Protein for muscle recovery after exercise

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Whey protein supplementation during the days before and after muscle-damaging eccentric exercise improves recovery of muscle strength, compared to placebo

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

Samenvatting

ID

NL-OMON27140

Bron
NTR

Verkorte titel
PRIME

Aandoening

Muscle function

Ondersteuning

Primaire sponsor: NIZO food research
Overige ondersteuning: Provincie Gelderland (Eat2Move); FrieslandCampina Innovation Centre; Stichting Kernhem; NIZO

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

isokinetic MVC defined as peak force at an angular velocity of 180°/s, as determined by dynamometry of the upper leg, before and immediately after, 3h after, and 1, 2 and 3 days

after eccentric exercise

Toelichting onderzoek

Achtergrond van het onderzoek

Delayed onset muscle soreness (DOMS) develops 24-48 hours after strenuous exercise biased toward eccentric (muscle lengthening) muscle actions and is a symptom of exercise-induced muscle damage. Soreness is accompanied by a prolonged strength loss, a reduced range of motion, and elevated levels of muscle damage markers in the blood. Reported study results are not consistent with respect to the acute benefits of protein supplementation on reductions in muscle damage and enhanced recovery of muscle function. We hypothesize that supplementation with whey protein is efficacious in improving recovery following eccentric exercise when given in the days before and after the exercise.

Doel van het onderzoek

Whey protein supplementation during the days before and after muscle-damaging eccentric exercise improves recovery of muscle strength, compared to placebo

Onderzoeksopzet

Before and immediately after, 3h after, and 1, 2 and 3 days after eccentric exercise

Onderzoeksproduct en/of interventie

A whey protein supplement and an isocaloric placebo supplement, starting 4 days before muscle damaging exercise

Contactpersonen

Publiek

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Wetenschappelijk

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

Substantial
 Male
 Age ≥18 and ≤35 years.
 BMI ≥18.5 and ≤27.5 kg/m2
 Healthy as assessed by the NIZO lifestyle and health questionnaire.
 Recreationally active, defined as performing physical activities on a recreational basis for a maximal duration of 5 hours per week.
 Veins suitable for cannulation (blood sampling)
Procedural
 Having given written informed consent.
 Willing to comply with study procedures.
 Ability to follow Dutch verbal and written instructions.
 Availability of internet connection.
 Accept use of all encoded data, including publication, and the confidential use and storage of all data for 15 years.
 Accept disclosure of the financial benefit of participation in the study to the authorities concerned.

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

Substantial
 Having a history of medical or surgical events that may significantly affect the study outcome, to be decided by the principal investigator.
 Participating in resistance exercise or exercise with a major eccentric component (e.g. (trail) running, football, volleyball, basketball, track and field) in the last 6 months.
 Regular use of the following medication: corticosteroids, antihistamines, NSAID.
 Smoking.
 Regular use of protein supplements.
 Mental status that is incompatible with the proper conduct of the study
 A self-reported reported lactose intolerance, allergy or sensitivity to dairy ingredients
 Evidence of current excessive alcohol consumption (>21 units/week) or drug (ab)use, and not willing/able to stop this during the study.

 Reported slimming or medically prescribed diet
Procedural
 Participation in any clinical trial including blood sampling and/or administration of substances up to 30 days before Day 01 of this study
 Recent blood donation (<1 month prior to Day 01 of the study)
 Personnel of HAN, NIZO and FC, their partner and their first and second degree relatives

Onderzoeksopzet

Opzet

Type:	Interventie onderzoek
Onderzoeksmodel:	Parallel
Toewijzing:	Gerandomiseerd
Blindering:	Dubbelblind
Controle:	Placebo

Deelname

Nederland

Status:	Werving gestart
(Verwachte) startdatum:	01-03-2019
Aantal proefpersonen:	40
Type:	Verwachte startdatum

Voornemen beschikbaar stellen Individuele Patiënten Data (IPD)

Wordt de data na het onderzoek gedeeld: Nee

Ethische beoordeling

Positief advies

Datum:	25-02-2019
Soort:	Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

ID: 45952
Bron: ToetsingOnline
Titel:

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL7550
CCMO	NL68027.072.18
OMON	NL-OMON45952

Resultaten