

MENISCAL TRANSPLANT

What is wrong with my knee?

The meniscus is a pad of cartilage in the middle of your knee. Cartilage is a rubbery tissue that cushions the knee joint. You have a meniscus on the inner side of your knee (the medial meniscus) and a meniscus on the outer side of the knee (the lateral meniscus). Each meniscus attaches to the top of the shinbone (tibia) and acts as a shock absorber during weight-bearing activities. If a meniscus tears, it can cause knee pain, swelling, and can limit motion. Most meniscus tears are small and can be debrided or repaired during a routine knee arthroscopy. However, a meniscus that is badly damaged or has an extensive tear may have to be removed. Without the menisci, a knee joint can develop persistent pain, swelling and arthritis.



What causes a meniscus-deficient knee?

A meniscus tear usually occurs from a twisting, pivoting, or squatting maneuver. Athletes participating in cutting and pivoting sports such as soccer, basketball, and football are at increased risk for tearing their meniscus. Without the meniscus present, patients are much more likely to develop accelerated degenerative changes to the knee joint. As this happens, the remaining cartilage that covers the ends of the bone, called the articular cartilage, is worn away, and bone is exposed. For this reason, orthopedic surgeons attempt to preserve the meniscus when surgically treating a torn meniscus. During surgery, only the damaged portion of the meniscus is removed, or your surgeon will perform a meniscus repair, if possible. Unfortunately, despite advances in arthroscopy, not all meniscus tears are amenable to repair. In some cases, in order to best treat the damaged meniscus, the entire meniscus must be removed.

How is a meniscus-deficient knee diagnosed?

Patients with a meniscus-deficient knee, usually complain of persistent pain with activities of daily living or sports. On examination, many patients will have

swelling in their knee joint (effusion), tenderness over the medial or lateral joint, and pain with twisting of the knee. Most patients that need a meniscal transplant will have already had an MRI and at least one knee arthroscopy to remove the damaged meniscus.

How is a meniscus-deficient knee treated?

Non-operative treatment of a meniscus-deficient knee consists of activity modification, non-impact exercise, and unloading braces. However, some patients continue to have persistent pain and are at risk for developing knee arthritis. The goal of a meniscus transplant is to restore the cushioning support of the meniscus, therefore alleviating pain and hopefully slowing the progression of degenerative changes in the knee.

What happens if I need surgery?

Not all patients are candidates for meniscus transplant. Indications for meniscal transplant are patients under the age of 40, have had a prior meniscectomy, have knee pain with activities, have evidence of early joint arthritis, and are in good overall health. The knee must be stable and in correct alignment. Occasionally, the patient must have a ligament reconstruction to stabilize the knee or corrective osteotomy to re-align the knee before they have a meniscus transplant. A meniscus from a cadaver (allograft) is used for the transplant. The meniscus is tested to ensure it is safe from any diseases. Patients do not need to be on medicine to prevent rejection of the new meniscus.



Meniscal allograft

The surgery is done arthroscopically with an additional small incision. Most patients will stay one night in the hospital. After surgery, patients are immediately started on a continuous passive motion (CPM) machine. The rehab is extensive and most patients are not allowed to run until 6 months after surgery. Generally it is recommended that patients only participate in light recreational sports after a meniscal transplant.