BURKE & BRADLEY ORTHOPEDICS

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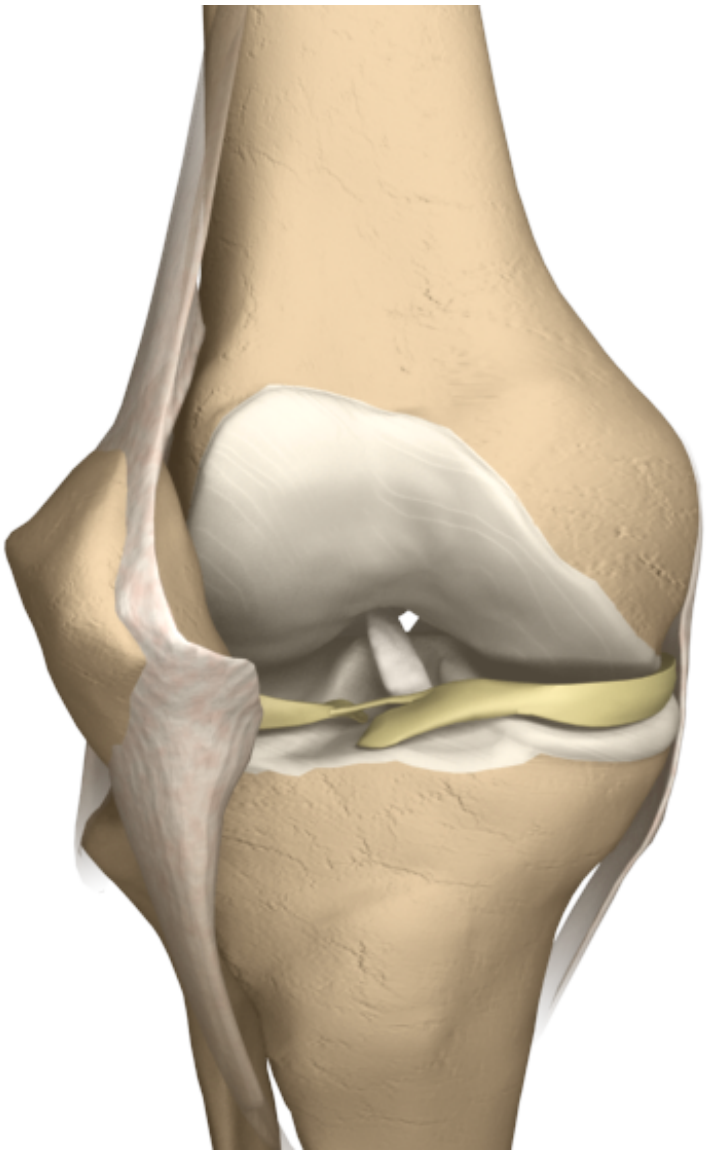
Meniscus Problems – Meniscus Transplant

A healthy meniscus acts as a shock absorber and provides a smooth surface for your knee to glide on. Behind the knee cap (patella), each knee has two menisci located between the thigh bone (femur) and shin bone (tibia), which protect articular cartilage from wear and tear. The somewhat C-shaped medial meniscus is on the inside of your knee, whereas the more U-shaped lateral meniscus is on the outside of your knee.



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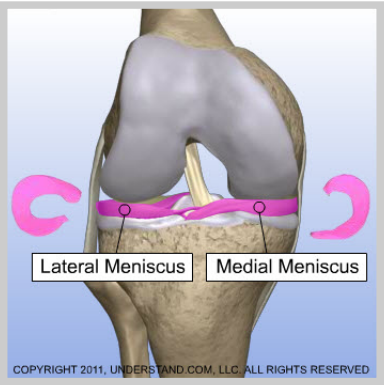
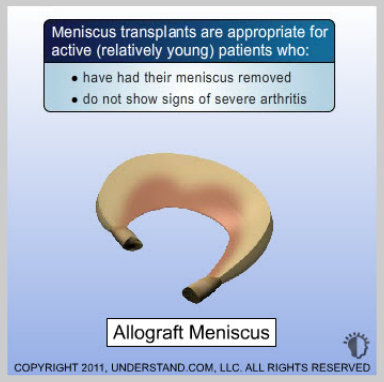


Meniscus Transplant Introduction

A healthy meniscus acts as a shock absorber and provides a smooth surface for your knee to glide on. Behind the knee cap (patella), each knee has two menisci located between the thigh bone (femur) and shin bone (tibia), which protect articular cartilage from wear and tear. The somewhat C-shaped medial meniscus is on the inside of your knee, whereas the more U-shaped lateral meniscus is on the outside of your knee.

Doctor's Personal Note: *A Message From Your Doctor*

Thank you for visiting our website and viewing our 3D Animation Library. These animations should assist you in better understanding your condition or procedure. We look forward to answering any additional questions you may have at our next appointment.



When the Procedure is Performed

Meniscus injuries, such as tears, are common and typically don't heal well. Often times, only a small piece of meniscus has to be removed. However, In certain cases, a meniscus may be surgically removed completely or near completely because it is not repairable. Without the meniscus to dampen the forces from continued movement, symptoms may return. The knee can become unstable over time, and the articular cartilage and bone surfaces may begin to wear and experience degenerative arthritis. To relieve symptoms or slow the degeneration, tissue from a cadaver, called allograft, may be used in active patients who have previously had their meniscus removed and who do not show signs of severe arthritis. The allograft is an intact, healthy meniscus from a donor.

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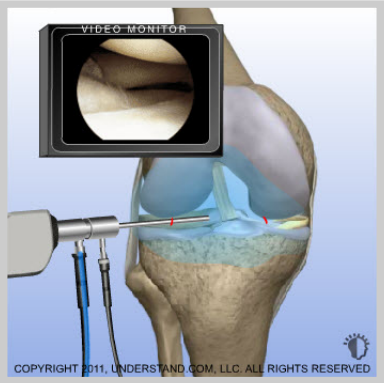
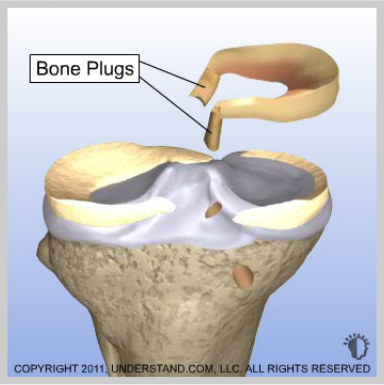
Matching the Meniscus

Unlike organ transplants that must be tissue-matched to avoid rejection, the meniscus that will be used does not need to be matched to your tissues because it lacks live cells and rejection is rare. However, the allograft will have been screened to minimize the risk of contracting HIV or other infectious diseases. Correct sizing is important for a successful transplant. Therefore, an X-ray or other imagery will be taken to ensure the meniscus in your knee and that of the donor are similar in size.



Incisions & Visualization

Small incisions (portals) are made around the joint. The scope and surgical instruments will go into these incisions. The scope is inserted into the knee. Saline solution flows through a tube (cannula) and into the knee to expand the joint and to improve visualization. The image is sent to a video monitor where the surgeon can see inside the joint.



Repair

A surgical instrument is inserted into the knee to remove either the inner margin or all of the remaining meniscus. There are several ways to affix the meniscus once it has been placed inside. For example, a trough may prepared to accept the donor tissue and seat the transplant. Another option is to create one or more holes in your tibia. These holes will accept bone plugs that may be intentionally left on the ends of the donor meniscus to help secure it inside your knee. Some of the suture materials that will be used to fasten the allograft to your knee are positioned and the donor meniscus is brought into your knee.

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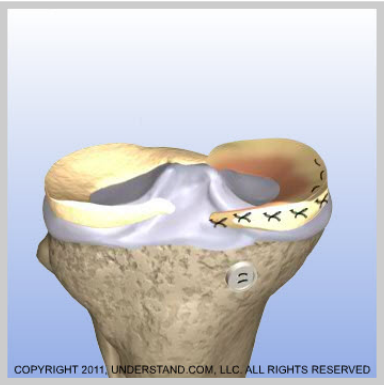

End of Procedure

The ends of the donor meniscus are anchored into the holes in the tibia and sutured in place. The sutures may be tied together at the front of the shinbone (tibia), or they may be fastened to a special type of screw or button. Next, additional sutures are affixed along the margin of the meniscus to hold it in place. One or more additional small incisions may be needed for placing and tying these sutures. Once the allograft meniscus is attached, the surgical instruments are removed, the incisions are closed, and the procedure is completed. Following physical therapy as part of recovery, your knee will experience considerable pain relief.

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