

## What is Over Pronation?

The mechanics of how we walk and move is important to ensuring that we remain injury free. Unfortunately in many cases the architecture of the foot can disrupt our gait (the way we walk), potentially causing long term injury and pain problems.

Over-pronation, or flat feet, is a common biomechanical problem that occurs when a person's arch collapses too far upon weight bearing, and is said to be "over-pronated". Pronation is the natural motion of the foot as it rolls inward and flattens out when the foot makes contact with the ground. Pronation is part of the body's natural, complex shock absorption and allows the foot to adapt to the contour of the ground. Too much pronation will cause the arch of the foot to flatten excessively, placing stress and pressure on the tissues and ligaments of the foot.

The best way to determine if you over pronate is to visit a Podiatrist who can do a full gait analysis. It is not only the amount of over pronation which is important but the timing of it during the gait cycle as well that needs to be assessed. This is quite a common problem and may lead to a number of injuries, including:

- Arch Pain
- Stiff big toe (Hallux limitus)
- Shin splints
- Heel spurs
- Plantar heel pain
- Bunions (Hallux valgus)
- Knee pain
- Achilles tendon problems
- Lower back pain
- Pain in the ball of the foot (metatarsalgia or Morton's neuroma)



### Treatment and Prevention:

- Custom made orthotics provide the required arch support to effectively reduce excessive pronation and restore the foot and its posture to the right biomechanical position
- Footwear should also be examined to ensure there is a proper fit. Footwear with a firm heel counter is often recommended for extra adequate control, support and stability
- Strapping/Taping the foot in a certain way provides support for the foot as well as stability and may be used in acute cases or as a first line treatment
- Stretching and strengthening exercises may be prescribed to help loosen tight muscles and ligaments and strengthen certain muscles in order to achieve better foot function and prevent further strain
- Foot Mobilisation Technique helps joints that may have become stiff or fixed to loosen up and in turn allow for better foot function