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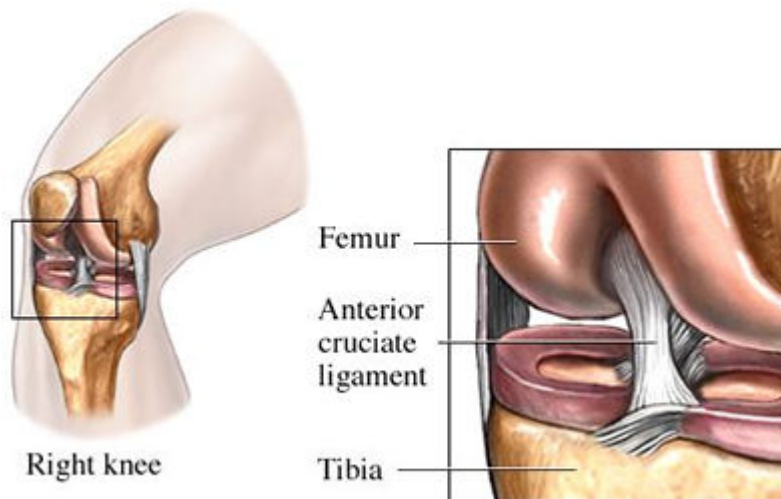
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A TORN CARTILAGE IS ONE OF MANY VARIATIONS IN KNEE INJURIES

One of the common knee surgeries athletes and physically active individuals have is related to the semilunar cartilage (meniscus). A tear in the meniscus (semilunar cartilage) is often referred to as a “torn cartilage”. This can be confusing as there is more than one type of cartilage inside the knee.

The illustration depicts the two menisci that are in each knee. The menisci are described by indicating their position in the knee: medial and lateral. The medial is on the side nearer the midline of the body, while the lateral is along the outer side of the knee (away from the midline of the body). They rest on the tibia (shin bone) and are attached at their margins. The medial meniscus is torn more frequently than the lateral because of its attachment, size, and location.

The meniscal attachments to the ligaments and capsule of the knee are important in its complex motion. Knee motion is more than a simple bending and straightening. There is some rotation and gliding motion between the femur and the tibia during a complete arc of motion of the knee.



The menisci have several functions. They increase joint congruity, enhance joint stability, serve as simple shock absorbers, and help spread the synovial fluid (joint lubricant).

The knee menisci are a special type of moon shaped fibrocartilage. They have a nerve and blood supply along their outer edge but the inner two-thirds receives its nutrition from the fluid inside the joint. A tear in this portion of the meniscus without a blood supply does not heal by itself and often enlarges with time. A tear in the peripheral margin of the meniscus has the potential to heal if repaired. An additional small incision, or incisions, are usually required to satisfactorily repair (suture) the torn meniscus. The decision to repair a tear is frequently made at the time of surgery based on the location and extent of the tear.

If a meniscus (semilunar cartilage) is torn and displaces, it can interfere with the knee motion. The incapacity may be sudden and complete. The term the knee is “locked” means part of the motion is blocked. Most frequently this is associated with an inability to straighten the knee. These sudden and dramatic tears may occur with arising from a squatting or kneeling position, a sudden twisting motion of the knee, or a quick change of direction during athletic participation. They occur frequently and may occur when least expected. The meniscus injuries most commonly seen are usually not the dramatic ones that cause complete incapacity. They are more subtle and chronic in nature. Different types of small and/or complete tears may exist in the semilunar cartilage giving varying symptoms. These symptoms may include pain along the joint line, intermittent locking, a giving way sensation, swelling, clicking, night pain, pain on squatting or pivoting, and the inability to duck walk. It is important to state that each of these, or all of these, symptoms can be produced by problems in the knee other than a “torn cartilage”.

Diagnosing a tear in the meniscus may be straightforward in some cases and it may be difficult in others. Besides doing a detailed history and physical examination, the physician will likely require standing weightbearing x-rays to assess the joint spaces and overall alignment. In addition, a magnetic resonance imaging (MRI) may be necessary to document the tear. An MRI provides a means of visualizing the menisci in a painless, non-invasive manner without exposure to radiation. Even though MRI represents the best imaging modality to detect the menisci, it too lacks 100 percent accuracy and must be correlated with the clinical presentation.

An important concept to understand is not all meniscal tears produce symptoms and not all tears require surgery. Arthroscopy is generally indicated for patients who fail conservative treatment and continue to have a *symptomatic* meniscal tear. Arthroscopy is a surgical procedure that is performed on an outpatient basis. A partial meniscectomy is the name of the surgical procedure for removing the “torn cartilage”, or a portion of it. While surgical intervention is elective, the joint surface (articular cartilage) may sustain microscopic damage each time it rides over the incongruity of a torn meniscus. The damage is cumulative and early surgical treatment is sometimes desirable. Removal of the injured portion of a meniscus does not completely eliminate the accelerated wear, but has the potential to slow the progression. Most active individuals do well after their meniscal surgery, but there are many reasons for the differences between individual recoveries. Two tears are seldom alike. Associated injuries to other structures in the knee, the duration the tear is present, and the presence of arthritis in the knee are among just a few of the factors which alter the recovery time. The resumption of athletic participation

varies from one week to three months following removal of a portion of the meniscus. This is assuming there are no complications

In conclusion:

1. Not all tears in the meniscus require surgery.
2. Not all knee problems are related to a torn meniscus.
3. A tear may be present suddenly and be incapacitating, or it may become more noticeable over a period of time.
4. The incidence of tearing a meniscus while participating in athletics is small, but it does occur. Tears occur in the work place and with activities of daily living.
5. Playing sports may aggravate an old tear.
6. A symptomatic tear in the semilunar cartilage of the knee treated surgically usually results in a return to full activity in most instances.
7. Arthroscopic surgery offers a quick return to sports and work.