

STRESS FRACTURES

What is a stress fracture?

Every day, the body produces new bone to replace bone lost to the stress of daily living. This process is usually in a balance, regulated by the body. However, this balance can be upset by excessive physical training. When muscles become fatigued and are unable to absorb the shock of physical activity, the stress is transferred to the bone, resulting in a "micro-crack" in the bone, called a stress fracture. Think of a stress fracture occurring from suboptimal stress which is cumulative; this is different than forces required to fracture a bone.

What causes a stress fracture?

The most common cause of a stress fracture is a sharp increase in physical activity and/or intensity without adequate periods of rest. It can also be caused by the impact of a surface (playing basketball on a concrete court rather than a wood court), poor equipment (worn out shoes, for example, that can't provide adequate foot support or absorption of vibration), or increased physical stress (a basketball player who dramatically increases his or her playing time, for example).

Are women at a higher risk for a stress fracture than men?

Yes. Medical studies support the theory that female athletes experience more stress factors than males. Many sports medicine professionals attribute this to a condition referred to as "the female athlete triad". The triad consists of eating disorders (bulimia or anorexia), amenorrhea (disrupted menstrual cycle) and osteoporosis. These disorders can result in decreased bone mineral density and an increased risk of stress fractures. Women who run more than 40 miles/wk are at increased risk for developing an abnormal menstrual cycle (irregular, intermittent, or cessation). This is why your doctor may ask about your menstrual cycle.

Where do stress fractures occur?

Although stress fractures occur in nearly every bone in the human body, more than 50% of all stress fractures occur in the lower leg and foot, because these are weight bearing bones. Stress fractures may be associated with a specific sport such as the humerus (upper arm bone) in throwing sports, the ribs in golfing and rowing, the spine in gymnastics and the lower extremity and foot in running activities

What are the symptoms of a stress fracture?

Stress fractures produce pain in a well localized area directly over the area of bone where the fracture has occurred. The pain can increase with activities and decrease with rest. There may be local swelling that is visible, but this is not always the case.

