Internal Pads (menisci) of the Knee

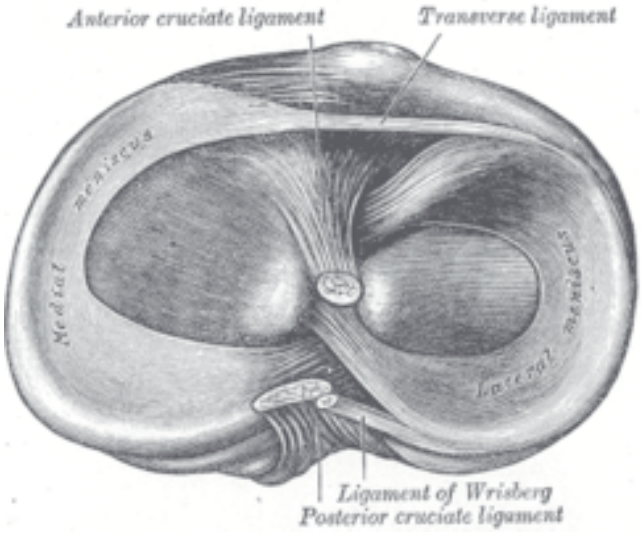
The menisci sit on the flat top of the lower leg bone known as the tibia plateau. Their job is to be a shock absorber for the tremendous amount of pressure that can be forced down through the thigh bone (femur) when we are jogging, running or lifting weight. They are semi-lunar shaped plates of fibro cartilage (fibro – fibrous, cartilage – hard and flexible like the ear) connective tissue. Medical terminology refers to the anterior and posterior horns in reference to the location of both ends of the menisci.

The under surfaces are relatively flat so they can sit and move on the tibia plateau; the upper surfaces are slightly concave to receive the condyles (rounded ends) of the femur. They are thick at their attached outer edges and thin at their unattached inner edges. The thick outer edges are vascular so they receive blood directly; however, the thin inner edges are avascular, so they have a very limited blood supply. A transverse ligament joins the anterior parts of the menisci so that they can move, very slightly, in unison; the ligament can be absent in some people. During extension (straight leg) the menisci glide forward and during flexion they glide posterior.

The medial (inside of the knee) meniscus is very firmly attached at its outer edges, consequently it is the one that is injured most; in fact, about twenty times more often. Injury often occurs as a result of twisting a flexed knee, when playing a sport or changing direction quickly. Once the cartilage is torn it can cause considerably pain, especially if the torn part folds over or is displaced during weight bearing. If the tear is on the outer edge there is a good chance the injury will heal. However, when the tear is on the avascular inner edge the potential for healing is very limited; in fact surgery is often the only answer.

The good news is that surgery has come a long way in dealing with this lesion. Arthroscopic (joint) surgery is the method of choice and it usually requires only two or three small punctures around the knee to clean up the injury. Typically you are up and walking for short distances on the day of surgery, and within six weeks you are able to engage in most of your normal activities. In my case I had three small puncture wounds around my right knee to repair my medial meniscus. The day of the surgery I was walking for very short distances and I was back at work within two weeks.

However, it took me a full year before I had full flexion (120 degrees) of the knee without pain. Immediately after the surgery I went for a series of treatments to reduce the swelling - Low Intensity Laser Therapy is an excellent technique in this regard. I also had to stretch and strengthen the muscles of the leg on a regular basis; initially, I used a stationary bike to strengthen my muscles and increase the range of motion of the knee. After a number of weeks, I was able to move to weights and squat movements to return to full strength. Naturally massage played a vital role, increasing circulation, lengthening muscles and decreasing tension, on my road to recovery.


Anterior cruciate ligament
Transverse ligament
Medial meniscus
Lateral meniscus
Ligament of Wrisberg
Posterior cruciate ligament