

## ***PATELLAR DISLOCATION / SUBLUXATION***

### **DESCRIPTION**

Injury to the kneecap (patella) affecting the joint it forms with the thighbone (femur). The patella is a “V” shaped convex bone that sits within a “V” shaped concave groove of the femur, known as the trochlea. *Patellar dislocation* is where the patella is displaced from its normal position and no longer sits in the trochlea. *Patellar subluxation* is where the patella is not centered within the trochlea but the joint surfaces still touch, thus, the patella is not in normal relationship to the trochlea. This tends to occur in adolescents and young adults.

### **FREQUENT SIGNS AND SYMPTOMS**

- Severe pain when attempting to move the knee and feeling of knee giving way.
- Tenderness, swelling and bruising of the knee
- Patella tends to dislocate to the outer side of the knee causing an obvious deformity. It often will re-locate on its own when the knee is straightened, leaving no deformity. The damage is the same in both cases.
- A lump usually appears on the inner knee which is the end of the inner part of the thigh bone (femur)

### **CAUSES**

- Direct blow to the knee
- Twisting or pivoting injury to the lower extremity as with cutting (rapid change of direction)
- Powerful muscle contraction
- Congenital (born with) abnormality, such as a shallow or malformed joint surfaces

### **RISKS INCREASES WITH**

- Participation in contact sports (football, soccer), sports that require jumping / landing (basketball, volleyball), or sports where cleats are worn on shoes
- Persons with wide pelvis, knocked knees, shallow or malformed joint surfaces
- Previous knee sprains or patellar dislocations
- Poor physical conditioning (strength/flexibility) or are loose jointed

### **EXPECTED OUTCOME**

With appropriate reduction (repositioning of the joint) and treatment, complete healing requires at least 6 weeks.

### **POSSIBLE COMPLICATIONS**

- Associated fracture or joint cartilage injury due to the dislocation or reduction (re-position) of the patella,
- Prolonged healing or recurrent dislocation if activity is resumed too soon
- Excessive bleeding within the knee due to dislocation
- Patella pain and giving way usually due to inadequate or incomplete rehabilitation
- Unstable or arthritic joint following repeated injury or delayed treatment

## GENERAL TREATMENT CONSIDERATIONS

After immediate reduction (repositioning of the bones of the joint), treatment consists of ice and medications to relieve pain. Reduction can be performed without surgery, though surgery may be necessary to remove loose fragments of bone or cartilage caused by the dislocation or reduction and/or to help prevent further dislocation. Elevating the injured knee at or above heart level helps in reducing swelling. Your doctor may drain the blood from your knee. Immobilization by splinting, casting or bracing without immobilization for up to 6 weeks is may be recommended to protect the joint while the tissues heal, though this is not done as frequently any more. Reducing swelling and sometimes a brace is recommended in the early post injury period, using crutches to walk (if no fracture) until you are walking without a limp. Stretching and strengthening of the injured, stiff and weakened joint and surrounding muscles (due to immobilization and the injury) is necessary. This may be done with or without the assistance of a physical therapist or athletic trainer.

## MEDICATION

- Non-steroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take if surgery planned in 7 days or less), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact him/her immediately if any bleeding, stomach upset or an allergic reaction occurs.
- Strong pain relievers may be prescribed as necessary. Use only as directed and only as much as you need.

## HEAT AND COLD:

- Cold is used to relieve pain and reduce inflammation for acute and chronic cases. Cold should be applied for 10 - 15 minutes every 2-3 hours for inflammation and pain, and immediately after any activity which aggravates your symptoms. Use ice packs or an ice massage.
- Heat may be used prior to performing stretching and strengthening activities prescribed by your physician, physical therapist or athletic trainer. Use heat pack or a warm soak.

## NOTIFY OUR OFFICE IF:

- Pain, tenderness or swelling worsens despite treatment
- You experience pain, numbness, or coldness in the foot.
- Blue, gray or dusky color appears in the toenails
- Any of the following occur after surgery:
  - Signs of infection: Fever, increased pain, swelling, redness, drainage or bleeding in the surgical area.
- New, unexplained symptoms develop. Drugs used in treatment may produce side effects.

