Nitrate and muscle performance

No registrations found.

Ethical review	Not applicable
Status	Recruiting
Health condition type	-
Study type	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/m2)

-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	ID
NTR-new	NL6009
NTR-old	NTR6507
Other	: EACO 56.02/17

Study results