

# Stress Fracture

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A stress fracture is an injury which most commonly occurs in the bones of the lower leg - the tibia and/or the fibula. This injury is the result of these bones being unable to withstand repeated stress. The tibia and fibula are responsible for bearing the body's weight resulting in great repetitive force during running sports. Different from most fractures, stress fractures generally do not occur from a single episode. As the bones of the lower leg are subject to constant repetitive stress, as with running, they must adapt to the increased demand. Bone is in a state of remodeling that involves removal of old bone and then replacement of new bone. During this rebuilding of bone, problems can arise if the stresses placed on the bone exceed the ability of the bone's remodeling, not allowing enough time to form new bone. Eventually a weakened area forms that is highly susceptible to a stress fracture.

A stress fracture will produce an area of localized pain. Initially this pain will occur only after activity. As the condition worsens, the pain begins sooner during the workout. The intensity of the pain will later become greater and last for longer periods of time. Mild swelling may be present at the sight of pain, as well as being tender to pressure. A definite diagnosis requires x-rays and a special test called a bone scan. Like shin splints, stress fractures are an over-use injury and rest is necessary for healing. If pain allows, aerobic conditioning may continue using a stationary bike, swimming or running in a pool. Ice should be used to control pain and inflammation. Strengthening of the lower leg muscles will help reduce activity related stress to the bone and stretching of the Achilles tendon may be of benefit. When pain has gone and the fracture has healed, the athlete should return to a progressive running program, making use of these recommendations to avoid re-injury.

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