

# Nitrate and muscle performance

No registrations found.

<b>Ethical review</b>	Not applicable
<b>Status</b>	Recruiting
<b>Health condition type</b>	-
<b>Study type</b>	Interventional

## Summary

### ID

NL-OMON27128

### Source

Nationaal Trial Register

### Health condition

dietary nitrate, beet root juice, exercise performance, counter movement jump, isokinetic dynamometer

## Sponsors and support

**Primary sponsor:** HAN University of Applied Sciences

**Source(s) of monetary or material Support:** Eat2Move

## Intervention

## Outcome measures

### Primary outcome

- Counter movement jump performance
- Maximal isometric voluntary contraction
- Maximal isokinetic voluntary contraction
- Isokinetic muscle endurance performance

## Secondary outcome

-Plasma nitrate and nitrite

## Study description

### Study objective

We hypothesize that dietary nitrate supplementation improves muscle strength and muscle endurance performance.

### Study design

-Exercise testing will be performed after a 6-day supplementation period with beet root juice or placebo.

### Intervention

Dietary nitrate will be ingested as beetroot juice. The intervention comprises a 6-day supplementation period with either beetroot juice (140 mL daily) or nitrate-depleted beetroot juice (placebo; 140 mL daily). After ingestion of the last bolus of beetroot or placebo juice, counter movement jump performance, maximal strength and muscular endurance will be assessed. Both experimental periods will be separated by a wash-out period of at least 1 week.

## Contacts

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## Eligibility criteria

### Inclusion criteria

- Healthy male
- Recreationally active (0.5 – 8 h of sport activities per week on a non-competitive base)
- 18-40 years

### Exclusion criteria

- Obesity (BMI >30 kg/m<sup>2</sup>)
- Injury preventing maximal exercise performance
- Smoking
- Current use of dietary nitrate supplements
- Medication interfering with nitric oxide metabolism, or medication known to affect physical or mental performance

## Study design

### Design

Study type:	Interventional
Intervention model:	Crossover
Allocation:	Randomized controlled trial
Masking:	Double blinded (masking used)
Control:	Placebo

### Recruitment

NL	
Recruitment status:	Recruiting
Start date (anticipated):	01-04-2017
Enrollment:	15
Type:	Anticipated

## Ethics review

Not applicable	
Application type:	Not applicable

## Study registrations

### Followed up by the following (possibly more current) registration

No registrations found.

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

No registrations found.

## In other registers

### Register

NTR-new

NTR-old

Other

### ID

NL6009

NTR6507

: EACO 56.02/17

## Study results