



Stress Fractures

Stress fractures are small cracks in the bone and are caused from repetitive overload due to muscular fatigue. The muscles are unable to completely absorb the shock and the force is transferred to the bone leading to the small cracks and fissures in the bone. Most stress fractures reported are seen in the lower leg or the foot due to their weight bearing properties. Activities such as running, jumping and repetitive foot to ground striking increase the chances for developing a stress fracture.

Stress fractures are generally caused by changing the training regimen without a gradual progression in the training variables. The training variables would be mode, intensity, frequency and duration. These are known as intrinsic factors. Extrinsic factors that would affect the force applied to the bone would be variable such as shoes, training surfaces, improper training, nutritional deficiencies and weather conditions. Incorrect monitoring of any of these factors will lead to an overloaded stress along the bone. Females are more likely to have stress fractures due to three factors known as the female athlete triad. Osteoporosis, amenorrhea, and eating disorders are the categories to the female athlete triad. Females have less bone density than males which increases their chances for fractures. Amenorrhea relates to infrequent menstrual cycles which play a part in nutrient and hormonal transport throughout the female body. Females are also more likely to have an eating disorder than males which disturbs metabolism and nutritional balances.

Treatment for stress fractures follows rest from the activity for six to eight weeks with frequent ice application. However, it is important to continue to participate in other pain-free activities. If the activity that caused the stress fracture is resumed too early, a more complicated and harder to treat stress fracture can develop. Occasionally, if the fracture is too severe, it may never heal properly. A simple guideline to follow is GRADUAL PROGRESSION in any of the training variables.

Highlights:

- Overuse injury generally caused from repetitive ground striking.
- Females are more likely to have stress fractures.
- Gradual progression in any activity is the key to avoiding stress fractures.

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