



STRESS FRACTURES



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Cause

Stress fractures are small bone fractures that often occur from overuse or dancing on improper surfaces. They occur in the internal structure of the bone and if left untreated can lead to larger complete fractures. Stress fractures can occur in nearly any bone of the body however in dancers we commonly see them in the metatarsals the tibia and the fibula. Stress fractures will often not show up on plain film x rays, so if they are suspected, follow up MRI or bone scans may be required

Stress fractures are usually the result of increasing the frequency or intensity of an activity too quickly. This is because the bone usually adapts to increased load overtime through a process called remodelling however when it does not have ample time to rest and recover the bone weakens leading them to be susceptible to stress fractures.

The following list of risk factors makes individuals more susceptible to stress fractures:

- **High impact sports** including dancing and gymnastics
- **Footwear** shoes with minimal padding or shock absorption
- **Females** especially those with abnormal or absent menstrual cycles
- **Foot problems** people who over pronate or have rigid high arches are at an increased risk of developing stress fractures
- **Previous stress fractures**
- **Lack of nutrients** lack of vitamin D and calcium often caused by eating disorders



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Symptoms

Symptoms of a stress fracture can be quite mild at first and increase with time. Some of the symptoms that may be experienced with a stress fracture include:

- Dull ache
- Pain at night or when at rest
- Sharp localised pain at a pinpoint area with specific movements
- Tenderness and mild swelling around the area

Treatment

Treatment will depend on the location of the stress fracture but will usually involve a combination of the following:

- Rest
- Footwear modifications and padding
- CAM walker
- Change in training patterns
- Nutritional advice