Test-retest reliability, discriminative ability and validity of the Mobility Monitor and test-retest reliability of the Q-force

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The main aims of this study are to: 1) examine test-retest reliability, discriminative ability and convergent validity of sit-to-stand power measurement of the Mobility Monitor and of 3D hybrid motion sensors; 2) investigate test-retest reliability…

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Other condition
Study type	Observational non invasive

Summary

ID

NL-OMON36105

Source
ToetsingOnline

Brief title
Psychometric properties of the Mobility Monitor and the Q-force

Condition

- Other condition

Synonym
Not applicable.

Health condition

healthy older adults

Research involving

Human

Sponsors and support

Primary sponsor: Universitair Medisch Centrum Groningen
Source(s) of monetary or material Support: ZonMW

Intervention

Keyword: Clinical assessment, Falls, Muscle strength, Reproducibility of Results

Outcome measures

Primary outcome

The main study parameters are test-retest reliability, disriminative ability

and convergent validity of STS power assessment of the Mobility Monitor and of

3D hybrid motion sensors, and test-retest reliability of strength measurement

of the Q-force.

Secondary outcome

Not applicable.

Study description

Background summary

Older persons may experience a decline in daily life functioning and an increase in fall risk during aging. Muscle strength and power are strongly related to daily life functioning and fall risk. Exercise can improve muscle strength and power, leading to a decrease in fall risk and an increase in functioning. Therefore, instruments are needed that can identify older persons with low muscle function. Subsequently these older persons may be offered an exercise program to improve muscle function, daily life functioning and fall risk. This study will contribute to the development of two new instruments (the Mobility Monitor and the Q-force) for the evaluation of muscle function, daily life functioning and fall risk by investigating psychometric properties of these new instruments.

Study objective

The main aims of this study are to: 1) examine test-retest reliability, discriminative ability and convergent validity of sit-to-stand power measurement of the Mobility Monitor and of 3D hybrid motion sensors; 2) investigate test-retest reliability of strength assessment of the Q-force; 3) to obtain sensordata during stair walking.

Study design

This study is a test-retest study. Subjects will be measured two times: one time per week during two successive weeks. Each measurement will last ca. 60 minutes.

Study burden and risks

The activities that will be performed in this study by the older persons are usual daily activities (walking, stair walking, sit to stand movements). For that reason, these activities are considered to form a low risk and burden for the older persons. The Mobility Monitor and Q-force may be of great use in assessing muscle function, daily life functioning and fall risk of older persons. Therefore, the potential benefits of both devices outweigh by far the low risks and burden for the subjects.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

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

Inclusion criteria

- Community-dwelling older persons aged 70 years or older.
- Older persons who can perform STS transfers with the arms crossed on the chest.
- Older persons who can walk 10 meter without using a walking aid (such as a cane or rollator).

Exclusion criteria

- Cognitive impairment or other neurologic diseases that can impair STS transfers, walking or understanding instructions.
- Severe co-morbidity.
- Not being able to read and understand Dutch instructions.
- Total hip replacement surgery in the previous 6 months.
- Visual problems to a degree that makes it impossible for the subject to accurately read or walk and stand up safely.
- Having had a stroke within the last 6 months.
- Parkinson*s disease stage 4 or 5.

Study design

Design

Study type: Observational non invasive

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

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	21-10-2011

Enrollment:	50
Type:	Actual

Ethics review

Approved WMO Date:	23-06-2011
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)
Approved WMO Date:	06-12-2011
Application type:	Amendment
Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)

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	NL36008.042.11