Ankle Fractures Overview

An “ankle fracture” (broken ankle) occurs when one or both (fibula or tibia) of the bones making up the top part of the ankle joint are broken. Most commonly this is the bone on the outside of the ankle (the fibula).

Most ankle fracture can be managed with Pneumatic Walker (Aircast AirSelect *or* Rebound Walker). Pneumatic boots are commonly referred to as “Moonboots”- these boots have a rigid plastic molded shell and has air cells that can inflate inside the shell to ensure that the leg, ankle and foot is secure and can not move.

Pneumatic Walker (Aircast AirSelect *or* Rebound Walker) has become increasingly more common than plaster-of –paris casts. The reason for this is that air walkers are more comfortable to wear than plaster-of –paris casts as you can still clean you ankle and foot. The Pneumatic Walkers also ensure optimal fit during the healing period as the boots inflate to get a customized fit and ensure optimized stabilization of the fracture site

The ankle joint is formed by three bones (Figure 1):

- The *Tibia*. The large bone forming the top and inside (media aspect) of the ankle joint
- The *Fibula*. The smaller bone making up the outside (lateral aspect) of the ankle joint.
- The *Talus*. The dome shaped lower bone of the ankle joint.

Ankle fractures can be broadly divided into two groups:

1. ***Stable Ankle Fractures*: The ankle joint remains intact (Figure 2)**

   A *stable ankle fracture* (Figure 2) occurs if just the outside bone (fibula) is broken and the syndesomosis structures on the inside of the ankle (medial malleolus and deltoid ligaments) are intact.
   Stable ankle fractures can be treated non-operatively by limiting activity until the bone has healed (usually 6 weeks).

Figure 1| Ankle Anatomy

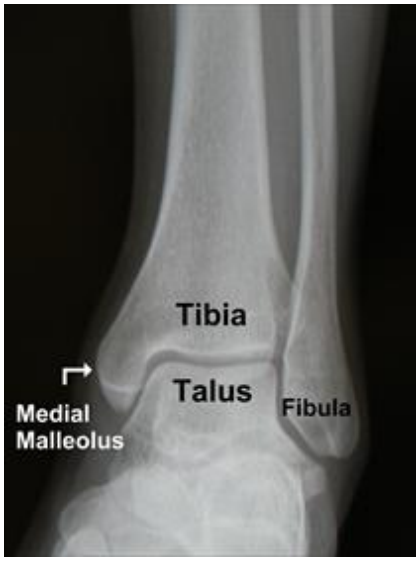
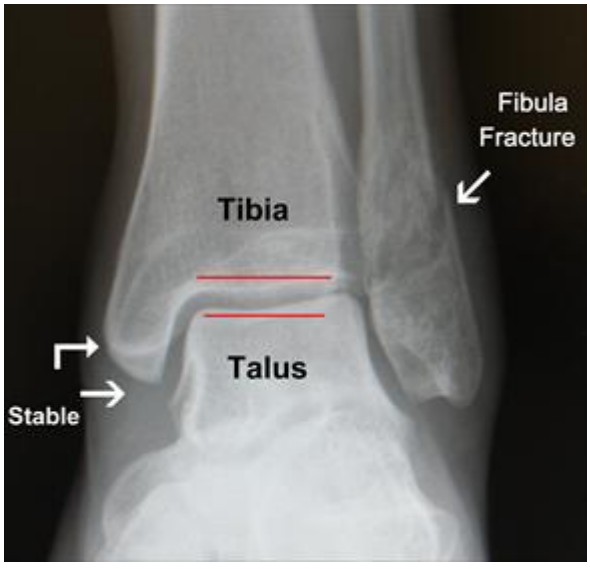


Figure 2| Stable Fracture



2. ***Unstable Ankle Fractures*: The ankle joint is displaced (Figure 3)**

   An unstable ankle fracture (Figure 3) occurs if the injury causes the structures on the inside (medial aspect) of the ankle to be disrupted. This type of injury allows the lower bone of the ankle (the talus) to be loose and potentially poorly positioned within the ankle joint (See Figure 3).

   Surgery is generally indicated to ensure that bones are realigned correctly.

   Your surgeon will prescribe a Pneumatic Walker (Aircast AirSelect *or* Rebound Walker) to assist with stabilizing the fracture site.

   Note| Each surgeon has their own protocol, the information provided is general and may differ from your surgeons protocol.

Figure 3| Unstable Ankle Fracture

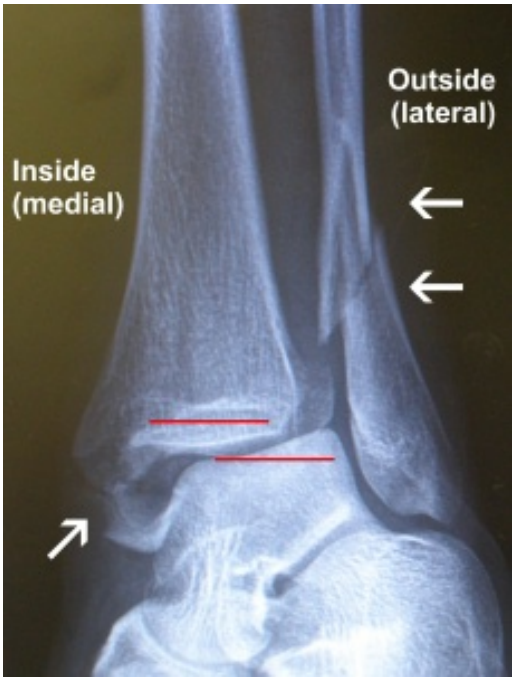


Figure 4| Unstable Ankle Fracture Stabilized with surgery

Edited by John Early, MD on May 18th, 2013