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## **Chondromalacia Patellae**

Chondromalacia means “softening of the cartilage” and is a condition that commonly affects the patella (kneecap). The term is highly overused to refer to any type of anterior knee pain, or pain in the front of the knee. There is some controversy as to whether the condition actually exists, but there are many patients who are found to have “softened” cartilage at the time of arthroscopy, often under the kneecap. It is unclear how softened cartilage causes pain, but it is clear that there may be other knee abnormalities that cause the pain, rather than the chondromalacia itself.

### **Symptoms:**

Pain in the front of the knee, directly under the kneecap, is the hallmark of pathologic chondromalacia patellae. There are many people with chondromalacia, however, who do not have pain. Clicking, catching, and grinding under the kneecap are also common, but again, this does not always equate with pain. The condition can be associated with overuse, particularly individuals who kneel, squat, or do a lot of stair climbing. Going *down* stairs, in particular, is frequently painful. Injury, particularly a blow to the front of the knee, or a fall directly to the kneecap, can sometimes bring on symptoms.

### **Cause:**

Patellar chondromalacia has no known cause, other than when it is preceded by injury or overuse. Women seem to be particularly prone, typically those in the 10-40 year old range, so the development of chondromalacia may be related to hormonal changes, and anatomical difference between men and women (wide hips with narrower knees) that put more lateral stress on the kneecap.



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## Diagnosis:

A careful history and physical examination will often make the diagnosis. Plain x-rays are often obtained and can show associated arthritis under the kneecap, and bony malalignment of the patellofemoral joint. MRI may be indicated if the diagnosis remains unclear, or if there is failure to improve with treatment.

## Treatment:

Most patients with patellar chondromalacia are treated nonsurgically. Physical therapy is the mainstay of treatment, to restore normal strength and range of motion, and to restore normal mechanics. NSAIDS may help to relieve pain and inflammation.

PRP injection may be beneficial with chondromalacia. It may help to stimulate healing damaged cartilage. Other *biologicals*, such as AmnioFix, may help to stimulate the body's own healing response. Viscosupplementation, injection of the knee with hyaluronic acid (Euflexxa, Synvisc, OrthoVisc) may help to stabilize cartilage and help prevent cartilage breakdown. Cortisone injections can be helpful for pain management, but may adversely affect cartilage health.

Surgery is uncommonly indicated for chondromalacia. When needed, arthroscopic debridement can be beneficial when there is concern for cartilage flap tears, and loose cartilage in the knee. This is done in the outpatient surgery setting, and recovery is generally fast.