



## **THE REHAB ROOM**

### **Stress Fractures**

Stress fractures are a break in the bone due to repetitive loading. It begins as a “stress reaction” and with time and continual loading, develops into a “stress fracture” due to the bone’s inability to adapt to the training load.

Stress reactions and fractures are often difficult to diagnose and are sometimes missed as they may not be seen on a normal x-ray. If a bone stress injury is suspected a MRI scan or bone scan should be done to form an accurate diagnosis.

Common symptoms of a stress fracture include localised pain that increases with activity and swelling.

A few of the risk factors for developing a stress factor include...

- 1) **Gender-** It has been found that females have a greater risk of developing a stress fracture than males. This is thought to be due to a number of reasons including females having thinner bones, wider hips and more likely to have adverse biomechanics.
- 2) **Biomechanics-** Poor biomechanics such as knee valgus (when knees roll inwards) and flat feet can result in adverse forces that are repetitively passed through bones which creates increased stress.
- 3) **Type of sport-** Sports that involve high impact, repetitive activities (such as long distance road running) are most likely to result in stress fractures in lower limb. Stress fractures can also be seen in upper limbs due to repetitive, high intensity muscle contractions (such as bowling in cricket).
- 4) **Training load –** High training loads with inadequate rest is a very common cause of stress fractures. It is most likely to occur when there is lack of variation in the training or when there is a sudden increase in training intensity e.g. after returning from injury.

Stress fractures are treated differently depending on their location and severity. It is important that if you have a stress fracture, you are seen by a health professional who can advise on a safe treatment approach and return to sport.

If a stress fracture is displaced, surgical intervention is usually necessary however many stress fractures are able to be treated conservatively. Some treatment methods include pain control, ice and off loading the effected area. A decreased training load is generally

also required. Training does not necessarily have to stop, you may be allowed to change to a low impact type of training such as swimming whilst the stress fracture is healing.

Other adjuncts such as aircasts (shown in the picture above) or orthotics are often used to offload stress fractures if they are located in the lower limb. After recovery from a stress fracture, it is important to identify why the injury occurred initially. A rehab programme should be created by a physiotherapist to assist in injury

prevention. This may include changing running biomechanics and increasing muscle strength, flexibility and endurance.



**By: Rowena Myrans**

Rowena Myrans graduated from King's College London in 2011 and has been working in private practice in Hong Kong ever since. Rowena has an interest in treating sports injuries which led her to complete an MSc in Sports Medicine and Health Science in Hong Kong, combining this with experience in orthopaedic and work related injuries and training in clinical Pilates.