ANKLE FRACTURES

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WHAT IS AN ANKLE FRACTURE?

The ankle joint is a complex structure that plays an important role in supporting body weight and enabling movement. It is composed of three bones, along with several ligaments and tendons that provide stability and mobility. The three bones are the tibia (shinbone), the fibula (outside calf bone) and the talus (bone which connects the leg to the foot). An ankle fracture, more commonly known as a broken ankle, is an injury that occurs when one or more of the bones that make up the ankle joint break. This injuries can range from stable breaks that can be treated with a moonboot to life changing fracture dislocations that take months and/or years of rehabilitation
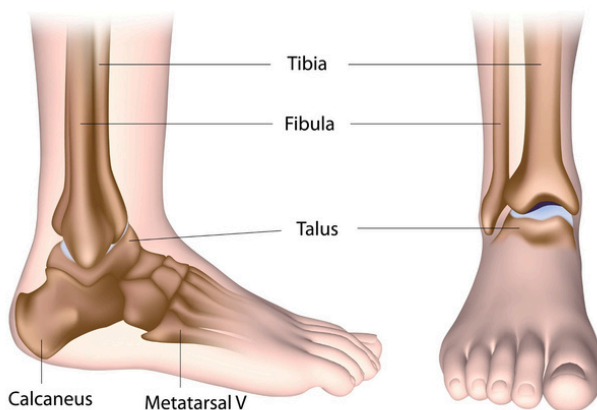
Ankle fractures can be classified into various types depending on their location:

- Lateral malleolus fracture: A fracture of the fibula near the ankle joint, on the outer side of the ankle.
- Medial malleolus fracture: A fracture of the tibia near the ankle joint, on the inner side of the ankle.
- Posterior malleolus fracture: A fracture of the back part of the ankle joint.
- Bimalleolar fracture: A fracture involving both the lateral and medial malleoli, which often results in an unstable ankle and requires emergency surgery

Fracture of the lateral malleolus

Fracture of the medial malleolus

Xray of a bimalleolar ankle fracture

Diagram illustrating the bones of the ankle joint

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- Trimalleolar fracture: A fracture involving the lateral and medial malleoli, as well as the posterior malleolus. This type of fracture is usually more severe and requires surgical intervention.
- Talus fracture: A fracture of the talus bone, which can range from minor to severe.
- Avulsion fracture: A fracture where a small piece of bone is pulled away from the main bone by a ligament or tendon
- Syndesmosis injury: The syndesmosis is the strong joint that joints the tibia and the fibula at the level of the ankle joint (see **Syndesmosis Injuries**)

RISK FACTORS FOR ANKLE FRACTURES

Some factors that may increase the risk of an ankle fractures include:

- Participation in high-impact sports
- High forces through the ankle joint
- Osteoporosis or weak bones
- Advanced age
- Being overweight
- Excessive alcohol intake
- Smoking

SYMPTOMS OF AN ANKLE FRACTURE

Individuals who experience an ankle fracture may have the following symptoms:

- Sudden and severe pain
- Swelling and bruising
- Inability to weight bear on the affected ankle
- Deformity or visible bone protrusion
- Limited range of movement

CAUSES OF ANKLE FRACTURES

Ankle fractures can occur with:

- A sudden twist or roll of the ankle, often occurring during sports activities.
- Direct impact to the ankle, such as from a fall or collision
- Missteps on uneven surfaces or stairs

DIAGNOSIS

Imaging tests, such as X-rays, CT scans, or MRIs, may be ordered to confirm the diagnosis and assess the severity or extent of the fracture and possible associated injuries. They can also help with pre operative planning.

TREATMENT

The treatment of an ankle fracture depends on the type and severity of the injury. Treatment options can be divided into non-surgical and surgical approaches.

Non-Surgical Treatment:

- Immobilisation: A cast, splint, or boot may be used to immobilise the ankle, allowing the bones to heal properly.
- Medication: Over-the-counter or prescription pain relievers and anti-inflammatory medications may be prescribed to alleviate pain and reduce swelling.
- Elevation and ice: Elevating the injured ankle and applying ice can help minimise swelling and discomfort.
- Physiotherapy: Once the fracture has healed, a physiotherapist may recommend exercises and stretches to restore strength, flexibility, and range of movement.

Surgical Treatment:
In cases of severe or displaced fractures, surgery may be necessary to realign the bones and secure them with screws, plates, or other hardware. (See **Ankle Fractures Surgery Information**)

USEFUL WEBSITES

Health Direct
https://www.healthdirect.gov.au/surgery/ankle-fracture-surgery

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