Human Brown Adipose tissue perfusion dynamics. The use of functional MRI.

Published: 23-03-2010
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To study the application of fMRI for the detection of BAT perfusion.

Ethical review	Approved WMO
Status	Recruiting
Health condition type	Other condition
Study type	Observational invasive

Summary

ID

NL-OMON34728

Source
ToetsingOnline

Brief title
Human Brown Adipose tissue perfusion dynamics.

Condition

- Other condition
- Metabolism disorders NEC

Synonym
obesity

Health condition

obesitas

Research involving
Human

Sponsors and support

Primary sponsor: Universiteit Maastricht
Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: Brown adipose tissue, fMRI, PET/CT

Outcome measures

Primary outcome

Validity of fMRI for the study of BAT activity.

Secondary outcome

nvt

Study description

Background summary

The problem of obesity is increasing in the western world. Brown fat can have a possitive effect on the human energy balance and body weight regulation. Currently BAT is detected by PET/CT. With PET/CT it is not possible to study BAT dynamics. WIth the use of fMRI it is in principle possible to study the dynamics of blood perfusion in BAT.

Study objective

To study the application of fMRI for the detection of BAT perfusion.

Study design

Validation study comparing BATactivity with PET/CT and BAT blood perfusion by fMRI during cold exposure.

Study burden and risks

The radiation dose is 2.8 mSv. This is considered a low risk. The other measurements are hardly (DXA scan) or non invasive.

Contacts

Public

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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 adults
- BMI: 18-30 kg/m2 (lean)
- Gender: Male and female
- Age: 18-30 years

Exclusion criteria

- Diabetes Mellitus
- Pregnancy
- Medication: use of Beta-blockers
- Contra-indications to MRI and/or therapeutic radiation

Study design

Design

Study type: Observational invasive

Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Basic science

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	17-05-2010
Enrollment:	40
Type:	Actual

Ethics review

Approved WMO

Date:	23-03-2010
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	NL30699.068.10