



Stress Fractures

Stress fractures are somewhat peculiar injuries which are not very well understood by most persons. Some patients have actually never heard of them. Every day the body makes new bone to replace the bone that is broken down by the stress of living. The process is balanced with the body replacing the equal amount of bone that is lost. If the process is upset for some reason, and there may be several factors, the body may not produce sufficient bone. As a result micro cracks, called stress fractures, can occur in the bone.

Other factors may affect the building process such as too little sleep, a diet with inadequate calcium, and perhaps most commonly a rapid increase in the person's activities. Sometimes stress fractures may actually occur from minor trauma like accidentally kicking one leg when running.

How do I know if I have a stress fracture?

Pain is the major finding that will help in the diagnosis of a stress fracture. The pain is in a very limited area directly over the part of the bone where the fracture has occurred. The pain is increased by activities and decreases with rest and actually may disappear with rest.

There is pain when pressure is applied to the area of a stress fracture when the doctor examines the patient. Hopping or jumping on the leg with a stress fracture always increases the pain. There may, at times, be swelling in the injured area as well.

X-rays are usually not helpful in diagnosing stress fractures early because the bones may look normal and the micro cracks may not be visible yet on plain x-rays. Sometimes if the bone has begun to heal or repair itself a healing reaction called callus can be seen on x-rays. Early diagnosis of a stress fracture is usually made by a bone scan, which is a special radioactive test done by injection of a radiotracer into the blood stream. After two or three hours the patient is placed under a scanner to check the affected bone. MRIs are also sometimes used to confirm the diagnosis.

How are stress fractures treated?

A stress fracture involves only the bone and therefore, unlike other fractures, skin, muscle and other tissue usually are not affected. Since these tissues are intact, they provide protection for the injured bone. A cast usually is not required for a stress fracture, but a walking brace might be suggested. A cane or crutches are usually necessary. Return to activity is a gradual process, while swimming or biking can usually be done to maintain muscle conditioning. When the doctor determines that stress may be applied to the bone, a gradual increase in stress is the key. Each increase in activity must be done slowly and for short amounts of time. The doctor will guide the patient through the steps of recovery and can monitor the degree of fracture healing with x-rays.

Increasing the calcium intake above 1,000 to 1,500 mg of calcium per day required for normal bone repair will not help the stress fracture heal more rapidly.

ADDENDUM

Common causes of stress fractures are increasing the amount or intensity of activity too rapidly and improper equipment such as ill-fitting running shoes.

Female athletes experience more stress fractures than male athletes. Some feel this could be related to eating disorders, amenorrhea, and osteoporosis. As a woman's bone mass decreases, the chances of getting a stress fracture will increase.

Most stress fractures occur in the lower leg and foot.



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What activities cause stress fractures?

Repetitive stress of the foot striking the ground causes trauma to the foot and lower leg. Without sufficient rest between workouts or competitions an athlete is at risk for developing a stress fracture.

The most important treatment for a stress fracture is rest and avoidance of the activity that caused the stress fracture. A person can engage in any pain free activity during the 8 weeks that it takes most stress fractures to heal.

Prevention of stress fractures

- Use proper equipment. Old or worn out running shoes are notorious causes of stress fractures.
- A healthy diet is important. Make sure you are taking enough calcium
- Activities which cause pain or swelling should be stopped and rest should be imposed for at least 3 days. If continued pain persists, evaluation is essential.
- Slow increase in any activities is very important. For runners, mileage should be built up very gradually on a weekly basis.



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Please consult Dr. Haverbush or a physician for specific treatment recommendations.

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