



EPIK UNI-SYSTEM™
Encore Performance In Knees



CONTRIBUTING SURGEON

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 **encore**™
surgical

System Overview

The EPIK Uni is designed to ease the use of the minimally invasive surgical technique of unicompartmental knee replacement. Using conservative techniques, minimally invasive surgery has shown to reduce blood loss and recovery time. When used for the proper indications, unicompartmental implantation combined with minimally invasive surgical techniques can provide advantages to patients including restoring more normal kinematics and greater range-of-motion when compared to total knee replacement.

Indications

Isolated medial or lateral compartment tibial/femoral osteoarthritis
Intact ligaments

Contraindications

Bi-condylar osteoarthritis
Patella/Femoral osteoarthritis
Deficient or absent ACL
Significant alignment deformity (>15 degrees)

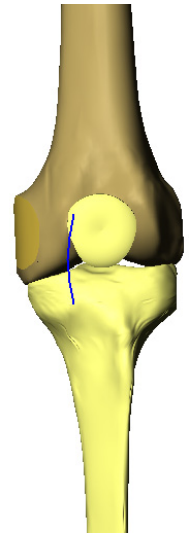
Preoperative Planning

Use a long-standing radiograph to evaluate the angle between the mechanical axis of the leg and the anatomic axis of the femur. The normal mechanical axis is formed by a straight line which begins at the center of the femoral head, passes through the center of the knee joint, and ends at the center of the ankle. The mechanical axis will not be normal in the face of femoral, tibial, or joint space deformities. With unicompartmental arthroplasty, it is important not to over correct the deformity, which can lead to accelerated wear of the remaining condyle.

The goal of this preoperative planning exercise is to restore the normal mechanical axis of the leg and create a joint plane that is parallel to the floor, while sacrificing minimal bone stock and maximizing collateral ligament balance following reconstruction.

Templates for the EPIK Unicompartmental Knee System are available to aid in preoperative implant sizing.

EPIK™ Uni (Onlay Tibia) Surgical Technique Steps



Approach

A 2"-3" medial parapatellar incision is used. The incision begins in the quadriceps tendon and extends along the medial border of the patella and the medial border of the patellar tendon. The incision may need lengthening in some patients for adequate exposure.

Note: This technique begins with femoral preparation before advancing to the tibia. Many surgeons prefer to make the posterior femoral cut and then move to the tibia followed by the femur.

Femoral Preparation

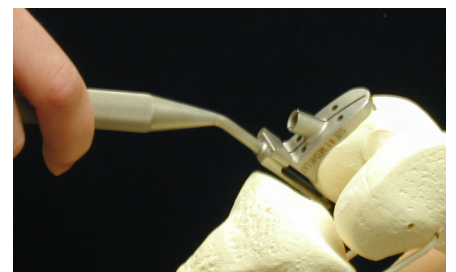
With the leg extended, mark the "tide" mark - the articulating point of the femur over the tibial plateau. This will establish a guideline for the anterior location of the femoral component.



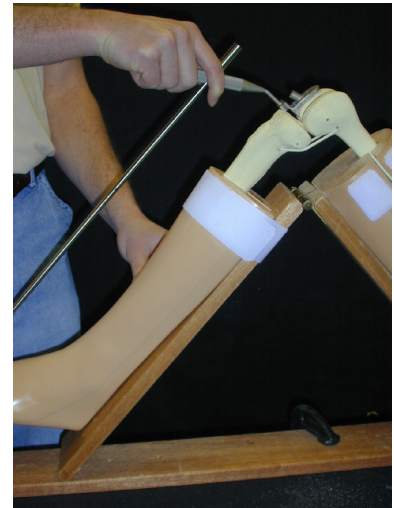
With the knee flexed to 90 degrees, feather or eburnate the bone by running a saw over existing cartilage on the distal femur. This will help to facilitate burring later.



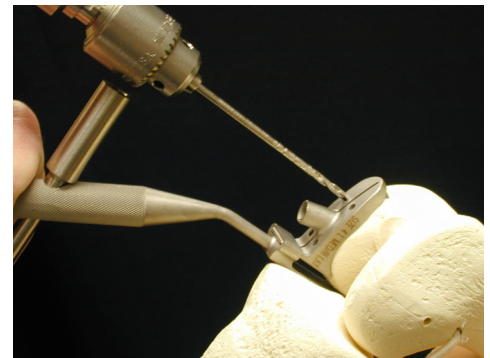
With the knee flexed to 90 degrees, align the appropriate sized drill guide/posterior cut guide on to the femur. Choose the size that covers the distal cartilage erosion but does not overhang the patello-femoral joint.



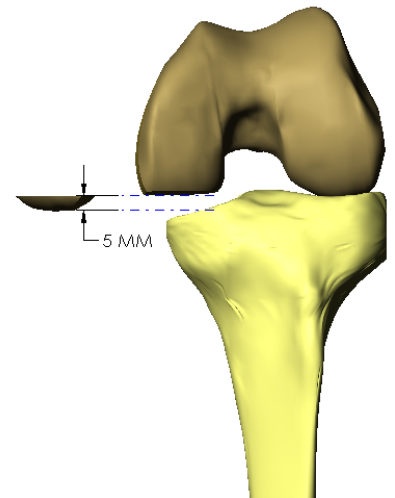
The anterior/posterior alignment of the femoral component can be verified by the drop rod. The drop rod should be at 90° to the femur; if the knee is bent at 90°, the rod will be parallel to the length of the tibia.



Drill and pin the guide in place using a 1/8" drill bit and headed bone pins.



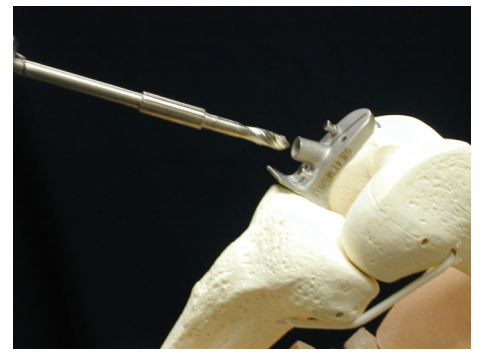
Resect 5mm of the posterior condyle utilizing the plateau at the base of the drill guide.



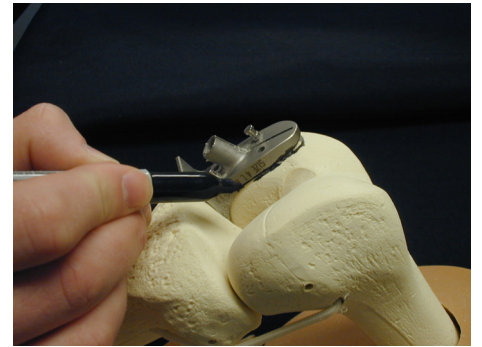
Using a reciprocating saw, make the sagittal cut of the femoral keel. Take care to prepare the accurate thickness of the keel.



Drill for the femoral peg through the drill guide.



Outline the femoral shape with a bovie or methylene blue.



Remove the headed pins with the pin puller and remove the drill guide.



Burr the shape of the femur to recess the component 1-2mm.

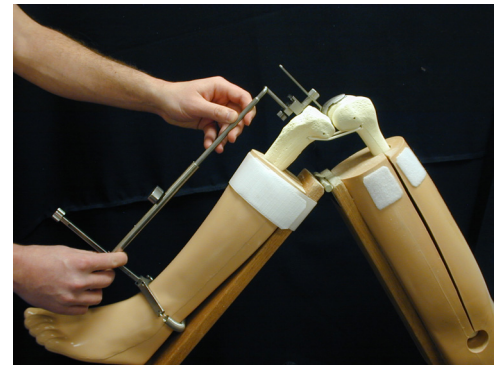


Trial the femoral component.

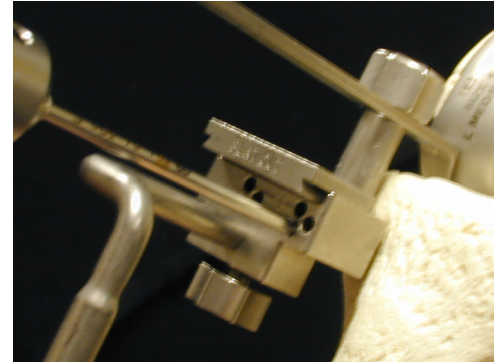


Tibia Preparation

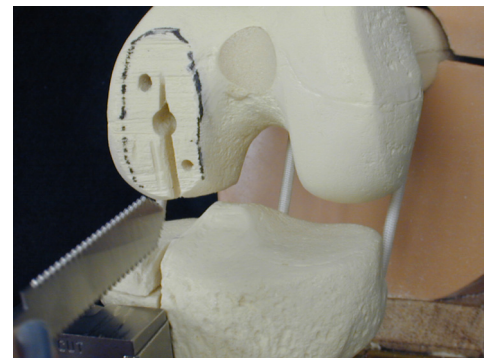
Assemble the proper height block, extramedullary guide, ankle clamp, and stylus. The objective is to make a cut parallel to the joint surface to reproduce the slope of the proximal tibia. Set the stylus to the lowest point of the condyle.



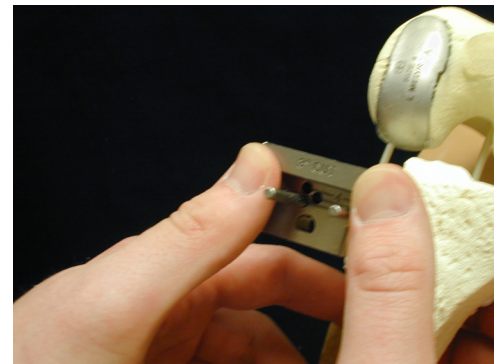
Drill and pin the height block to the tibia through the zero holes. The depth of the cut can be changed by shifting the pin holes up or down for 2mm adjustments.



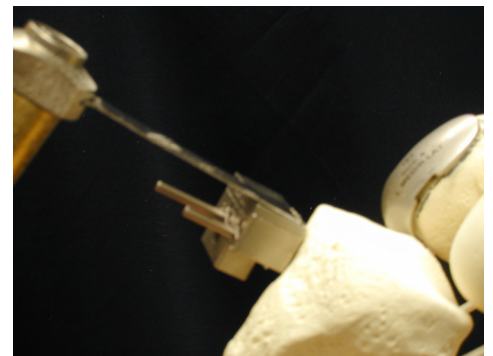
Make the sagittal cut using a reciprocating saw (.8mm). The sagittal cut should be just aside the tibial eminence.



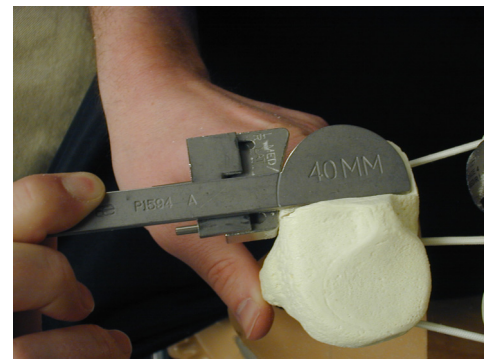
Remove the stylus and slide the cut surface forward. Cut surfaces are available in either flat or 3 degrees.



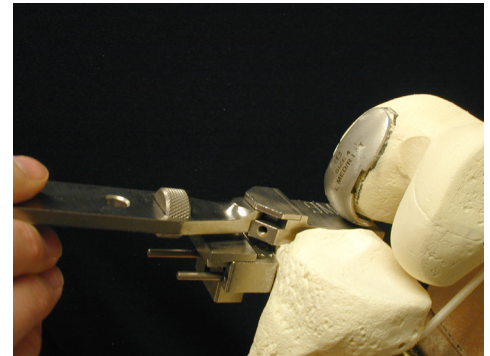
Make the transverse cut using the narrow blade.



Size the tibia with the appropriate template. Adjust the sagittal cut as needed to obtain the best cortical coverage of the proximal tibia.



With the femoral trial in place, using the spacer gauges, check the flexion and extension gaps. Make adjustments to the tibia cut to balance the gaps.



Prepare the keel with the tibia keel punch. The keel can also be prepared with the tibia trial keel.



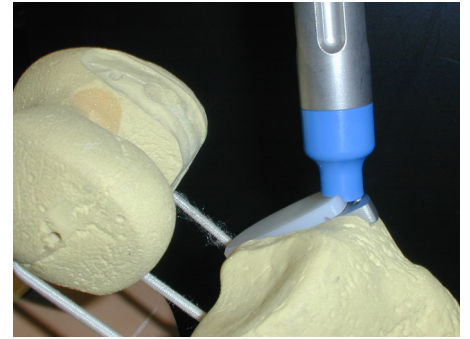
Impact the tibia trial and insert trial. Evaluate the fit through flexion and extension.



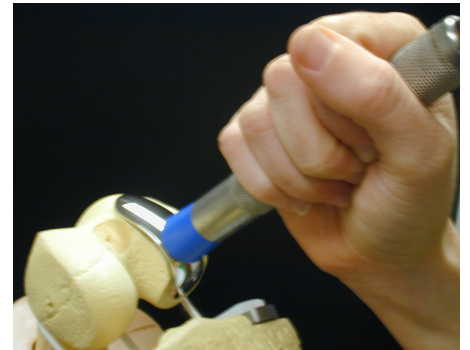
Prepare for the tibia peg by either drilling with the drill guide or using the tibia peg punch.



Cement the tibial component into place. Remove excess cement. Impact the insert into the tibial tray.



After placing cement on the component and the bone, impact the femur into place using the femoral impactor.



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