

# **Phalanx Fractures of the Foot**

See also Phalanx Fx, Foot

## **Background**

1. Very common fracture
2. Seen in sports not requiring footwear
  - Martial arts
  - Yoga
  - Gymnastics

## **Pathophysiology**

1. Mechanism
  - Axial force
    - Stub toe on turf / floor
    - Crush injury (player steps on foot)
  - Hyperextension injury
    - Less common
    - May cause spiral or avulsion fracture
  - Stress fractures are rare

## **Diagnostics**

1. Swelling, bruising, pain worse w/standing
2. Always evaluate capillary refill
3. Evaluate toenail for hematoma
4. X-ray: AP, lateral, oblique

## **Therapeutics**

1. Acute phase
  - RICE
  - NSAIDs
2. Stable non-displaced fracture
  - Buddy tape to adjacent toe until no tenderness
  - Rigid sole shoe
3. Lesser toe displaced fracture
  - Reduction
  - Buddy tape
4. First toe displaced fracture
  - Reduction
  - Post-reduction x-ray
  - Rigid immobilization w/cast shoe or walking boot
5. Surgical referral
  - Circulatory compromise
  - Open toe fractures: high osteomyelitis risk
  - First toe fractures
    - Unstable fractures that spontaneously displace
    - >25% intra-articular involvement
  - Difficult fracture reduction

## **Prognosis**

1. Return to play
  - 4-6 wks after non-operative case
  - Sport-specific activity allowed when radiographic union verified and full ROM restored
2. Complications
  - Persistent pain
  - Activity intolerance
  - Malunion
  - Degenerative joint dz
  - Osteomyelitis (open fracture)

## **Patient Education**

1. <http://www.footphysicians.com/footankleinfo/metatarsal-fractures.htm>

## **References**

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2. Umans HR. Imaging sports medicine injuries of the foot and toes. *Clin Sports Med* 2006;25(4):763-80
3. <http://www.aafp.org/afp/20031215/2413.html>
4. <http://aapgrandrounds.aappublications.org/cgi/content/extract/5/4/40-a>

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