# Physical activity and health with increasing age

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- define and validate indexes, based on body acceleration, related with quality of movement and quality of sleep for daily life monitoring,- cross-sectional study of relations of these indexes with age,- longitudinal study of the effect of physical...

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|---|---|
| **Ethical review** | Not approved |
| **Status** | Will not start |
| **Health condition type** | Age related factors |
| **Study type** | Interventional |

## Summary

### ID

NL-OMON37731

**Source**
ToetsingOnline

**Brief title**
PA, health and age

### Condition

- Age related factors

**Synonym**
Movement efficiency, quality of movement

**Research involving**
Human

### Sponsors and support

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

## Intervention

**Keyword:** Aerobic training, Age, Quality of movement, Quality of sleep

## Outcome measures

### Primary outcome

Body acceleration as measured with a Philips DirectLife Activity Monitor.

Reference parameters are subject height, weight, age, gender, body composition,

VO2max,

VO2activity, heart rate, sleep polysomnography

### Secondary outcome

Not applicable

# Study description

### Background summary

Aging is associated with a reduction of physical activity, quality of movement, and quality of sleep. This leads to reduced health and well being in elderly subjects. Aerobic physical activity can increase executive functions and sleep, resulting in a partial restoring of health and well being.

### Study objective

- define and validate indexes, based on body acceleration, related with quality of movement and quality of sleep for daily life monitoring,
- cross-sectional study of relations of these indexes with age,
- longitudinal study of the effect of physical activity training on the age associated reduction of quality of movement and quality of sleep.

### Study design

The study consists of a validation study to define indexes related with quality of movement and quality of sleep, a cross-sectional analysis to evaluate correlations with age, and an intervention study on the efficacy of physical activity training.

### Intervention

5 subjects per decade will form part of a control group and 20 of an exercise group. Control subjects won*t change their ordinary life, while subjects in the exercise group will follow a regular training schedule of moderate intensity, at 50% of heart rate reserve, as available for the specific age group in fitness centres.

### Study burden and risks

Candidates will first undergo a telephone interview for screening (30 min) with questions about their personal characteristics, health and lifestyle. Those that will result suitable for this research will visit the university once.
During the visit, weight height and body composition will be measured (1 hour) and 4 tests will be performed: walking test (gait analysis, 1 hour), standing test (postural control, 1 hour), fitness test (exhaustion test, 1 hour) and sleeping test (polysomnography, 10 hours overnight). No risk is associated with the tests, although the fitness test can cause fatigue. During the intervention, field measurements will be taken at three time points (at the beginning, at 6 months and at the end). At each time point, subjects will be asked to wear the DirectLife Active Monitor during 1 week. Measurements constitute no risk and require a minimal burden from the subjects. No burden or risk is associated with the training, as subjects will be recruited among people that are already planning to follow a training.
Training subjects will get an allowance for half of the cost of their training, while control subjects will receive 100 euro.

## Contacts

**Public**
Universiteit Maastricht

Universiteitssingel 50
6229 ER Maastricht
NL
**Scientific**
Universiteit Maastricht

Universiteitssingel 50
6229 ER Maastricht
NL

# Trial sites

## Listed location countries

Netherlands

# Eligibility criteria

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

## Inclusion criteria

Men and women
Age between 45-85 years
No fitness activity in the previous year
Body mass index between 19-35 kg/m2
Informed consent

## Exclusion criteria

Age below 45 or above 85 years
Body mass index below 19 kg/m2 or above 35 kg/m2
Neurological, cardiological or orthopedic disease
Pregnancy

# Study design

## Design

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|---|---|
| Study type: | Interventional |
| Intervention model: | Other |
| Allocation: | Non-randomized controlled trial |
| Masking: | Open (masking not used) |

**Primary purpose:** Basic science

### Recruitment

NL

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|---|---|
| Recruitment status: | Will not start |
| Enrollment: | 100 |
| Type: | Anticipated |

## Ethics review

Not approved

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|---|---|
| Date: | 23-05-2012 |
| 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 | NL40040.068.12 |
| Other | Pending for NCT |