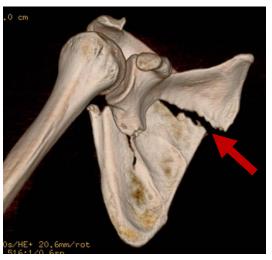
# STEVEN CHUDIK MD SHOULDER, KNEE & SPORTS MEDICINE

**Scapular Fracture of Shoulder** 

A scapular fracture indicates a break in the scapula, or shoulder blade.



Posterior view of scapular fracture, as seen on 3-D CT scan



Anterior-lateral view of scapular fracture on 3-D CT scan

## **Frequent Signs and Symptoms**

- Severe arm pain at the time of injury
- Tenderness, swelling, and later bruising of the arm, chest, or back
- Visible deformity if the fracture is complete and bone fragments separate (displaced) enough to distort normal body contours
- Numbness, coldness, or paralysis below the fracture involving the forearm or hand from pressure on or stretching of blood vessels or nerves (uncommon)
- Pain with attempted motion of the shoulder such as lifting or rotation of the arm

## **Etiology (Causes)**

- High-energy trauma, such as a motor vehicle accident
- Indirect stress due to falling on an outstretched hand or bent elbow
- Direct blow to the scapula



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#### **Risk Factors**

- Contact sports such as football, soccer, hockey, and rugby
- Motor vehicle sports or accidents
- Sports in which falling is possible (snowboarding, volleyball, basketball)
- History of bone or joint disease, previous immobilization of the arm
- Poor physical conditioning (strength and flexibility)

#### **Prevention**

- Appropriately warm up and stretch before practice or competition
- Maintain appropriate conditioning:
  - Cardiovascular fitness
  - Shoulder strength
  - Endurance and flexibility
- Wear proper protective equipment and ensure correct fit
- Use proper technique when falling

#### **Outcomes**

With appropriate treatment and normal alignment of the bones, healing can be expected. Surgery may be necessary to realign fractures that are displaced. Average healing time is six to eight weeks in adults and four to six weeks in children. Full function may require three to four months of therapeutic exercise.

#### **Potential Complications**

- Nonunion (fracture does not heal)
- Malunion (heals in a bad position)
- Chronic pain, stiffness, loss of motion, or swelling of the shoulder
- Excessive bleeding in the arm, causing pressure and injury to nerves and blood vessels (uncommon)
- Heterotopic ossification (calcification of the soft tissues)
- Injury to the nerves of the upper extremity due to stretching from the fracture, causing numbness, weakness, or paralysis (rare)

#### **Treatment Considerations**

If the bones are in appropriate alignment (position), the initial treatment consists of ice and medications to help relieve pain. Immobilization with a sling or shoulder immobilizer for up to six weeks is recommended to protect the bones while they heal. Severe fractures that are



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displaced (not in appropriate alignment) require surgery to restore and maintain the fractures in good position. Surgery usually includes repositioning the fracture fragments and holding the position with sutures, wires, plates, or screws. After immobilization (with or without surgery), stretching and strengthening of the injured and weakened joints (elbow and shoulder) and surrounding muscles (due to the injury and the immobilization) are necessary. This is usually done with the assistance of a physical therapist or athletic trainer.



Post-surgical X-ray of same patient injury shown earlier in 3-D scans.

### **Possible Medications**

Strong pain relievers may be prescribed as necessary. Use only as directed.

## **Modalities (Cold Therapy)**

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.

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



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