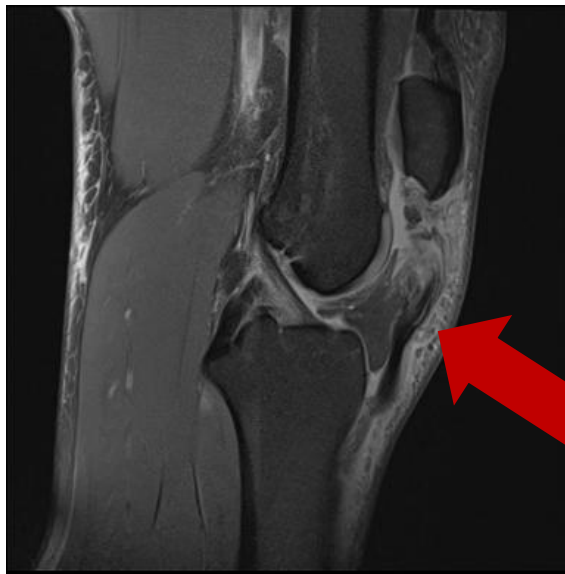


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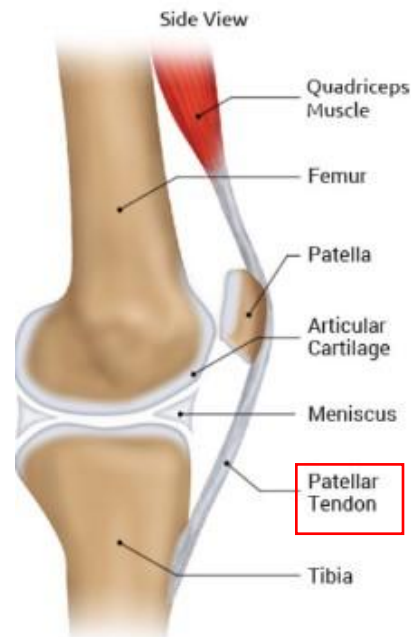
SHOULDER, KNEE & SPORTS MEDICINE

Patellar Tendon Rupture

Patellar tendon rupture is a complete tear of the patellar tendon. This structure is the tendon attachment of the quadriceps (thigh) muscles to the leg. The quadriceps muscles become a tendon above the patella (kneecap), which attaches into the patella, and then the patella tendon runs from the patella to the tibia (the lower leg bone). With a patella tendon rupture, there is loss of continuity between the quadriceps muscles and the tibia and therefore, a loss of function of the quadriceps muscles when trying to straighten the knee. The function of the quadriceps muscles is to forcefully straighten the knee or slow the knee during bending or squatting.



MRI confirming torn patellar tendon



Frequent Signs and Symptoms

- A pop or rip felt at the knee or under the kneecap (patella) at the time of injury
- Pain, tenderness, swelling, warmth, or redness over and around the patellar tendon
- Pain when trying to forcefully straighten the knee or bend the knee
- Inability to straighten the knee when seated
- Crepitation (a crackling sound) when the tendon is moved or touched
- Bruising at the patellar tendon and knee after 48 hours
- Loss of firm fullness when pushing on the area where the tendon ruptured (a defect between the ends of the tendon where they separated from each other)
- Inability to stand, walk, run, navigate stairs, sit up from a chair



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Etiology (Causes)

- Sudden episode of stressful overactivity, such as with jumping, hurdling, or starting a sprint
- Direct blow or injury to the knee
- Fall that causes forceful bending of the knee

Risk Factors

- Sports that require sudden, explosive muscle contraction, such as those involving jumping and quick starts; also, with running or contact sports
- Poor physical conditioning (strength and flexibility)
- Previous patellar tendon injury
- Untreated patellar tendinosis
- Cortisone injection into the patellar tendon (potentially)
- Fall risks

Outcomes

With early and appropriate surgical intervention, patients are typically able to return to their pre-injury level of competition. This injury requires approximately 4-6 months of formal rehabilitation following surgical repair.

Prevention

- Appropriately warm up and stretch before practice or competition.
- Allow time for adequate rest and recovery between practices and competition.
- Maintain appropriate conditioning:
 - Cardiovascular fitness
 - Knee and thigh strength
 - Flexibility and endurance
- Taping, protective strapping, or an adhesive bandage may be recommended before practice or competition.

Potential Complications

- Weakness of the quadriceps muscles, especially if untreated
- Re-rupture of the tendon after treatment
- Prolonged disability
- Risks of surgery, including infection, bleeding, knee stiffness, knee weakness, pain when sitting for long periods, pain when getting up from a seated position and when kneeling or squatting, pain going up or down stairs or hills, and knee giving way or buckling



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Treatment Considerations

Initial treatment consists of not walking on the affected leg, icing the area, applying a compressive elastic bandage, elevating the injured leg, and ordering an MRI to evaluate the pattern of the tear. Definitive treatment requires surgery within 3 weeks to repair the tendon. Surgical treatment usually involves sewing the ends of the tendon back together, followed by immobilization in a long leg brace for 6 weeks. After surgery and immobilization, physical therapy is usually needed to regain knee motion and strength, and recovery requires approximately 6 months

Possible Medications

- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take within 7 days before surgery), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.
- Pain relievers may be prescribed as necessary by your physician. Use only as directed and only as much as you need.

Modalities (Cold Therapy)

Cold is used to relieve pain and reduce inflammation. Cold should be applied for 10 to 15 minutes every two to three hours for inflammation and pain and immediately after any activity that aggravates your symptoms. Use ice packs or an ice massage with a cloth between the ice and your skin to prevent burning /freezing your skin.

Notify My Office If Symptoms Worsen



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