

Effect of a high protein vs. high carbohydrate meal on the postprandial endothelial function in healthy humans

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To investigate the difference between two meals (high in protein vs. high in carbohydrates) on the endothelial function?

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Vascular hypertensive disorders
Study type	Interventional

Summary

ID

NL-OMON32312

Source

ToetsingOnline

Brief title

Effect meal on endothelial function

Condition

- Vascular hypertensive disorders

Synonym

endothelial dysfunction arteries

Research involving

Human

Sponsors and support

Primary sponsor: Universiteit Maastricht

Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: Diet, Endothelial function

Outcome measures

Primary outcome

Endothelial function, measured by forearm blood flow before and after arterial occlusion

Secondary outcome

not applicable

Study description

Background summary

A healthy endothelium regulates the balance between vasodilation and vasoconstriction. On the other hand dysfunction of the endothelium is a precursor for cardiovascular diseases such as atherosclerosis. Lifestyle interventions can improve endothelial functioning. Interventions can be exercise as well as dietary interventions. At this point little is known about the short term effect of a meal high in protein or carbohydrates.

Study objective

To investigate the difference between two meals (high in protein vs. high in carbohydrates) on the endothelial function?

Study design

In random subjects will ingest a protein or carbohydrate-rich meal on two different days. Before and during 2 hours after the meal forearm blood flow will be measured before and after 5 minutes of arterial occlusion.

Intervention

Intervention meal 1=30% protein, 30% fat, 40% carbohydrates. 2=12% protein, 30% fat, 58% carbohydrates.

Study burden and risks

Time burden is 2*2.5 hours. No further risks

Contacts

Public

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Scientific

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age

Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

Healthy, between 20-40 years

Exclusion criteria

Smoking, currently on medication, high blood pressure (>160 mmHg systolic, >100 mmHg

diastolic), BMI >35 kg/m²

Study design

Design

Study type:	Interventional
Intervention model:	Crossover
Masking:	Single blinded (masking used)
Control:	Uncontrolled
Primary purpose:	Basic science

Recruitment

NL	
Recruitment status:	Recruitment stopped
Start date (anticipated):	01-04-2008
Enrollment:	16
Type:	Anticipated

Ethics review

Approved WMO	
Date:	28-04-2008
Application type:	First submission
Review commission:	METC academisch ziekenhuis Maastricht/Universiteit Maastricht, METC azM/UM (Maastricht)

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
CCMO	NL22424.068.08