

Knee Disarticulation Amputation

Joint:

Incise sides of patellar tendon

Incise on the medial and lateral edges of the patellar tendon. This allows isolation of the tendon so that it can be dissected up, off of the tibial tubercle.

Lift up tendon to expose the fat pad

Palpate the anterior joint line where the capsule attaches to the tibial plateau.

Incise anterior joint line

Sharply incise down onto the anterior joint line and onto the top edge of the tibial plateau.

Enter the joint

Enter the joint below the meniscus, keeping the menisci with the femur.

Release the anterior aspect of the lateral and medial menisci

Dissection under the menisci helps preserve the vascular meniscal rim, which will add mechanical strength to the capsule for the myodesis and closure.

Release the anterior cruciate ligament

To allow translation of the tibia forward and more completely expose the knee joint.

Bone hook

Place a bone hook onto the tibia to pull forward and translate the tibia anteriorly. It is initially resisted by the anterior cruciate ligament.

Release remaining fibers

Release the remaining fibers of the anterior cruciate ligament and the posterior meniscal attachments. The tibia subluxes forward to expose the posterior tibial joint line.

Dissect the capsule off the posterior tibial joint line

Release the posterior cruciate ligament of the posterior edge of the posterior tibial plateau

Dissect around the fibula and release the lateral collateral ligament

Use the amputation knife to dissect the soft tissue down the posterior tibial plateau

Dissect all of the soft tissue directly off of the posterior aspect of the tibia and the fibula and keep the soft tissue with the posterior myofasciocutaneous flap.

Use the scalpel to fully release the flap off the fibula

Divide through the distal end of the flap.

Note the normal motion between the tibia and the fibula

Remove the menisci

Dissect the center portion of the menisci off of the capsule. Leave a small rim of the vascular portion of the menisci to eventually sew the muscle flap to as a myodesis.

The shape of the medial (left) and lateral (right) menisci

Isolate the femoral remnants of the cruciate ligaments

The patellar tendon will eventually be sutured to the femoral remnants of the cruciate ligaments.

Osteoarthritis

The surface of the femoral condyle shows moderate wear of the articular cartilage surface indicative of moderate osteoarthritis

This is consistent with a 64 year old man.

©Prosthetics Research Study