

# The influence of implant length on the outcomes of total hip arthroplasty

<b>Submission date</b> 30/06/2017	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
<b>Registration date</b> 14/07/2017	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 05/09/2023	<b>Condition category</b> Musculoskeletal Diseases	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

Osteoarthritis is a condition that causes joints to become painful and stiff. Hip osteoarthritis can be treated with hip replacement surgery, where the damaged hip joint is replaced with an artificial implant. The surgeon has various choices as to which implant they use. The implant that surgeons routinely use comes in two different lengths: the original (150mm) length or the 'short' (125mm) length. It is not known whether patient outcomes differ based on the length of the implant used. The aim of this study is to find out whether the length of the hip replacement stem has any influence on pain and physical function after total hip replacement.

### Who can participate?

Patients aged 45-80 undergoing total hip replacement for osteoarthritis

### What does the study involve?

Participants are randomly allocated to receive either an 'original' (150mm) or 'short' (125mm) stem as part of routine total hip replacement at the study centre. Hip function, quality of life, pain, joint awareness, satisfaction and implant position are measured at the start of the study and after 1 and 2 years.

### What are the possible benefits and risks of participating?

It is thought that the length of stem does not affect patient recovery or outcomes after surgery in any way. Participants do not directly benefit from taking part in this study, but the knowledge gained may benefit other people by helping to find the best way to treat people who need total hip replacement in the future. Both stem lengths are available for routine use in the study centres, and as such there are no additional risks in taking part in this study beyond those of having routine total hip replacement surgery.

### Where is the study run from?

1. Royal Infirmary of Edinburgh (UK)
2. Golden Jubilee National Hospital (UK)

### When is the study starting and how long is it expected to run for?

January 2016 to December 2019

Who is funding the study?  
Stryker (USA)

Who is the main contact?  
Dr David Hamilton  
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## Contact information

**Type(s)**  
Scientific

**Contact name**  
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## Additional identifiers

**EudraCT/CTIS number**

**IRAS number**

**ClinicalTrials.gov number**

**Secondary identifying numbers**  
2 (01-04-16)

## Study information

**Scientific Title**  
Can Arthroplasty Stem INfluence Outcome? (CASINO): a randomised controlled equivalence trial of 125mm vs 150mm Exeter stems in total hip arthroplasty

**Acronym**  
CASINO

**Study objectives**

That the use of the 125mm Exeter<sup>TM</sup> stem in routine total hip arthroplasty achieves equivalent short-term (up to 2 years post-op) patient-reported and radiographic outcomes as the 150mm Exeter stem.

**Ethics approval required**

Old ethics approval format

**Ethics approval(s)**

South East Scotland Research Ethics Committee 02, 12/05/2017, ref:16/SS/0176

**Study design**

Multi-centre prospective randomised controlled trial

**Primary study design**

Interventional

**Secondary study design**

Randomised controlled trial

**Study setting(s)**

Hospital

**Study type(s)**

Treatment

**Participant information sheet**

Not currently available in web format, please use contact details to request a participant information sheet

**Health condition(s) or problem(s) studied**

Hip osteoarthritis

**Interventions**

Patients will be randomised on a 1:1 ratio to receive either an 'original' (150mm) or 'short' (125mm) Exeter<sup>TM</sup> stem as part of routine total hip arthroplasty at the study centre. Randomisation will be by computer-generated number, stratified by centre using random block sizes.

A standard operative technique will be employed by all trial surgeons; using the posterior approach, Exeter<sup>TM</sup> femoral component and Contemporary<sup>TM</sup> acetabular component (Stryker). All implants will be cemented. The routine post-operative patient care protocol of the study centre will be employed.

**Intervention Type**

Device

**Pharmaceutical study type(s)**

Not Applicable

**Phase**

Not Applicable

**Drug/device/biological/vaccine name(s)**

150mm ExeterTM hip stem, 125mm ExeterTM hip stem

**Primary outcome measure**

Patient reported function, measured using the Oxford Hip Score at baseline, 1 year and 2 years

**Secondary outcome measures**

1. Quality of life, measured using the EQ5D-5L questionnaire at baseline, 1 year and 2 years
2. Pain, measured using the visual analogue scale at baseline, 1 year and 2 years
3. Joint awareness, measured using the Forgotten Joint Score-12 at baseline, 1 year and 2 years
4. Satisfaction, measured using a satisfaction Likert response scale at 1 and 2 years
5. Radiographic implant position, measured using AP pelvis radiographs at 1 year

**Overall study start date**

01/01/2016

**Completion date**

31/12/2020

## **Eligibility**

**Key inclusion criteria**

1. Planned total hip replacement for osteoarthritis
2. Planned primary hip arthroplasty with standard implants
3. Patients aged 45-80
4. Patient willing and able to comply to the study protocol

**Participant type(s)**

Patient

**Age group**

Mixed

**Lower age limit**

40 Years

**Upper age limit**

80 Years

**Sex**

Both

**Target number of participants**

220

**Key exclusion criteria**

1. Dysplasia of the hip/acetabulum
2. Requirement for acetabular bone grafting

3. Planned bilateral procedures within the trial period
4. Activity-limiting pain in either knee or contralateral hip
5. Procedures done for pain relief (such as for patients with no walking capacity)
6. Already recruited to the trial

**Date of first enrolment**

01/06/2017

**Date of final enrolment**

01/06/2018

## Locations

**Countries of recruitment**

Scotland

United Kingdom

**Study participating centre**

**Royal Infirmary of Edinburgh**

Edinburgh

United Kingdom

EH16 4SA

**Study participating centre**

**Golden Jubilee National Hospital**

Glasgow

United Kingdom

G81 4DY

## Sponsor information

**Organisation**

ACCORD; The University of Edinburgh & NHS Lothian

**Sponsor details**

The Queen's Medical Research Institute

47 Little France Crescent

Edinburgh

United Kingdom

EH16 4TJ

**Sponsor type**

Industry

**Website**

<http://www.accord.scot/>

**ROR**

<https://ror.org/01x6s1m65>

## **Funder(s)**

**Funder type**

Industry

**Funder Name**

Stryker

**Alternative Name(s)**

Stryker Corporation

**Funding Body Type**

Private sector organisation

**Funding Body Subtype**

For-profit companies (industry)

**Location**

United States of America

## **Results and Publications**

**Publication and dissemination plan**

Publication of trial results will be sought through high-ranked peer reviewed speciality journals with an expectation of publication 1 year following the end of the last patient follow-up.

**Intention to publish date**

31/12/2021

**Individual participant data (IPD) sharing plan**

The current data sharing plans for the current study are unknown and will be made available at a later date.

**IPD sharing plan summary**

Data sharing statement to be made available at a later date

**Study outputs**

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">HRA research summary</a>			28/06/2023	No	No
<a href="#">Protocol article</a>		16/04/2023	05/09/2023	Yes	No