

Beetroot Juice and Endothelial function in Men

Gepubliceerd: 11-11-2014 Laatste bijgewerkt: 19-03-2025

- There is correlation between FMD and LTH. - Smokers have a lower FMD and LTH response.
- Beetroot juice improves the FMD and PORH response but not the LTH response.

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

Samenvatting

ID

NL-OMON28932

Bron

NTR

Verkorte titel

BeeJEM

Aandoening

Beetroot juice, FMD, LTH, Endothelial function.

Ondersteuning

Primaire sponsor: Erasmus MC, Rotterdam

Overige ondersteuning: Erasmus MC, Rotterdam and Unilever

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

Degree of correlation between FMD and LTH

Toelichting onderzoek

Achtergrond van het onderzoek

Measurement of flow-mediated dilatation of the brachial artery in response to forearm occlusion for 5 min (FMD) using ultrasonography is a well-accepted, but investigator-demanding method, to determine endothelial function. Local thermal hyperaemia of the skin measured with a laser Doppler flow imager (LTH) is less demanding and may be a suitable alternative to determine endothelial function at frequent intervals. We want to investigate whether LTH correlates with FMD response in a group of healthy non-smoking and smoking men and to what extent LTH can be inhibited by the nitricoxide synthase (NOS) inhibitor L-NMMA applied locally on the skin. In addition we want to replicate the reported improved FMD response to nitrate-rich beetroot juice and correlate this to the LTH response. Post occlusive reactive hyperaemia (PORH) of the skin is considered to be a measure of microvascular function and is also thought to be correlated to the FMD response. We will also determine the PORH response during this study.

Doel van het onderzoek

- There is correlation between FMD and LTH.
- Smokers have a lower FMD and LTH response.
- Beetroot juice improves the FMD and PORH response but not the LTH response.

Onderzoeksopzet

2 research visits with 7 days between visits.

Onderzoeksproduct en/of interventie

Beetroot juice

Contactpersonen

Publiek

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Wetenschappelijk

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

Non-smokers:

- Healthy Men
- Age between 25-65 years
- Non-smoking for > 5 years
- Body mass index between 18 and 30 kg/m²
- Capable and willing to give informed consent
- General good health, based on medical history and physical examination
- Systolic BP measured on day of the experiment should be < 160 mmHg

Smokers:

- As for the non-smokers
- In addition smoking at least on average 14 cigarettes per day for at least 5 years

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

- Female subjects

- History of cardiovascular disease
- Use of vasoactive drugs
- Drug or/and alcohol abuse

Onderzoeksopzet

Opzet

Type:	Interventie onderzoek
Onderzoeksmodel:	Cross-over
Toewijzing:	N.v.t. / één studie arm
Blinding:	Dubbelblind
Controle:	Placebo

Deelname

Nederland	
Status:	Werving gestart
(Verwachte) startdatum:	12-11-2014
Aantal proefpersonen:	40
Type:	Verwachte startdatum

Ethische beoordeling

Positief advies	
Datum:	11-11-2014
Soort:	Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

ID: 40563
Bron: ToetsingOnline

Titel:

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL4695
NTR-old	NTR4900
CCMO	NL45250.078.13
OMON	NL-OMON40563

Resultaten