

**STEVEN CHUDIK MD**  

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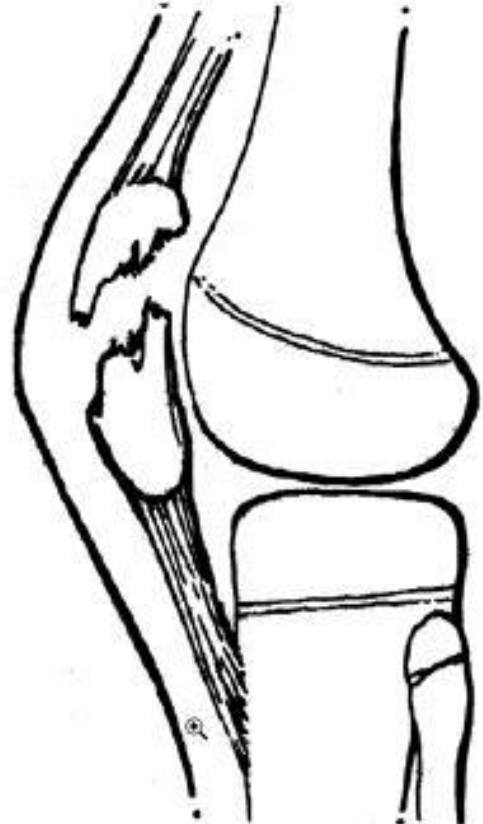
**SHOULDER, KNEE & SPORTS MEDICINE**

## **Patellar Fracture**

Patellar fracture is a complete or incomplete break of the kneecap (patella). Most fractures of the patella are accompanied by sprain or rupture of ligaments, ligament-like tissue (retinaculum), or tendons attached to the patella.

### **Frequent Signs and Symptoms**

- Severe pain in the knee at the time of injury
- Tenderness and swelling in the knee
- Pain when trying to move the knee
- Inability to straighten a bent knee under its own power
- Catching or locking of the knee
- Bleeding and bruising in the knee
- Difficulty in bearing weight on the injured extremity, especially when trying to get up from a sitting position, go up or down stairs, or jump
- Visible deformity if the fracture is complete and the bone fragments separate enough to distort normal leg contours
- Numbness and coldness in the leg and foot beyond the fracture site if the blood supply is impaired



### **Etiology (Causes)**

- Injury causing a force greater than the bone can withstand; usually due to a direct blow
- Indirect stress caused by twisting or bending

### **Risk Factors**

- Contact sports, especially football, hockey, or soccer
- Basketball
- Motor sports
- Bony abnormalities (including osteoporosis), tumors of bone
- Metabolic disorders, hormone problems, and nutritional deficiencies and disorders
- Poor physical conditioning (strength and flexibility)



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### Prevention

- Appropriately warm up and stretch before practice or competition
- Maintain appropriate conditioning:
  - Strength, flexibility, and endurance
  - Cardiovascular fitness
- Wear proper protective equipment (knee pads)

### Outcomes

This condition is usually curable with appropriate treatment.

### Potential Complications

- Failure to heal (nonunion)
- Healing in a poor position (malunion)
- Avascular necrosis (bone death) due to interruption of blood supply to bone
- Arrest of normal bone growth in children
- Risks of surgery, including infection, bleeding, injury to nerves (numbness, weakness, paralysis), need for further surgery, and pain from the wires or screws used to fix the fracture
- Infection in fractures where the skin broken over fracture site
- Arthritic knee joint
- Prolonged healing time if activity is resumed too quickly
- Proneness to repeated knee injury
- After healing, risk of roughened contact surface of the kneecap, causing pain with sitting, when rising from a sitting position, when going up or down stairs or hills, and when jumping or running
- Stiff knee
- Unstable kneecap

### Treatment Considerations

Initial treatment consists of medications, elevation of the leg, and ice to relieve pain and reduce swelling. Cast or brace immobilization, especially if the fracture is in proper alignment and position, is performed. Surgery is usually recommended to reduce the fracture into proper alignment and position if the joint surface is not smooth. This is done by using wires or screws



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to fix the fracture and restore the joint surface's smoothness. After immobilization (with or without surgery), stretching and strengthening of the injured and weakened joint and surrounding muscles (due to immobilization and the injury) are necessary. These may be done with or without the assistance of a physical therapist or athletic trainer.

### **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.
- Your physician for severe pain may prescribe narcotic pain relievers. Use only as directed and only as much as you need.

### **Notify My Office If Symptoms Worsen**



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