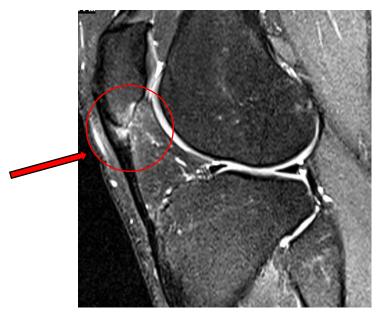
### SHOULDER, KNEE & SPORTS MEDICINE

# Patellar Tendinosis or "Jumper's Knee"

The patellar tendon runs from the patella to the tibia (lower leg bone) to transmit the force of the powerful quadriceps muscle on the front of the thigh. The patellar tendon sees tremendous repetitive forces when we run, jump, and land. With overuse, the patella tendon, typically just below the patella (kneecap), degenerates, thickens, and becomes painful. We call this patellar tendinosis or "jumper's knee".



MRI image of patellar tendinosis. Healthy patellar tendon should appear dark black on MRI.

Degenerative tendon area appears with bright white fluid density on MRI.

### **Frequent Signs and Symptoms**

- Pain, tenderness and swelling over the patellar tendon, most often at the lower pole of the patella (kneecap) or at the tibial tubercle (bump on the upper part of the lower leg)
- Pain and loss of strength (occasionally) with forcefully straightening the knee (especially when jumping or when rising from a seated or squatting position) or bending the knee completely (squatting or kneeling)
- Crepitation (a crackling sound) when the tendon is moved or touched



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### **Etiology (Causes)**

- Strain from a sudden increase in amount or intensity of activity or overuse of the quadriceps muscles and patellar tendon
- Direct blow or injury to the knee or patellar tendon

#### **Risk Factors**

- Sports that require sudden, explosive quadriceps contraction (jumping, quick starts, or kicking) for example: basketball
- Running sports, especially running downhill
- Poor physical conditioning (strength and flexibility, such as with weak quadriceps or tight hamstrings)

#### **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
  - Thigh and knee strength
  - Flexibility and endurance
- To help prevent recurrence, taping, protective strapping or bracing, or an adhesive bandage may be needed for several weeks after healing is complete.
- Wear arch supports (orthotics).

#### **Outcomes**

This condition is usually curable if treated appropriately with physical therapy and resting of the affected area.

#### **Potential Complications**

- Prolonged healing time if not appropriately treated or if not given adequate time to heal.
- Recurrence of symptoms if activity is resumed too soon or progressed too quickly
- Untreated, tendon rupture requiring surgery
- Chronic pain that prevents return to full activity



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#### **Treatment Considerations**

Initial treatment consists of rest and ice to relieve the pain, stretching and strengthening exercises of the quadriceps and hamstring muscles, and avoiding aggravating activities. Referral to a physical therapist or athletic trainer for further evaluation and treatment may be helpful. A patellar tendon brace may be prescribed to reduce stress to the tendon. Surgery to remove the damaged or degenerated tendon tissue is rarely necessary and is only considered after failure of conservative treatment.

#### **Possible Medications**

- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take
  within seven 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 by your physician. Use only as directed and only as much as you need.
- Cortisone injections are not given commonly. Cortisone injections may weaken tendons, so it is better to give the condition more time to heal than to use them.

### **Modalities (Heat and Cold)**

- Cold is used to relieve pain and reduce inflammation. Cold should be applied for 15 to 20 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.
- Heat may be used before performing stretching and strengthening activities prescribed by your physician, physical therapist, or athletic trainer. Use a heat pack or a warm soak.

**Notify My Office If Symptoms Worse** 



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