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# Validity and reliability of the figure of 8 walk test

**Submission date**
22/05/2015

**Recruitment status**
No longer recruiting

**Registration date**
27/05/2015

**Overall study status**
Completed

**Last Edited**
18/06/2019

**Condition category**
Surgery

[X] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] 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
martha.moore@ouh.nhs.uk

# Contact information

### Type(s)
Public

### Contact name
Ms Martha Moore

### Contact details
Physiotherapy Research Unit
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# Additional identifiers

### EudraCT/CTIS number

### IRAS number

### ClinicalTrials.gov number

### Secondary identifying numbers
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

## Study design
Observational crossover trial

## Primary study design
Observational

## Secondary study design
Crossover trial

## Study setting(s)
Home

## Study type(s)
Other

## Participant information sheet
Not available in web format, please use the contact details to request a patient information sheet

## 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 measure

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.

### Secondary outcome measures
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

### Overall study start date
01/06/2015

### Completion date
01/11/2015

## Eligibility

### Key inclusion criteria
12 months post total knee replacement

### Participant type(s)
Patient

### Age group
Senior

### Sex
Both

### Target number of participants
80

### 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
England

United Kingdom

### Study participating centre
**Nuffield Orthopaedic Centre,**
Oxford University Hospitals NHS Trust
United Kingdom
OX3 7LD

## Sponsor information

### Organisation
University of Oxford (UK)

### Sponsor details
c/o NDORMS
Windmill Road
Oxford
England
United Kingdom
OX3 7LD

### Sponsor type
University/education

### ROR
https://ror.org/052gg0110

## Funder(s)

### Funder type
Government

### Funder Name
Health Technology Assessment Programme

### Alternative Name(s)
NIHR Health Technology Assessment Programme, HTA

### Funding Body Type

Government organisation

### Funding Body Subtype
National government

### Location
United Kingdom

## Results and Publications

### Publication and dissemination plan
Planned publication in a high-impact, peer reviewed journal in early 2018.

### Intention to publish date
31/03/2018

### 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 |