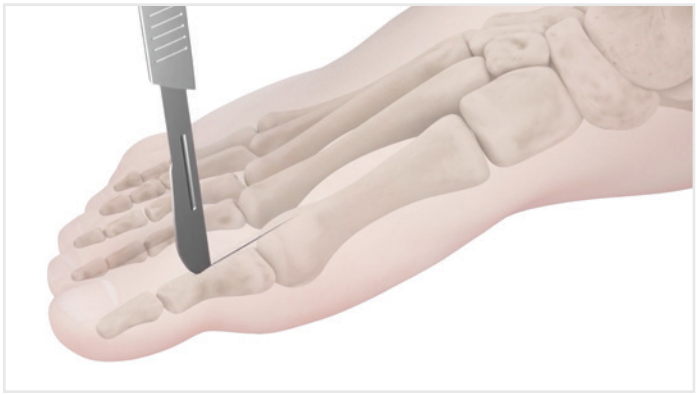
SURGICAL TECHNIQUE

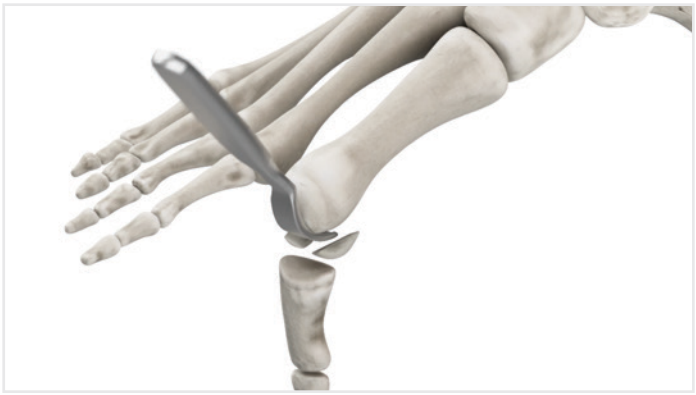
The Accu-Joint® Hemi Implant System is a revolutionary, patented, FDA-approved resurfacing treatment for arthritic disorders of all 5 MTP joints that is designed to restore natural motion and preserve an active lifestyle.

STEP 1



The incision is placed just medial to the extensor tendon using a standard soft tissue approach. More exposure may be required in order to obtain clearance for the reamer. If indicated, the EHL tendon can be lengthened or transected for full exposure of the joint.

STEP 2

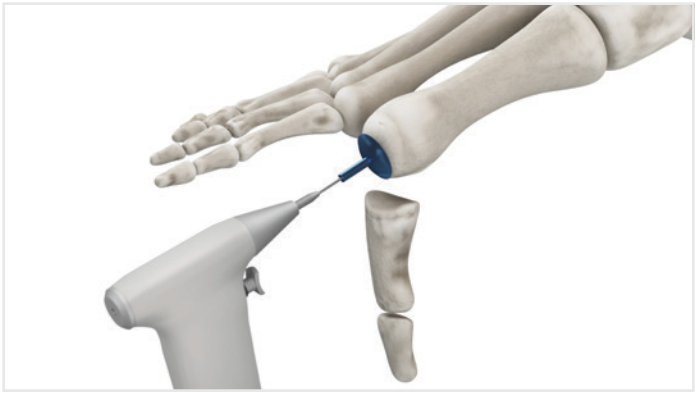


A McGlamry elevator is utilized to free up the sesamoid apparatus and reduce flexor binding. Release of these adhesions is necessary for restoration of anatomic motion. Complete a full 360 degree extra-articular cheilectomy. Resection of the dorsal exostosis is important to reduce the enlarged joint to its original size, and to recreate the dorsal articulation.

STEP 3

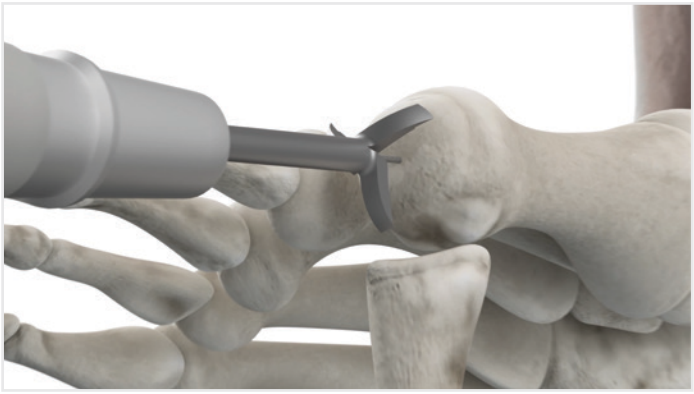
Center and align the trial to the bone articular surface. The trial for the Accu-Joint® hemi implant should be positioned perpendicular to the articular set angle. The opposing side trial is used to assess the size of the implant. For example, the concave phalangeal trial will be used to size the convex metatarsal head and vice-versa. The trials and implants vary 1mm in size. It is recommended to choose the implant size that is one size smaller than the trial to ensure the implant size is 10-15% smaller than the outer diameter of the bone. Be sure the implant sizing does not create an overhang of the implant.

STEP 4



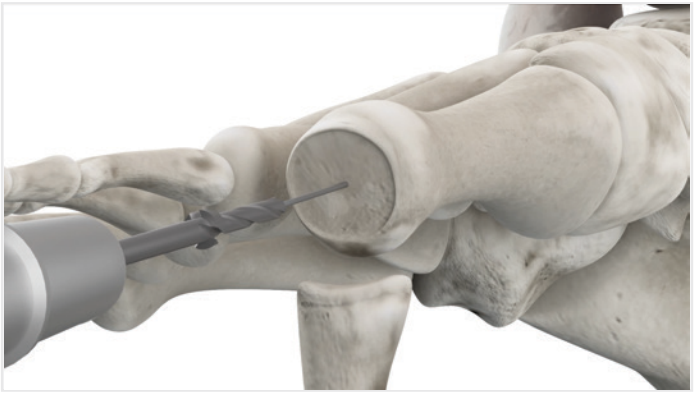
The trial can be used as a guide for the insertion of the K wire and visualizing with C-ARM is essential to ensure the wire is properly placed. 30-40 mm of the wire should be left exposed to aid with instrumentation. The K-wire should be positioned so the stem of the implant rests in the plantar half of the first metatarsal.

STEP 5



The reamer is placed over the K-Wire. Care should be taken to avoid flexor tendons. Use the reamer in the forward direction at high speed prior to contacting the cartilage surface. Constant light pressure will be the most effective method of removing the damaged cartilage. As the reamer is advanced a 360-degree recess and a 1mm deep ring needs to be created to accept the implant. If more decompression is required, continue reaming to restore a normal metatarsal parabola. The first metatarsal should be shorter than the second metatarsal. Additionally, the opposite side of the joint can be prepared to ensure adequate dorsiflexion. A rasp should be used to remove any remaining dorsal osteophytes.

STEP 6



The cannulated drill is placed over the K-wire and slowly advanced. The drill is advanced until the top of the counterbore is flush with the bone.

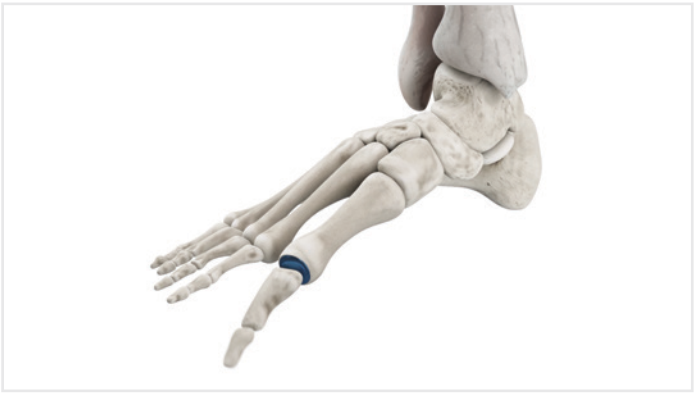
STEP 7

The trial is placed, the K-wire removed and range of motion simulated. The goal is to achieve 90 degrees of dorsiflexion during this step. If desired range of motion is not achieved, remove the trial and decompress further. Ensure the implant is sized appropriately and does not overhang the prepared surface. The Tap can be utilized at surgeon discretion.

STEP 8

Using the driver, the implant is inserted into the pilot hole using two finger tightness. Ensure 360 degree seating of the implant is accomplished. The Accu-Joint® hemi implant is intended to be used with bone cement.

STEP 9



Ensure that smooth range of motion is verified using simulated weight bearing. Flush and closure is completed followed by another final check of the range of motion. Postoperatively, immediate and full weight bearing is allowed using a surgical shoe. During the first 3 days rest, ice, and elevation are encouraged. Further care will follow a normal postoperative protocol.