The effect of protein hydrolysate supplementation to preserve muscle mass during immobilisation and enhance muscle regain during recovery

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We hypothesize that protein hydrolysate supplementation will attenuate the loss in muscle mass during 7 days of immobilisation and will augment the rate of muscle mass re-gain during recovery.

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

Samenvatting

ID

NL-OMON24953

Bron
Nationaal Trial Register

Verkorte titel
NIR trial

Aandoening

healthy, young subjects

Ondersteuning

Primaire sponsor: Nuritas
Overige ondersteuning: Nuritas

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

skeletal muscle mass (quadriceps muscle cross sectional area (CSA))

Toelichting onderzoek

Achtergrond van het onderzoek

Recovery from illness and/or injury often requires a period of physical inactivity. Short periods of inactivity disrupt muscle protein synthesis and breakdown rates, which lead to a loss of skeletal muscle mass. A loss of skeletal muscle mass has been shown to slow recovery and impact quality of life. It is therefore important to develop strategies that can prevent the loss of skeletal muscle mass during periods of inactivity.With the present study, we will investigate whether dietary supplementation with a protein hydrolysate can attenuate skeletal muscle loss following 7 days of one-legged knee immobilisation and augment the rate of muscle mass re-gain during recovery in young men.

Doel van het onderzoek

We hypothesize that protein hydrolysate supplementation will attenuate the loss in muscle mass during 7 days of immobilisation and will augment the rate of muscle mass re-gain during recovery.

Onderzoeksopzet

1 week immobilisation, 2 weeks recovery

Onderzoeksproduct en/of interventie

Subjects will receive a nutritional supplement during immobilisation and recovery. This will be either a protein hydrolysate or a placebo

Contactpersonen

Publiek

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Wetenschappelijk

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

1) Male
2) Aged 18-35 y
3) BMI 18.5-30.0 kg/m2

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

1) (Family) history of thrombosis
2) (Family) history of Factor V Leiden, or other known thrombophilia (such as; protein C, protein S, antithrombin deficiency)
3) Lower limb, back or shoulder injuries (which may interfere with the use of crutches)
4) Allergies to milk protein
5) Lactose intolerance
6) Participation in structured resistance exercise program
7) All co-morbidities interacting with mobility and muscle metabolism of the lower limbs (e.g., arthritis, spasticity/rigidity, all neurological disorders and paralysis)
8) Any medications known to (or may) affect protein metabolism (i.e., corticosteroids, non-steroidal anti-inflammatories, or prescription strength acne medications)
9) Diagnosed diabetes
10) Diagnosed metabolic, cardiovascular or intestinal disorders
11) A history of neuromuscular problems
12) Use of anti-coagulants
13) Use of protein and/or fish-oil supplements
14) Participation in a 2H2O study in the previous 6 months.
15) Smoking
16) Any recent hospital admission/ major surgery

Onderzoeksopzet

Opzet

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

Deelname

Nederland

Status:	Werving gestopt
(Verwachte) startdatum:	01-05-2019
Aantal proefpersonen:	30
Type:	Werkelijke startdatum

Voornemen beschikbaar stellen Individuele Patiënten Data (IPD)

Wordt de data na het onderzoek gedeeld: Nee

Ethische beoordeling

Positief advies

Datum:	03-04-2019
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	NL7645
Ander register	METC azM/UM : METC18-073

Resultaten