ANKLE INJURIES

Untreated sprained ankles heal incorrectly, leaving the patient with a stiff or weakened ankle, which is at a higher risk of re-injury.

The ankle's stability is provided by a number of ligaments, located on either side of the ankle joint, that are designed to protect the joint from excessive movement. On the inside of the ankle, there is the deltoid ligament. The lateral ligament complex (outside) consists of the weaker anterior talofibular, calcaneofibular and posterior talofibular ligaments.

How an ankle sprain occurs?

An ankle sprain occurs when the ankle joint is taken beyond their normal range of movement and results in tearing of some of the above mentioned ligaments.

Tearing is graded as:

Grade 1: Mild: Involves a ligament stretch and no joint instability

Grade 2: Moderate: Partial ligament tearing and some loss of joint stability

Grade 3: Complete: Complete ligament rupture and abnormal joint motion and instability.

The most common mechanism of injury is when the foot lands awkwardly, resulting in the ankle joint suffering an inversion injury (i.e. the foot rolls inwards). This is the most common type of ankle injury that occurs in sport.

Symptoms

1. Pain and difficulty weight-bearing / walking
2. Swelling, that may occur either quickly (less than 30 minutes) or later that day
3. Restriction in ankle movement
4. Giving way or a feeling of instability, particularly on un-even ground or when changing directions
5. Recurrent clicking

Treatment

Rehabilitation is necessary to strengthen the ankle joint and restore propeioception (balance) so you can return to daily living and playing sport.

Physiotherapy management will involve a thorough physical and biomechanical assessment to assess the extent of your injury, treatment can commence immediately. If there is a concern of possible bone fracture further investigations maybe required (i.e. x-ray).

The rehabilitation program includes:

RICE: this will prevent the ankle joint and its associated damaged structures becoming more sensitive and painful, and involves:

1.**Rest**: by restricting loading on the ankle joint, it will minimise any further damage to your injured ankle. This may involve the use of crutches, braces and / or taping.

2**.Ice**: regular application of ice will provide pain relief and minimize associated secondary soft tissue damage.

3.**Compression**: minimise secondary damage and swelling to neighbouring soft tissues.

4.**Elevation**: to assist in minimising ankle / foot swelling, by improving return blood flow to the heart.

Massage: plays an important role with healing of the damaged ligaments by improving local blood flow and releasing adhesions in the ankle ligaments. This ensures they re-form appropriately, minimizing the development of any scar tissue in the ankle joint and / or ligamentous structures.

Increase Strength: by a series of graduated exercises to the muscles of the lower leg, to improve the range of movement and the control of the ankle joint.

Proprioceptive (Balance) Exercises: these will promote good foot positioning prior to landing and improve postural control. This is the most important part of the rehabilitation program, as it will significantly lower the risk of ankle re-injury.

Stretching: poor gastrocnemius / soleus muscle flexibility can overload the ankle joint and associated foot structures. Hence, a regular stretching program to maximize their length is essential for correct ankle function.

Sports specific retraining: ensure optimal performance when returning to play

Surgery: can be a possibility if conservative physiotherapy rehabilitation fails, an appropriate referral to an orthopaedic surgeon for further investigations (Bone scans, CT, MRI) can assist in ongoing management and to determine whether surgery is appropriate.