

# Measurement of testosterone in muscle tissue using microdialysis; a pilotstudy

Published: 16-02-2010

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To study how testosterone levels in muscle tissue compare to plasma levels in males.

<b>Ethical review</b>	Approved WMO
<b>Status</b>	Recruiting
<b>Health condition type</b>	Endocrine disorders of gonadal function
<b>Study type</b>	Observational invasive

## Summary

### ID

NL-OMON35267

### Source

ToetsingOnline

### Brief title

Measurement of testosterone in muscle tissue using microdialysis

### Condition

- Endocrine disorders of gonadal function

### Synonym

hypogonadism, lack of male hormone

### Research involving

Human

### Sponsors and support

**Primary sponsor:** Vrije Universiteit Medisch Centrum

**Source(s) of monetary or material Support:** researchbudget afdeling

### Intervention

**Keyword:** male, microdialysis, muscle, skeletal, testosterone

## Outcome measures

### Primary outcome

Levels of testosterone in plasma and muscle tissue, measured every 15 minutes for a duration of 5 hours.

### Secondary outcome

not applicable

## Study description

### Background summary

For clinical diagnosis, testosterone levels are measured in blood plasma. Due to binding to proteins and local conversion, plasma levels of testosterone only provide an indirect measure of testosterone levels in target organs. Recently, we have had experience with microdialysis. Using microdialysis, it is possible to make an estimation of testosterone levels in fatty and muscle tissue.

### Study objective

To study how testosterone levels in muscle tissue compare to plasma levels in males.

### Study design

The levels of testosterone in plasma and muscle tissue will be compared, in resting and after manipulation of the plasma testosterone.

### Study burden and risks

Duration of the study is 5.5 hours. 16 venepunctures (112 ml in total). Insertion of CMA 20 microdialysis catheter in the vastus lateralis muscle of the non-dominant lower limb, duration 5 hours. Application of testosterone gel (100 mg) on the back.

## Contacts

### Public

Vrije Universiteit Medisch Centrum

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1007 MB

Nederland

### 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

male, age 18-40 years

### Exclusion criteria

history of hypogonadism

## 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): 05-03-2010

Enrollment: 3

Type: Actual

## Ethics review

Approved WMO

Date: 16-02-2010

Application type: First submission

Review commission: METC Amsterdam UMC

## 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	NL27058.029.09