

Meniscus Tear

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ABSTRACT

CLINICAL PRESENTATION & EXAM: During a patient history, patient may report feeling a snap in the knee following hyperextension or rotation of the leg while the foot is planted on the ground. There may not be immediate swelling following the tear, but swelling will develop as well as pain and tenderness of the area. The knee may also catch or lock, the patient may report feeling instability, and the patient may be unable to fully extend the leg. Pain is exacerbated with hyperextension or rotation of the leg. **ANATOMY & PATHOLOGY:** The menisci are two fibrocartilaginous, wedge-shaped discs that reside within the knee joint. They are attached to the medial and lateral tibial plateau by roots that are connected to the anterior and posterior horns of the menisci. This type of connection results in a strong connection with the tibial plateau that prevents shifting and maintaining stable contact with the femoral condyles. The menisci are involved in providing shock absorption for the force between the femur and the tibia as well as a means of knee stabilization. Damage often occurs concurrently with an anterior-cruciate ligament (ACL) injury due to the internal rotation of the ligaments located in the knee joint. Risk increases in an older population due to the menisci degenerating with age and increase of falls. If damage does occur to the menisci, stability will diminish as well as the ability to dissipate force across the tibial plateau, meaning that there will be more stress due to reduced shock absorption. **DIAGNOSTIC TESTING & CONSIDERATIONS:** Three commonly used physical examination tests for a meniscal tear are the joint line test, McMurray's test, and Apley's test. In the joint line test, physicians palpate the joint line for any tenderness while the knee is at 90° of flexion; tenderness indicates a positive test. McMurray's test requires the patient to flex the knee and then extend and rotate it. A clicking sound or feeling a click when palpating indicates a positive test. Apley's test requires the patient to be in a prone position with the knee bent at 90°. The physician presses the tibia onto the knee while externally rotating the leg; pain indicates a positive test. Physical examination tests are not sufficient in diagnosing a meniscal tear and they are used in conjunction with either arthroscopy or MRI to confirm the diagnosis. Arthroscopy is the gold standard and allows physicians to look directly with the joint at the menisci, but it is an invasive procedure and can carry risks such as infection or septic arthritis. MRI is the preferred method due to it being a noninvasive procedure. **TREATMENT & RETURN TO ACTIVITY:** Repairing the meniscus is the key in allowing the patient to return to activity. Surgically repairing the meniscus is one of the methods used to alleviate the problem. It is preferable to a meniscectomy, as the meniscectomy may lead to further joint problems in the future. However, the repair does have a longer recovery time because the meniscus needs to heal itself after it is sutured back together. Weight bearing should be kept at a minimum after surgery. The patient will require the use of a brace to keep the knee stable and use crutches to keep weight off of the affected knee. Rehabilitation exercises will be prescribed to restore range of motion and strength. There are many factors that can affect return to activity, but generally it occurs at three to four weeks following a meniscectomy or approximately three months following a meniscus repair.

