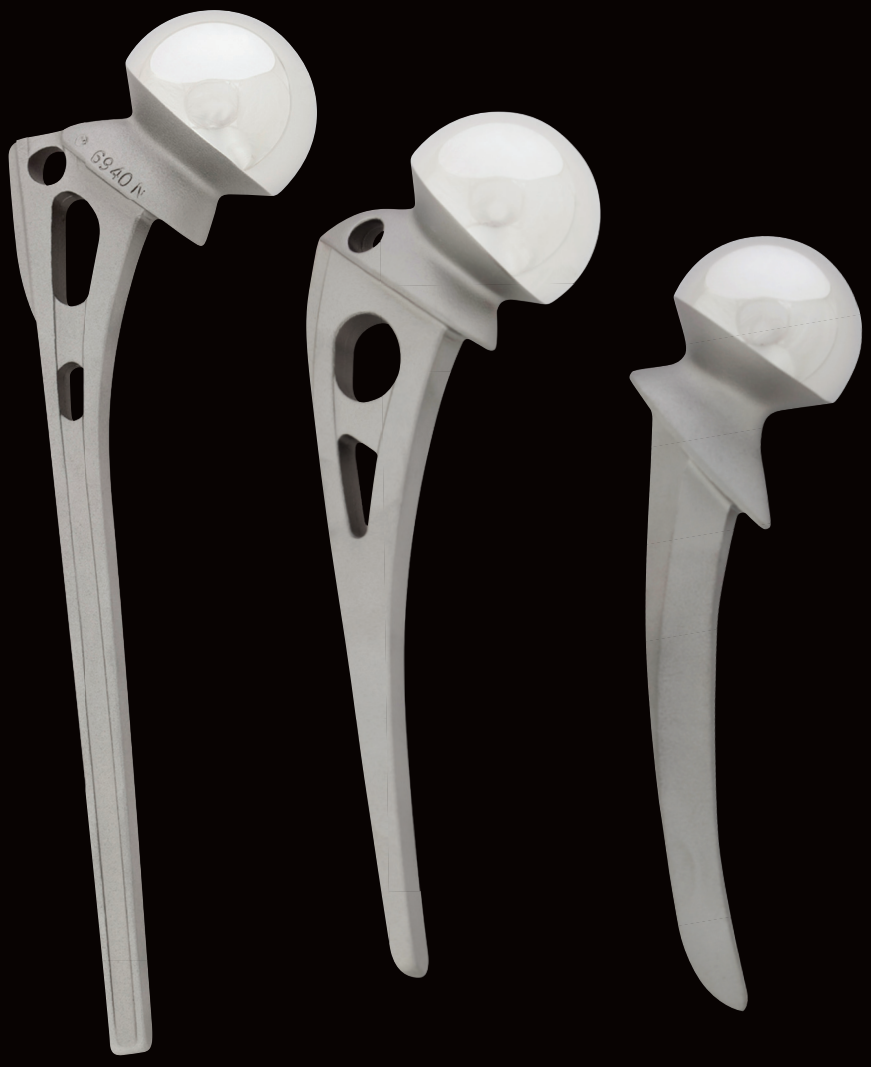
stryker®

ENDO'S™

Austin-Moore & Thompson

Endoprosthesis Systems

Surgical Technique



Austin-Moore & Thompson Endoprosthesis
Surgical Technique

Table of Contents

Indications

The Stryker Orthopaedics Endoprostheses are used as a hemiarthroplasty for the following indications:

- Femoral neck fractures
- Idiopathic avascular necrosis
- Nonunions

The patient's acetabular bone stock must be adequate to support articulation with the head of the endoprosthesis.

Contraindications

Absolute contrindications include:

1. overt infection;
2. distant foci of infections (which may cause hematogenous spread to the implant site);
3. rapid disease progression as manifested by joint destruction or bone absorption apparent on roentgenogram;
4. skeletally immature patients;
5. cases where there is a loss of abductor musculature, poor bone stock or poor skin coverage around the hip joint which would make the procedure unjustifiable.

Conditions presenting increased risk of failure include:

1. uncooperative patient or patient with neurological disorders who is incapable of following instructions;
2. osteoporosis;
3. metabolic disorders which may impair bone formation;
4. osteomalacia.

Relative contraindications include:

1. youth hemiarthroplasty will provide young, active patients a variable period of pain relief, but symptoms may or are likely to recur;
2. Parkinson's disease;
3. Suboptimal bone stock, especially of the acetabulum.

Warnings and Precautions

See package insert for warnings, precautions, adverse effects, information for patients and other essential product information.

Before using Austin-Moore and Thompson Endoprostheses instrumentation, verify:

- Instruments have been properly disassembled prior to cleaning and sterilization;
- Instruments have been properly assembled post-sterilization;
- Instruments have maintained design integrity; and,
- Proper size configurations are available.

For Instructions for Cleaning, Sterilization, Inspection and Maintenance of Orthopaedic Medical Devices, refer to LSTPI-B.

INTRODUCTION

The Austin-Moore and Thompson Endoprosthesis systems make up part of a comprehensive product offering from Stryker aimed solely at the treatment of proximal femoral fractures.

Manufactured from Vitallium alloy, a wide range of head sizes and stem designs are available to accommodate the needs of individual patient anatomy.

1. Thompson Endoprostheses

2. Austin-Moore / Fenestrated Regular Curved Stems

3. Austin-Moore / Fenestrated Narrow Curved Stems

4. Austin-Moore / Fenestrated Regular Straight Stems

5. Austin-Moore / Fenestrated Narrow Straight Stems

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OPERATIVE TECHNIQUE (AUSTIN-MOORE & THOMPSON)

STEP 1

Confirm that a hemi-arthroplasty is indicated.

STEP 2

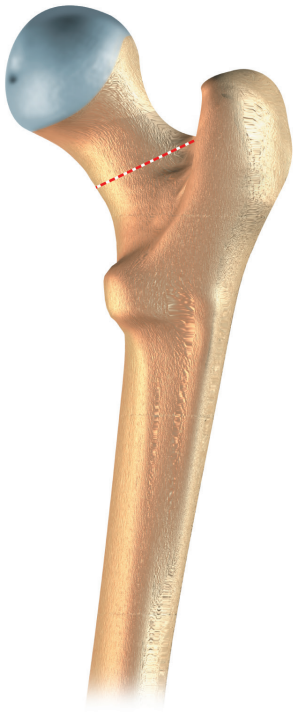
The patient is positioned and prepared on the operating table in the usual manner. Expose the hip joint using your preferred surgical approach for hemi-arthroplasty.

STEP 3

Following exposure of the hip, cut the femoral neck. In most individuals an appropriate level of neck resection lies along a line drawn from a point medially mid-way between the upper margin of the lesser trochanter and inferior aspect of the head, to a point laterally at the base of the neck.

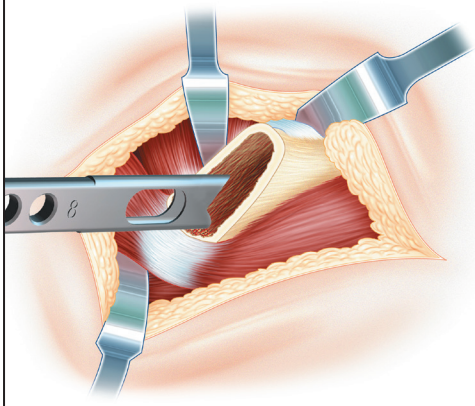
If the neck is cut too long, the leg will be lengthened, and the hip will be tight and difficult to reduce. The converse will be the case if the cut is too low, and the hip may be unstable. The neck cut may need to be modified a little higher or lower in valgus or varus hips, respectively.

Remove and measure the femoral head or alternatively use an appropriate instrument to measure the size of the acetabulum. Select an implant with a femoral head of the same size.



STEP 4

Ensuring the gluteus maximus tendon is retracted and protected, a box chisel is used to open the proximal femur. This should be positioned laterally and posteriorly to gain exposure in line with the femoral canal.



STEP 5

Proximal femur preparation is made with the femoral rasp. This should be done by hand unless the bone is unusually hard, as using a hammer risks fracturing a fragile osteopenic femur.

The rasp should be inserted with the required amount of anteversion: typically this is between 0° and 20° depending on the preferred approach.

The rasp should be inserted to a depth where the top cutting teeth line up with the neck resection line.

STEP 6

Following rasping, insert the definitive stem to ensure correct fit, seating and alignment can be achieved. Trim the neck if required to allow the collar of the prosthesis to sit flush. Confirm version is correct (see step 5). A trial reduction can be performed if required.

NB If performing a trial reduction, take great care when re-dislocating the hip. A swab around the neck of the prosthesis or a bone hook should be used to help dislocate and deliver the femoral head out of the acetabulum. Undue torsional force applied through the leg can fracture an osteoporotic femur.

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OPERATIVE TECHNIQUE (THOMPSON ONLY)

STEP 7 (Stem Insertion – Thompson)

Proceed with the preferred method of cementing technique. (Modern cementing techniques are recommended, including the use of a distal cement plug, thorough lavage and drying of the canal and retrograde filling with a cement gun).

The stem is inserted by hand until the collar of the prosthesis reaches the neck resection line on the medial calcar. The surgeon must hold the stem in position with the Femoral Head Driver until the bone cement is fully polymerised.

STEP 8 (Thompson)

Remove any excess cement from around the neck of the prosthesis and take care to ensure that the acetabulum is clear of any cement, bone fragments of soft tissue before reducing the hip. Confirm stability and a concentric reduction before layered wound closure.

The general post-operative management of the patient should follow the normal protocols of the operating surgeon and the institution in which the surgery was performed.

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OPERATIVE TECHNIQUE (AUSTIN-MOORE ONLY)

STEP 7 (Stem Insertion – Austin-Moore)

The stem (corresponding to the measured size in Step 3) is inserted with the Femoral Head Driver until the collar of the prosthesis reaches the neck resection line on the medial calcar.

STEP 8 (Austin-Moore)

Ensure that the acetabulum is clear of any bone fragments or soft tissue before reducing the hip. Confirm stability and a concentric reduction before layered wound closure.

The general post-operative management of the patient should follow the normal protocols of the operating surgeon and the institution in which the surgery was performed.

IMPLANT & INSTRUMENT LISTINGS

Implant Listing

Thompson Endoprosthesis

Catalogue Number	Head Diameter	Stem Length
6936-0-380	38mm	105mm
6936-0-400	40mm	105mm
6936-0-410	41mm	105mm
6936-0-420	42mm	105mm
6936-0-430	43mm	105mm
6936-0-440	44mm	105mm
6936-0-450	45mm	105mm
6936-0-460	46mm	105mm
6936-0-470	47mm	105mm
6936-0-480	48mm	105mm
6936-0-490	49mm	105mm
6936-0-500	50mm	105mm
6936-0-510	51mm	105mm
6936-0-520	52mm	105mm
6936-0-530	53mm	105mm
6936-0-540	54mm	105mm
6936-0-550	55mm	105mm
6936-0-560	56mm	105mm
6936-0-570	57mm	105mm

Fenestrated Regular Straight Stems

Catalogue Number	Head Diameter	Stem Length
6940-0-380	38mm	165mm
6940-0-400	40mm	165mm
6940-0-410	41mm	165mm
6940-0-420	42mm	165mm
6940-0-430	43mm	165mm
6940-0-440	44mm	165mm
6940-0-450	45mm	165mm
6940-0-460	46mm	165mm
6940-0-470	47mm	165mm
6940-0-480	48mm	165mm
6940-0-490	49mm	165mm
6940-0-500	50mm	190mm
6940-0-510	51mm	190mm
6940-0-520	52mm	190mm
6940-0-530	53mm	190mm
6940-0-540	54mm	190mm
6940-0-550	55mm	190mm
6940-0-560	56mm	190mm
6940-0-570	57mm	190mm
6940-0-600	60mm	190mm
6940-0-630	63mm	190mm

Fenestrated Regular Curved Stems

Catalogue Number	Head Diameter	Stem Length
6939-0-380	38mm	130mm
6939-0-400	40mm	130mm
6939-0-410	41mm	130mm
6939-0-420	42mm	130mm
6939-0-430	43mm	130mm
6939-0-440	44mm	130mm
6939-0-450	45mm	140mm
6939-0-460	46mm	140mm
6939-0-470	47mm	140mm
6939-0-480	48mm	140mm
6939-0-490	49mm	140mm
6939-0-500	50mm	150mm
6939-0-510	51mm	150mm
6939-0-520	52mm	150mm
6939-0-530	53mm	150mm
6939-0-540	54mm	150mm
6939-0-550	55mm	150mm
6939-0-560	56mm	150mm
6939-0-570	57mm	150mm
6939-0-600	60mm	150mm
6939-0-630	63mm	150mm

Fenestrated Narrow Straight Stems

Catalogue Number	Head Diameter	Stem Length
6940-1-380	38mm	135mm
6940-1-400	40mm	135mm
6940-1-410	41mm	135mm
6940-1-420	42mm	135mm
6940-1-430	43mm	135mm
6940-1-440	44mm	135mm
6940-1-450	45mm	135mm
6940-1-460	46mm	135mm
6940-1-470	47mm	135mm
6940-1-480	48mm	135mm
6940-1-490	49mm	135mm
6940-1-500	50mm	135mm
6940-1-510	51mm	135mm

Fenestrated Narrow Curved Stems

Catalogue Number	Head Diameter	Stem Length
6939-1-380	38mm	135mm
6939-1-400	40mm	135mm
6939-1-410	41mm	135mm
6939-1-420	42mm	135mm
6939-1-430	43mm	135mm
6939-1-440	44mm	135mm
6939-1-450	45mm	135mm
6939-1-460	46mm	135mm
6939-1-470	47mm	135mm
6939-1-480	48mm	135mm
6939-1-490	49mm	135mm
6939-1-500	50mm	135mm
6939-1-510	51mm	135mm

Instrument Listing

Austin-Moore Instrumentation

Catalogue Number	Description
6873-2-100	Straight Moore Rasp, 1 Piece
6873-3-000	Straight Narrow Moore Rasp, 1 Piece
6839-0-000	Curved Moore Rasp, 1 Piece
6839-4-000	Narrow Curved Moore Rasp, 1 Piece
6859-0-003	Moore Gouge – Small
6859-0-002	Moore Gouge – Medium
6859-0-001	Moore Gouge – Large
6839-2-060	Moore T-Extractor 150mm
6839-2-080	Moore T-Extractor 200mm
6839-3-000	Moore Hollow Chisel
6266-0-140	Femoral Head Driver Complete
6266-0-145	Plastic Replacement Head
6791-7-100	Metric Femoral Head Gauges, Set of three
6839-9-300	Endoprosthesis Instrument Case

Thompson Instrumentation

Catalogue Number	Description
6836-0-000	Thompson Rasp, 1 Piece
6859-0-003	Moore Gouge – Small
6859-0-002	Moore Gouge – Medium
6859-0-001	Moore Gouge – Large
6839-2-060	Moore T-Extractor 150mm
6839-2-080	Moore T-Extractor 200mm
6839-3-000	Moore Hollow Chisel
6266-0-140	Femoral Head Driver Complete
6266-0-145	Plastic Replacement Head
6791-7-100	Metric Femoral Head Gauges, Set of three
6839-9-300	Endoprosthesis Instrument Case

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