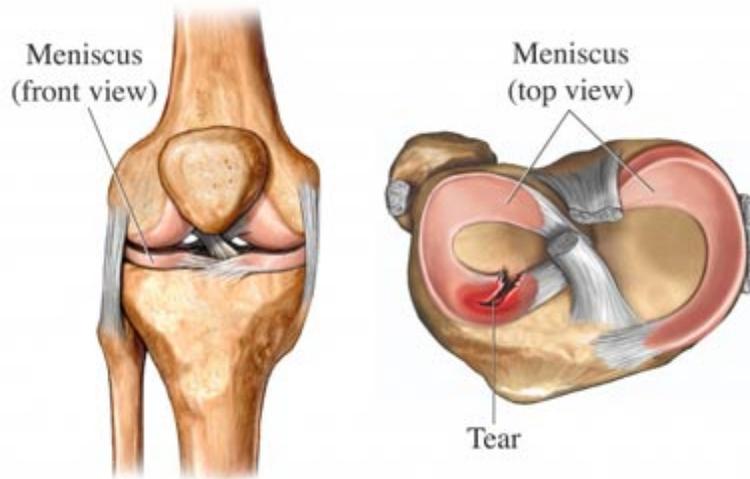


Meniscal Tear

Background:

The meniscus is a cartilaginous tissue that is found in the knee that stabilizes and disperses forces through the joint. There are two menisci found in the knee, one is on the medial (inside) part of the knee and the second is on the lateral (outside). Meniscal tears are a relatively common injury found in the knee and will cause the knee to malfunction.



Cause:

The most typical cause for tearing the meniscus is by having a planted foot, a bent knee, and a quick twisting motion at the knee. This is a very common motion in sports that require cutting and agility type movements. It is also possible that the meniscus can get worn down either by overuse or aging. These two attributes can make the likelihood of tearing the meniscus higher.

Symptoms:

The signs and symptoms for a torn meniscus are usually very easy to spot but it will vary depending on the severity of the tear.

- Minor tears will be accompanied by slight pain, discomfort, and swelling.
- Moderate tears will be accompanied by pain that is located at the sides or inside the knee. It will be possible to elicit the pain by pushing on the joint

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line of the knee, directly on the sides of the meniscus. There will be swelling in the knee joint and any rotation at the knee will cause a sharp pain. The pain may not always be present.

- Severe meniscal tears will be accompanied by the athlete's knee catching, clicking, and locking (the knee will not go through the full range of motion). Along with these symptoms the knee may feel weak and could "give out" while walking or standing.

Examination:

A complete examination of the knee will be done in order to diagnose a meniscal tear. A history of previous injuries or mechanisms will be taken followed by observation, looking for any tender areas, and range of motion tests. If these tests come back positive the doctor will order an X-ray and/or and MRI to confirm the diagnosis.

Treatment:

There are many factors that go into deciding the treatment that will be used for a torn meniscus. Factors like the patients age, activity level, severity of the tear, location of the tear, amount that the tear disables the athlete, how long the meniscus has been injured, and the doctors preference all go into this decision. The two options for treatment will be surgical and nonsurgical.

- Nonsurgical treatment is very conservative for meniscal tears. Treatments such as ice, compression, elevation, physical therapy, and possibly a knee brace to protect and stabilize the knee will be implemented. Nonsurgical treatments will usually be done with minor tears and some moderate tears.
- Surgical treatment is common with meniscal tears because they are normally not very invasive procedures. Depending on the location and the type of tear that has occurred at the meniscus will decide what type of surgical procedure will have to be done. The types of surgical treatments are meniscal repair (the torn part of the meniscus is sewn back onto the rest of the meniscus), partial meniscectomy (part of the meniscus is taken out or shaved off), and a total meniscectomy (the entire meniscus is taken out).

Athlete Recovery:

Recovery time for a meniscus surgery has a very positive outlook. This outlook is made even more positive with meniscal repairs and partial meniscectomies when the tear occurred on the periphery of the meniscus; this is because of the blood supply to this part of the meniscus. An athlete should be able

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to walk with almost immediately after surgery and be able to start practice in no more than two to four weeks post-op. Physical therapy to strengthen the muscles around the knee will be a focus of the rehabilitation plan before the athlete is able to return to their sport. Even after the formal physical therapy is completed it is in the athletes best interest to continue some of the exercises that they learned in order to prevent any additional meniscal injuries.

Prevention:

Meniscal tears are a very difficult injury to prevent and are often considered to be part of the risk of playing sports. Athletes that require cutting for their sport or have the potential of getting hit in the knee are more at risk than other athletes. The best prevention for meniscal injuries is to make sure that strength training and sport-specific activities are being done with a coach/athletic trainer/strength & conditioning coach that has knowledge of correct form and mechanics. These personnel will have the ability to fix the athlete's mechanics and ensure they are using proper technique to avoid injury.

Athletes At Risk:

Athletes that participate in Basketball, Rugby, Soccer, Football, Lacrosse or Tennis are at a higher risk of damaging their meniscus. These sports require the athlete to change direction with a planted foot, which is a common mechanism for this injury. Also, these sports incorporate contact between individuals; an athlete that takes a direct blow to the knee while the foot is planted will be vulnerable for a meniscus injury. It is also important to note that runners that step in a hole or uneven surface can also damage their meniscus.

Professional Athletes With Meniscal Tears: Chris Paul (NBA), Jeremy Lin (NBA), Michael Boley (NFL), John Tavares (NHL)

Relevant Articles:

Everything You Wanted to Know About Chris Paul's Knee

<http://www.clipsnation.com/2011/12/21/2648170/everything-i-know-about-chris-pauls-knee-s>

Surgery Is Not Always The Best Option For Repairing A Damaged Meniscus

<http://www.nydailynews.com/sports/more-sports/don-opt-surgery-meniscus-tear-article-1.1344685>

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Most NBA Players Recover From Meniscus Tears

<http://www.reuters.com/article/2011/12/16/us-nba-players-meniscus-idUSTRE7BF23P20111216>

Academic Journal Articles:

The Meniscus: Review of Basic Principles With Application to Surgery and Rehabilitation

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC155528/>

Surgery Versus Physical Therapy For A Meniscal Tear And Osteoarthritis

<http://www.nejm.org/doi/pdf/10.1056/NEJMoa1301408>

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