Trunk-coordination assessment in patients with chronic low back pain

Published: 30-09-2014
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The primary goal is to investigate the responsiveness of the coordination measurement in patients with low back pain.

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

Summary

ID

NL-OMON44511

Source
ToetsingOnline

Brief title
Trunk-coordination in low back pain

Condition

- Other condition
- Musculoskeletal and connective tissue disorders NEC

Synonym
Chronic a-specific low back pain, Low back pain

Health condition

Chronische a-specifieke lage rugpijn

Research involving
Human

Sponsors and support

Primary sponsor: Vrije Universiteit Medisch Centrum
Source(s) of monetary or material Support: Stichting voor de Technische Wetenschappen (STW)

Intervention

Keyword: Trunk coordination back pain

Outcome measures

Primary outcome

The main parameter is quality of trunk-coordination, which can be described as tracking error. This will be measured with an Xsens accelerometer. The responsiveness of the measured quality of trunk-coordination in LBP patients will be tested by comparing these scores with their pain-scores and a disability questionnaire and calculating correlations between these variables.

Secondary outcome

The usability of the coordination measurement will be described by the researcher who performs all tests.

Study description

Background summary

Low back pain (LBP) is one of the most costly health problems in the industrialized world. Impairments of neuromuscular motor control may play a key role in LBP. In earlier research, N.W. Willigenburg et al. (2003) found that LBP patients performed less on a trunk-coordination tracking task then healthy subjects. However, it is still unknown if patients increase their performance when pain is reduced. Therefore the responsiveness of the measurement will be tested.

Study objective

The primary goal is to investigate the responsiveness of the coordination measurement in patients with low back pain.

Study design

The trunk-coordination of 37 patients with chronic a-specific LBP from VUmc will be measured at baseline. Responsiveness of the coordination measurement will be established by measuring the patients one and two months after baseline and compare these outcomes with questionnaires on pain and disability.

Study burden and risks

The risks for the subjects are minimal. Patients will be asked to sit down and move their trunk within their own maximal range of motion. The measurements (including explanation and preparation) will take approximately 10 minutes. Filling in questionnaires will take 5 minutes. The coordination measurement will allow objective and quantitative monitoring of impairments of motor control in patients with chronic a-specific LBP.

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

In order to be eligible to participate in this study, the patients with LBP have to:
- be between the age of 18 and 70 years
- be able to understand and speak Dutch
- have a-specific LBP (as defined in the guidelines of the KNGF) or LBP followed by back surgery for at least 6 weeks, as diagnosed by the patient*s general practitioner or physiotherapist.

Exclusion criteria

A potential subject who meets any of the following criteria will be excluded from participation in this study; the patients with LBP may not have:
- other specifically diagnosed musculoskeletal disorders or any neuroanatomical disorders which might influence motor control of the low back
- any neurological disorders that interfere with trunk posture (e.g. Cerebro Vasculair Accident, Multiple Sclerosis or Parkinson's disease)
- any conditions that render the patient unable to understand or adhere to the protocol (such as cognitive, visual and/or language problems, that render the patient unfit to fill in the questionnaires)

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):	20-09-2016
Enrollment:	37
Type:	Actual

Ethics review

Approved WMO Date:	30-09-2014
Application type:	First submission
Review commission:	METC Amsterdam UMC
Approved WMO Date:	23-08-2016
Application type:	Amendment
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	NL49522.029.14