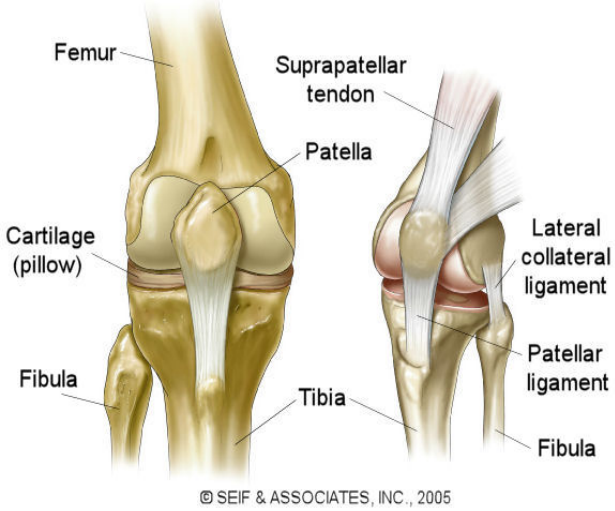
# Knee, Cartilage and its Function

The menisci are made of tough cartilage, and fit between the surfaces of the bones upon which they rest. The menisci are semi lunar (C-shaped) and have a wedged profile. The wedged profile helps the stability of the joint by keeping the rounded femur surface from sliding off the flat tibial surface. The menisci are *nourished* (fed) by small blood vessels; but there is also a large area in the center of the meniscus that does not have a good blood supply (avascular). This presents a problem when there is an injury to the meniscus, as areas without good blood supply heal poorly. When there is a torn cartilage in the knee, surgery is often required to fix this. This is usually done with an *arthroscopy* (a surgical procedure less invasive than open surgery). Some times open surgery of the knee is required if there is other damage which has occurred.




The medial meniscus rests on the medial tibial plateau. The tibia is the large bone in your lower leg (the shin bone). The medial tibial plateau is the upper end of the bone making up the inner part of your knee. The lateral meniscus serves the same purpose and is located on the outside of the knee. The menisci help to distribute your body weight across the knee joint. Without the meniscus present, the weight of your body would be unevenly applied to the bones in your legs (the femur and tibia). The femur is the large bone in your thigh. This uneven weight distribution would cause increased wear and tear on the cartilage covering the bones, leading to early damage of these areas. The presence of the menisci cartilage is necessary for a healthy knee.

## PURPOSE OF THE KNEE CARTILAGE

The knee joint is made up of three bones: the thigh bone *(femur*), the shin bone *(tibia*), and the knee cap *(patella*). The surfaces of these bones at the knee joint are covered with cartilage. This smooth, slippery surface allows the bones to slide against each other without causing bone damage. The meniscus sits between these cartilaginous surfaces of the bones (femur and tibia). It distributes the weight evenly in the joints and helps with the stability of the joint (keeps the joint steady).

## HOME CARE FOLLOWING INJURY:

- Use crutches as instructed.
- Once home, an ice pack applied to your injury may help with discomfort and keep the swelling down. An ice pack can be used for the first couple of days or as instructed.
- Only take over-the-counter or prescription medicines for pain, discomfort, or fever as directed by your caregiver.
- Call if you do not have relief of pain with medications or if there is an increase in pain.
- Call if your foot becomes cold or blue.
- Call if your knee gets stuck in a fixed position and will not move.
- You may resume normal diet and activities as directed.
- Make sure to keep your appointment with your follow-up caregiver. This injury may require further evaluation and treatment beyond the treatment you received today.

## MAKE SURE YOU:

- Understand these instructions.
- Will watch your condition.
- Will get help right away if you are not doing well or get worse.

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