Nocturnal Free Fatty Acids. Measurements in obese and lean subjects and the effect of â-blockage on pulsatile release.

No registrations found.

Ethical review	Positive opinion
Status	Pending
Health condition type	-
Study type	Observational non invasive

Summary

ID

NL-OMON21331

Source
NTR

Brief title
NFFA

Health condition

free fatty acid release

vrije vetzuur afgifte

Sponsors and support

Primary sponsor: Academic Medical Center (AMC), Department of Endocrinology and Metabolism
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Source(s) of monetary or material Support: fund=initiator=sponsor

Intervention

Outcome measures

Primary outcome

- Percent and/or absolute changes in nocturnal FFA levels with or without â-blockage.

Secondary outcome

- Difference in nocturnal FFA levels between lean and obese subjects

Study description

Background summary

It has been convincingly demonstrated that free fatty acids (FFA) play a key role in the induction of obesity-induced insulin resistance. The higher plasma levels of FFA originate from adipocytes which show higher rates of lipolysis in insulin stimulated states, i.e. insulin resistance of adipose tissue. The release of FFA is pulsatile and show a circadian rhythm and is thereby in part controlled by the central nervous system. Whether this pulsatility or rhythm is disturbed in insulin resistant subjects is not known. In a dog model FFA levels can be lowered by blocking the â-receptor present on the adipocyt, thereby decreasing the influence of the central nervous system on FFA release. In this study we aim to translate these findings to obese insulin resistant and lean insulin sensitive humans.

Study objective

Nocturnal FFA levels are higher in obese insulin resistant subjects and are less sensitive to the FFA lowering effects of a â-receptor blocker.

Study design

N/A

Intervention

Propranolol infusion

Contacts

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Eligibility criteria

Inclusion criteria

1. Male obese subjects (BMI > 30 kg/m2) and healthy lean controls (BMI 20 > 25 kg/m2)

2. Age 20 – 50 years

3. Stable weight 3 months prior to study inclusion

4. Caucasian

5. Written informed consent

Exclusion criteria

1. Any chronic medical condition or use of any medication

2. Asthma and bronchospastic COPD

3. Tobacco use

4. Alcohol abuse (>3/day)

5. Frequent intensive exercise (>2 week)

6. Familial lipid disorders, renal insufficiency (creatinine > 150 umol/L) , elevated liver enzymes (> 2 times), hypertension

7. Hypotension (BP < 100/60 mmHg), bradycardia (HR < 60min)

8. Unwilling or unable to provide informed consent

9. First degree family members with diabetes

10. Abnormal day/night rhythm (shiftworkers etc)

11. Blood donation in the past three months

Study design

Design

Study type:	Observational non invasive
Intervention model:	Other
Allocation:	Non controlled trial
Masking:	Single blinded (masking used)
Control:	N/A , unknown

Recruitment

NL

Recruitment status:	Pending
Start date (anticipated):	01-12-2008
Enrollment:	20
Type:	Anticipated

Ethics review

Positive opinion

Date:	19-11-2008
Application type:	First submission

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	NL1481
NTR-old	NTR1549
Other	: 08/282
ISRCTN	ISRCTN wordt niet meer aangevraagd

Study results

Summary results
N/A