

Stress Fracture

Fact Sheet



Stress fractures are small, hairline cracks within a bone. Unlike standard fractures which typically occur from trauma, stress fractures develop gradually over time because of ongoing stress placed on the bone. While stress fractures can affect any bone, they are more common in bones including the **metatarsals** (the long bones of the feet) and the **tibia** (shin bone).

What are the symptoms?

Because the damage from stress fractures build up over time, the pain can come on gradually without being linked to a certain incident or event. Sometimes, the initial sign may be a slight niggle that is easy to pass off or ignore. Symptoms around the stress fracture site may include:

- Pain and localised tenderness, ranging from mild to severe
- Pain that is exacerbated by weight bearing or physical activity
- Pain that tends to settle with rest
- Swelling and/or bruising

What causes stress fractures?

When high-impact forces are repetitively put on a bone, tiny cracks may form. Over time and with more stress to the bone, these cracks can continue to grow and begin to cause painful symptoms. This is a stress fracture. Any activity or condition that results in pressure and heavy loads on a bone, or the weakening of the bone, can contribute to the development of a stress fracture. This includes:

- High-impact physical activities such as running
- Sudden increase in training intensity

- Poor foot biomechanics or alignment issues
- Unsupportive footwear
- Increased weight
- Malnutrition
- Decreased bone density, like in osteoporosis

Managing stress fractures at home

If you suspect that you have developed a stress fracture, the first step is to stop the activities that are causing you pain as it may cause the stress fracture to worsen. The next step is to reduce the load off from that area as much as possible until you're able to see your Podiatrist. You can do this by:

- Wear comfortable, supportive and cushioning shoes as much as possible
- Avoid partaking in sporting activities until you have been assessed
- Rest the injured bone as much as possible
- Use ice to reduce swelling if present (for no longer than 20 minutes at a time every 2 hours)
- Elevate your foot above the level of your heart to help reduce swelling and pain

How your Podiatrist can help

Your Podiatrist will help by conducting an assessment and formulating a treatment plan to help heal the bone and address the cause to reduce the risk of it happening again. This may include:

- Orthotics to address any biomechanical and alignment issues of the feet and legs that may be resulting in increased stress through the bones
- Footwear assessment to ensure the shoes are helping and not hindering recovery, and are not causing increased loading through certain bones

- Activity modification to avoid activities that will overload the same bone and cause more damage
- Stretching and strengthening of muscles that may have contributed to the biomechanics of the feet that caused the stress fracture
- Referring for an x-ray if further investigation is required

Disclaimer: This document is an informative guide only and is not a tool for diagnosis. If you suspect that you have a stress fracture, we recommend that you see your Podiatrist immediately for an accurate diagnosis and an appropriate treatment plan. Referrals are not required to see your Podiatrist.