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LMH

Lesser Metatarsal Head Implant

Operative technique

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Proper surgical procedures and techniques are the responsibility of the medical professional. The following guidelines are furnished for information purposes only. Each surgeon must evaluate the appropriateness of the procedures based on his or her personal medical training and experience. Prior to use of the system, the surgeon should refer to the product package insert for complete warnings, precautions, indications, contraindications and adverse effects. Package inserts are also available by contacting the manufacturer. Contact information can be found on the back of this operative technique and the package insert is available on the website listed.

Intended use

Description

The Lesser Metatarsal Head (LMH) Implant is a hemi-resurfacing implant intended to replace a portion of the articular surface of the lesser metatarsal head. The device is intended to articulate against the proximal phalanx. The implant is available in three sizes, which are individually sterile-packed.

Indications

The Lesser Metatarsal Head (LMH) Implant system is intended for use as a hemi-arthroplasty implant for the metatarsophalangeal joint, for the treatment of degenerative and post-traumatic arthritis, hallux limitus, hallux valgus, hallux rigidus, and an unstable or painful metatarsophalangeal (MTP) joint. The device is intended for single use to be used with bone cement or press-fit without bone cement.

Contraindications

- Bone, musculature, tendons, or adjacent soft tissue compromised by disease, infection, or prior implantation, which cannot provide adequate support or fixation for the prosthesis
- Skeletal immaturity
- Known metal allergy
- Diabetes
- Active infection in the joint

Potential complications and adverse reactions

In any surgical procedure, the potential for complications exists. The risks and complications with these implants include:

- Infection or painful, swollen or inflamed implant site
- Fracture of the implant
- Loosening or dislocation of the implant requiring revision surgery
- Bone resorption or over-production
- Allergic reaction(s) to implant material(s)
- Untoward histological responses possibly involving macrophages and/or fibroblasts
- Migration of particle wear debris possibly resulting in a bodily response
- Embolism

Operative technique

A dorsal longitudinal incision is made extending from the distal shaft of the lesser metatarsal to the shaft of the corresponding proximal phalanx. The joint capsule is incised and the joint is dissected free.

All hypertrophic bone is resected from the metatarsal head and phalanx base. An osteotomy of the distal end of the lesser metatarsal is performed using a power saw aligned perpendicular to the weight-bearing surface.

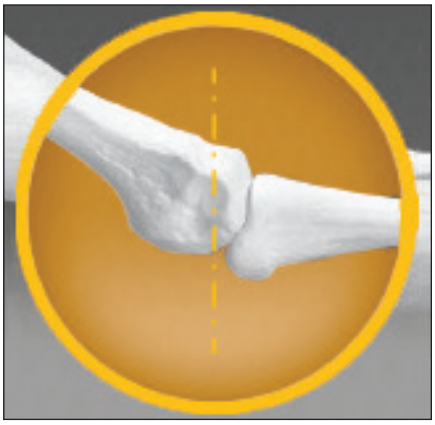


Figure 1

Plantar flex the digit for exposure to the metatarsal head. Place the sizer instrument over the resected metatarsal head. Select the size that best covers the cut bone surface without overhanging. The sizer instrument is centered on the metatarsal with the dorsal locating feature resting on the dorsal surface of the lesser metatarsal head. A 0.045" k-wire is placed through the sizer hole. The sizer instrument is removed, leaving the k-wire to act as a guide pin for the reamer.

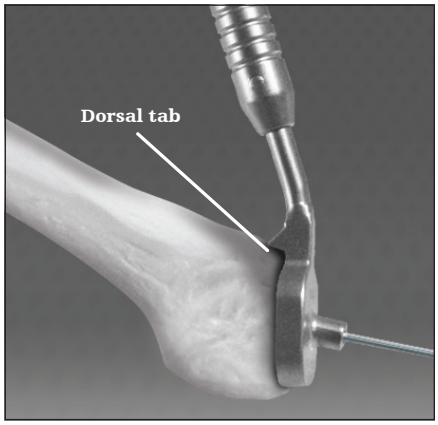


Figure 2

The cannulated reamer is now placed over the k-wire guide pin, and the medullary canal is reamed until the reamer hits its depth stop. The reamer and k-wire are now removed.

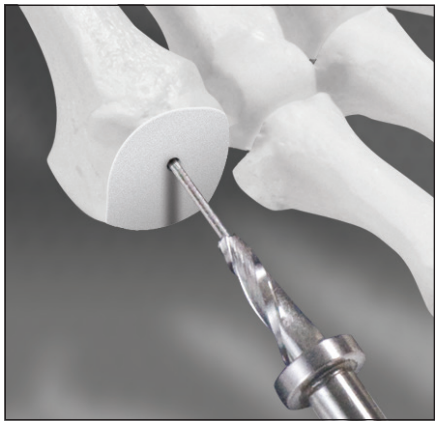


Figure 3

An implant trial is placed in the medullary canal to finalize the fit and check range of motion of the joint.

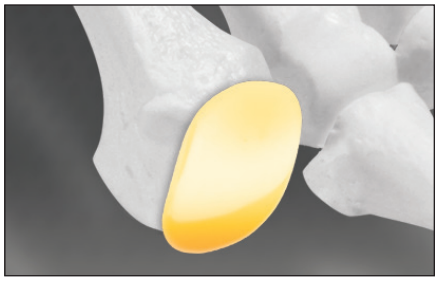


Figure 4

The broach instrument is used to square the entrance to the medullary canal.

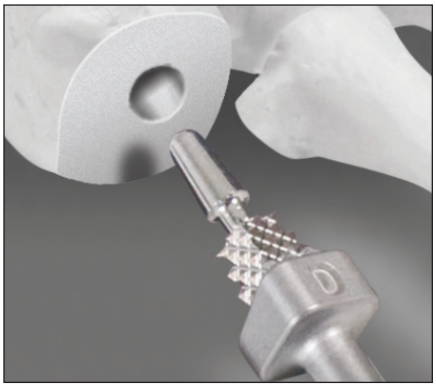


Figure 5

The broach instrument is inserted into the medullary canal and impacted to create the rectangular geometry of the implant stem.

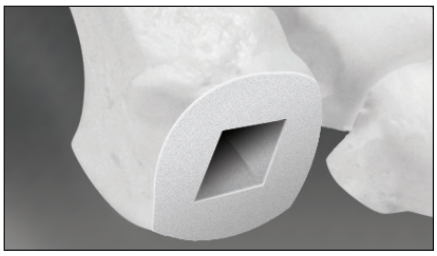


Figure 6

The appropriate size implant is now placed in the medullary canal and completely seated using the impactor instrument.

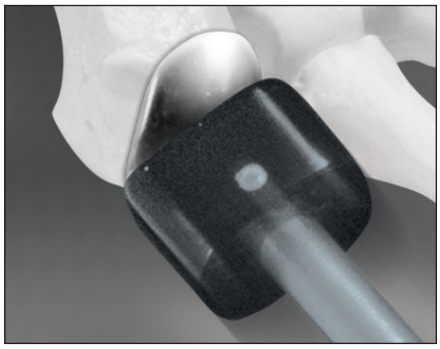


Figure 7

The joint capsule is repaired using suture of the surgeon's choice. The prosthesis should be completely covered by the joint capsule. Subcutaneous closure and skin closure are performed in the usual manner.

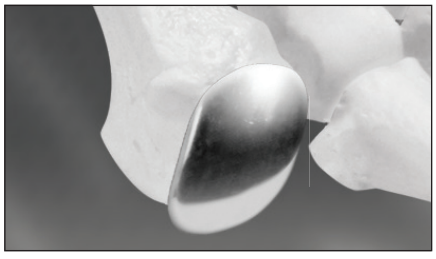


Figure 8

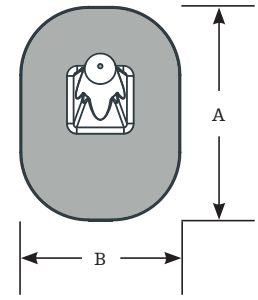
Explant information

If removal of the implant is required due to revision or failure of the device, the surgeon should contact the manufacturer, using the contact information located on the back cover of this operative technique, to receive instructions for returning the explanted device to the manufacturer for investigation.

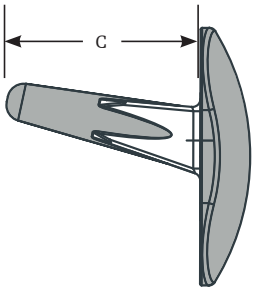
Ordering information

Part number	Description
LMH-0001	LMH, implant size 1*
LMH-0002	ELMH, implant size 2*
LMH-0003	ELMH, implant size 3*
LMH-1000	LMH, instrument set
LMH-1003	Trial, size 1**
LMH-1004	Trial, size 2**
LMH-1005	Trial, size 3**
LMH-1001	Reamer**
LMH-1002	Impactor**
LMH-1006	Sizer, size 1**
LMH-1007	Sizer, size 2**
LMH-1008	Sizer, size 3**
LMH-1009	Broach**
LMH-1010	.045" x 4" k-wire**

* Sterile
** Non-sterile



Size	Head height A	Head width B	Stem length C
1	10.5mm	8mm	12mm
2	13mm	10mm	12mm
3	16mm	12mm	12mm



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Foot & Ankle

This document is intended solely for the use of healthcare professionals. A surgeon must always rely on his or her own professional clinical judgment when deciding whether to use a particular product when treating a particular patient. Stryker does not dispense medical advice and recommends that surgeons be trained in the use of any particular product before using it in surgery.

The information presented is intended to demonstrate a Stryker product. A surgeon must always refer to the package insert, product label and/or instructions for use, including the instructions for cleaning and sterilization (if applicable), before using any Stryker product. Products may not be available in all markets because product availability is subject to the regulatory and/or medical practices in individual markets. Please contact your Stryker representative if you have questions about the availability of Stryker products in your area.

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