

Validity and reliability of the figure of 8 walk test

Submission date 22/05/2015	Recruitment status No longer recruiting	☒ Prospectively registered ☐ Protocol
Registration date 27/05/2015	Overall study status Completed	☐ Statistical analysis plan ☒ Results
Last Edited 18/06/2019	Condition category Surgery	☐ Individual participant data

Plain English summary of protocol

Background and study aims

The Figure of 8 Walk (F8W) test was developed to measure both straight and curved path walking in clockwise and counterclockwise directions. Research has shown that it is a valid and reliable test in elderly people and patients with stroke. However, its validity and reliability for patients who have undergone knee replacement surgery are yet to be tested. In addition, to date the F8W test has only been validated in clinical settings under controlled conditions; i.e., with smooth floors and quiet surroundings. This is likely to differ from the environment participants will encounter in daily life and so may not accurately reflect the patient's advanced walking performance. There is therefore a need for the F8W to be validated in both the participant's own home environment and for patients who have undergone knee replacement surgery.

Who can participate?

Patients who have undergone knee surgery at least one year ago

What does the study involve?

Participants are given the opportunity to choose to have their assessments carried out by a physiotherapist in either their home or in a clinical setting. At the first visit a physiotherapist carries out the F8W test. A second appointment is then made between 7-21 days later. This visit involves two separate tests, once with the same physiotherapist who attended the first appointment and a second test with a different physiotherapist. This will help to establish the reliability of the test over time and the reliability of the test between different measuring physiotherapists.

What are the possible benefits and risks of participating?

No particular benefits are expected for the participants from taking part in this study. All the assessments chosen are used in clinical practice and have been used safely in the past. There are no known particular side effects of the assessments and an experienced physiotherapist is with the participants throughout to monitor how they are doing and check they are safe. Participants may experience some pain or tiredness whilst carrying out the tests but they will be offered a rest in between each test and they may stop the test at any point should they wish to.

Where is the study run from?
Nuffield Orthopaedic Centre (UK)

When is the study starting and how long is it expected to run for?
From June to November 2015

Who is funding the study?
NIHR Health Technology Assessment Programme - HTA (UK)

Who is the main contact?
Martha Moore
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Contact information

Type(s)
Public

Contact name
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Additional identifiers

Protocol serial number
1

Study information

Scientific Title
Validity and reliability of the figure of 8 walk test: an observational crossover trial

Acronym
Fig 8

Study objectives
To investigate the validity and reliability of the Figure of 8 Walk Test for participants one year after knee replacement at home and in clinical settings.

Ethics approval required
Old ethics approval format

Ethics approval(s)

NHS Research and Ethics Committee South West Exeter, 21/05/2015, ref: 15/SW/0138

Primary study design

Observational

Study design

Observational crossover trial

Study type(s)

Other

Health condition(s) or problem(s) studied

Knee arthroplasty

Interventions

Patients who have had a knee replacement a year ago and are eligible to take part will be given the option to have their assessments at home or at the physiotherapy department at the Nuffield Orthopaedic Centre. The initial assessment will involve three physical measures tests including the figure of 8 walk test, the timed up and go and the short physical performance battery. They will also be asked to complete two short paper questionnaires, the Oxford Knee Score and an Outcome Measures Evaluation Form. At the first visit the same physiotherapy researcher will carry out the physical measures. A second appointment will then be made between 7-21 days later. This visit will involve two separate assessments, once with the same research physiotherapist who attended the initial appointment and a second assessment with a different research physiotherapist. During this appointment the initial research physiotherapist will carry out only the Figure of 8 Walk test. The participant will then be given a rest and the second research physiotherapist will carry out the Figure of 8 Walk test once more with the participant.

Intervention Type

Other

Primary outcome(s)

Figure of 8 Walk test, measured at baseline and 7-21 days later at the second assessment. During the second assessment the Fig 8 will be measured twice by two different assessors. To measure the outcome we will record how long it takes to complete the test in seconds, how many steps the participant takes, whether the test was completed within the 2ft boundary and a 3-point smoothness score.

Key secondary outcome(s)

1. Timed up and Go, measured only at the baseline assessment. Assessed by timing how long it takes to complete the test in seconds
2. Short Physical Performance Battery, measured only at baseline. Comprises of three different measures, assessed by time taken to complete all three

Completion date

01/11/2015

Eligibility

Key inclusion criteria

12 months post total knee replacement

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Senior

Sex

All

Total final enrolment

74

Key exclusion criteria

1. Further surgery within 12 months
2. Rheumatoid arthritis

Date of first enrolment

01/06/2015

Date of final enrolment

30/09/2015

Locations**Countries of recruitment**

United Kingdom

England

Study participating centre

Nuffield Orthopaedic Centre,
Oxford University Hospitals NHS Trust
United Kingdom
OX3 7LD

Sponsor information**Organisation**

University of Oxford (UK)

ROR

<https://ror.org/052gg0110>

Funder(s)

Funder type

Government

Funder Name

Health Technology Assessment Programme

Alternative Name(s)

NIHR Health Technology Assessment Programme, Health Technology Assessment (HTA), HTA

Funding Body Type

Government organisation

Funding Body Subtype

National government

Location

United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study are/will be available upon request from Martha Moore (martha.moore@ouh.nhs.uk). Hard copies of the data obtained during the study are stored in a locked office at the Physiotherapy Research Unit in the Nuffield Orthopaedic Centre, Oxford. Consent from participants was obtained and data was anonymised with participants being issued a corresponding trial number.

IPD sharing plan summary

Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	01/03/2019	18/06/2019	Yes	No
HRA research summary			28/06/2023	No	No