

John A. Schlechter, DO  
Pediatric Orthopedics and Sports Medicine



**Treatment of Stress Injuries to Bone**

The treatment program involves reducing activity to a pain-free level but not advocating total rest.

If the patient is symptomatic with weight bearing activities, he or she is placed on crutches. Rest or modified rest with elimination of the offending activity is paramount. Any activity that can be performed without pain is allowed.

A typical program for patients with lower extremity stress injuries to bone:

*If pain returns at any point in the program, return to the earlier phase of the program.*

**Phase I**

Cycling, swimming, and flotation-running in a pool

A trial of walking may take place every 2nd day. If the patient is pain-free, full ambulation without crutches may begin.

**Phase II**

Begins once there is pain-free walking for 3 to 5 days.

Weightbearing activities conducted in a non-pounding fashion. This includes the use of Stairmaster NordicTrack, elliptical machine and other exercise equipment that allows aerobic conditioning while weightbearing in a nonpounding fashion.

Sport-specific muscle rehabilitation and maintenance of aerobic endurance, and correction of any muscle imbalance or training error that was thought to have contributed to the initial injury if enrolled in physical therapy.

When phase II can be completed in a pain-free manner for 3 to 5 days, phase III may begin.

**Phase III**

Gradual reentry into sport-specific activity; done on alternate days. The patient performs the sport-specific activity by using onset of pain as a guide for activity cessation, with pain rigidly defined as any discomfort felt in the area of the original stress injury to bone.

Phase III, at times, involves very brief episodes of sport activity. When a team activity is involved, sometimes as little as 2 or 3 minutes of play may be permitted before the athlete rests. Time of sport activity is incrementally increased.

**Phase IV**

Unrestricted sports activity without pain or time modification.

A certified athletic trainer ideally will manage each athlete's progression through these four phases.