Shuttle walk test in patients after stroke

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Studying whether the SWT or the aSWT is the most applicaple measuring tool to determine (maximal) exercise capacity in patient with stroke, by calculating the test-retest reliability and the validity.

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Central nervous system vascular disorders
Study type	Observational non invasive

Summary

ID

NL-OMON33621

Source
ToetsingOnline

Brief title
Shuttle walk test after stroke

Condition

- Central nervous system vascular disorders

Synonym
Cerebrovascular accident/ Stroke

Research involving
Human

Sponsors and support

Primary sponsor: Universitair Medisch Centrum Utrecht
Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: 6 minute walk test, exercise test, shuttle walk test, stroke

Outcome measures

Primary outcome

Distance and in case of the shuttle walk test the number of steps and shuttles.

Measured in all test heart rate and Borg scale score (fatigue) both before and

directly after exercise.

Secondary outcome

n.a.

Study description

Background summary

The American College of Sports Medicine (ACSM) has set criteria for establishing maximal exercise capacity in healthy individuals. These criteria are not feasible for the stroke population, due to factors (e.g. alteration in muscle tone) which may lead to not obtaining these criteria.
There is no golden standard to measure (maximal) exercise capacity in people with stroke. An applicable exercise test is desired as initial concept to base a training program on and to evaluate the program with it. The six minute walking test (6MWT) is a frequently used (sub maximal) test for patients with stroke to measure exercise capacity. Singh et al. developed a shuttle walk test (SWT) which he tested on patients with COPD. It provokes a symptom limited performance. It is easily administered and reproducible. The SWT has been studied in other patient populations in different forms. In the present research we study whether the original SWT or the adjusted SWT (aSWT) with lower speed changes, is reliable and valid for patients with stroke.

Study objective

Studying whether the SWT or the aSWT is the most applicaple measuring tool to determine (maximal) exercise capacity in patient with stroke, by calculating the test-retest reliability and the validity.

Study design

The research consists of 2 parts:
Part 1 (N=15): each participant accomplishes two shuttle walk test. Once the

SWT and once the aSWT. The tests are on 2 different days.
Part 2 (N=30): each participant accomplishes twice the chosen SWT from part one and once the 6MWT. On the first day of participation they walk the 6MWT and the SWT. On the second day they repeat the SWT.

Study burden and risks

Risk of falling; the researchers are situated at the turning points, where there is the biggest risk of falling, to be able to support the participant in case of an incline to fall. The researchers will remove the participant from the test if they assess the situation as not being safe.
Cardiac complaints/complaints of breathlessness; a doctor will be notified when the test will start. He is stand-by. In case of complaints the test will be ended for the participant.

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

Stroke according to WHO definition.
Age between 18 and 80 years old.
Functional Ambulation Categories score * 4
Consentform has to be signed

Exclusion criteria

- On the Cumulative Illness Rating Scale (CIRS) on subscale 1, 2 and 3 a score of * 3.
- Wernicke's aphasia; the patient is not able to understand the instructions
- Orthopedic, neurologic or vascular conditions of the lower extremities which are of influence on the walking distance

Study design

Design

Study type: Observational non invasive

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

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	15-04-2009
Enrollment:	45
Type:	Actual

Ethics review

Approved WMO

Date:	09-12-2008

Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Utrecht (Utrecht)
Approved WMO Date:	14-04-2009
Application type:	Amendment
Review commission:	METC Universitair Medisch Centrum Utrecht (Utrecht)

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	NL20816.041.08