessions/week
- Lactose intolerant or allergies to milk protein
- A history of neuromuscular problems
- Use of anticoagulation medication
- Recent (<9 months) participation in amino acid tracer (L-[ring-2H5-phenylalanine, L-[ring-2H2]-tyrosine, and [1-13C]-leucine infusion) studies
- Individuals on any medications known to affect protein metabolism (i.e. corticosteroids, non-steroidal anti-inflammatories, or prescription acne medications).
- Strict vegetarian (because of standardized Aviko meal)
- Injury or condition that would limit the participant from performing the resistance exercise.

Onderzoeksopzet

Opzet

Type: Interventie onderzoek
Onderzoeksmodel: Parallel

Toewijzing:	Gerandomiseerd
Blinding:	Enkelblind
Controle:	Placebo

Deelname

Nederland	
Status:	Werving nog niet gestart
(Verwachte) startdatum:	01-06-2019
Aantal proefpersonen:	36
Type:	Verwachte startdatum

Voornemen beschikbaar stellen Individuele Patiënten Data (IPD)

Wordt de data na het onderzoek gedeeld: Nee

Ethische beoordeling

Positief advies	
Datum:	25-04-2019
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	NL7700
Ander register	METC MUMC : METC19-012

Resultaten