

## **S** How did the pt injure the ankle?

Document whether the pt inverted or everted the ankle.

Inversion injuries are associated with injury to the lateral malleolus and associated ligamentous structures.

Eversion injuries are associated with injury to the medial malleolus.

### **Has the pt been able to bear weight and walk since the injury?**

Ask the pt how he or she got to the ED. Often, the triage nurse will place the pt in a wheelchair, but he or she was able to walk to the triage desk.

Inability to walk four steps is an indication to obtain x-rays.

### **Where does the pt localize the pain?**

Localizes the area of injury and helps exclude foot injuries with referred pain.

### **What self-treatment has the pt done to date?**

Pain medications and ice may alter your physical exam.

### **Document past medical history, medications, allergies, and social history**

Exclude co-morbid illnesses, possible medication interactions with your prescribed treatment, and allergies.

Complete documentation is needed in order to bill.

## **O** Perform a physical exam

Note any tenderness, ecchymosis, or swelling.

- Specifically check for tenderness over:
  - ◆ Fifth metatarsal head: Exclude a Jones or dancer's fracture.
  - ◆ Navicular: Exclude fracture/dislocation.
  - ◆ Fibula head: Exclude a Maisonneuve fracture (proximal fibula fracture, disruption of the interosseous membrane, and medial malleolus fracture or deltoid tendon rupture).

Document normal sensation and pulses.

### **Perform the Thompson test**

Ensure that the Achilles tendon is intact. With the foot in a neutral position, squeeze the calf muscles. Foot should plantar flex. Lack of movement suggests complete rupture of the Achilles tendon. Movement will be normal with partial ruptures.

### **Test the stability of the ankle joint**

*Anterior draw:* Test the anterior talofibular ligament (ATFL). Push the tibia posterior while pulling the heel forward. Increased laxity or movement when compared to the unaffected side suggests injury.

*Talar tilt:* Tests ATFL and calcaneofibular ligament. Plantar flex the foot and test for laxity with inversion and eversion. Compare to the unaffected side.

### **Consider obtaining radiographs**

According to the Ottawa ankle rules, an ankle series is indicated for:

- Inability to walk more than four steps
- Bony tenderness on posterior edge or tip of either malleolus
- Bony tenderness over 5th metatarsal head or navicular (include foot series)

Obtain a full tibia/fibula series if pt has pain over the proximal fibula.

## **A** Ankle Sprain

Ligamentous sprain that is graded 1, 2, or 3:

- Type 1: mild stretch of the ligament with fibers remaining intact
- Type 2: partial disruption of ligament fibers
- Type 3: complete disruption of the ligament

ATFL is the most common tendon injured.

### **Achilles Rupture**

Risk of rupture increased with use of prednisone, fluoroquinolones, and age older than 60.

### **Ankle Fracture**

#### **Foot Fractures**

Jones fracture: Fracture of the 5th metatarsal.

Dancer's fracture: Avulsion fracture of the base of the 5th metatarsal.

## **P** Provide supportive care

All injuries should be treated with Rest, Ice, Compression, and Elevation (RICE).

NSAIDs and narcotics may be needed for pain relief.

### **Ankle Sprains**

Pt should bear weight as tolerated.

Severe (type 3) sprains should be treated with posterior splint, non-weight-bearing status, and referral to orthopedics.

Air or gel stirrup braces can help prevent recurrent sprains while allowing plantar and dorsiflexion.

Pts with persistent pain after 2 wks of conservative therapy should be referred to Orthopedics.

### **Achilles Rupture**

Orthopedics consultation

Treatment is controversial. Options include operative repair or conservative therapy with casting and non-weight-bearing status.

### **Ankle Fractures**

Orthopedics consultation for any open fracture or unstable fracture.

- Open fractures also require antibiotic treatment (i.e., cefazolin) and assurance that tetanus immunization is up-to-date.

Stable fractures can be managed with splint (posterior stirrup), non-weight-bearing status, and orthopedic referral.

### **Foot Fracture**

Posterior splint

Orthopedics referral

### **Disposition**

Most pts will be discharged home, with follow-up arranged with orthopedics or primary care provider.

Admit all pts with open or unstable fractures that will require operative repair.