Stress Fracture Treatment Outline

Conservative measures

These are simple, well-backed by research, and carry a relatively low risk of extra complications. These preventative measures should be taken by anyone who’s suffered a stress fracture, or believes that they are at risk for one.

- Examine your training to see whether you made any drastic changes in volume or intensity in the past month or so. These may have caused your stress fracture, as bone becomes more vulnerable to injury in the month following an increase in stress. Consider changing to a training model which includes “down weeks” every 3-4 weeks or an “equilibrium” model which maintains new levels of mileage for longer before increasing again.

- Check your stride frequency. Ideally, you’d be hitting 170 steps per minute or more. If you are significantly lower than this, do your best to increase your cadence. This will decrease the loads that have to be carried by your joints and bones.

- Speak with your doctor to see whether you have any underlying health issues that could have contributed to your stress fracture. This is especially relevant for women, for whom amenorrhea is a major concern and also a major health risk even outside of running.

- Once you have recovered, incorporate more lower-body strength training into your regimen. Muscle size and strength are linked to bone size and strength; additionally, there is some evidence that stronger muscles will absorb more shock, leaving the bone less vulnerable to high impact loading.

- Re-examine lifestyle issues like a lack of sleep and improper diet which could impede your body’s ability to repair your bones.

Aggressive prevention measures

These are preventative measures that have some backing evidence, but it is either circumstantial or only indirectly linked to bone stress. Additionally, they may carry the risk of increasing your risk for other injuries. If you have suffered multiple stress fractures and have not had success preventing them with conservative measures, consider trying these.
- Try using a custom orthotic if you have a history of tibial or metatarsal stress fractures. Some doctors have proposed that custom orthotics can alter how forces are transmitted up your leg, *theoretically* leading to lower peak stresses on the bone. Be aware that this theory currently has no experimental evidence to back it up!

- Alternatively, if you have a history of tibial or fibular stress fractures, you may also consider running in thin, low-profile “minimalist” shoes. Wearing a thin shoe will force you to maintain a high stride frequency, and will also encourage a midfoot or forefoot strike, which should reduce impact loads on your leg. The tradeoff for this is increased stress on your foot and metatarsals; some doctors have warned that wearing minimalist shoes can even increase your risk for a metatarsal stress fracture.

- Take a calcium and vitamin D supplement that provides 200% of your RDV of both. This carries a small risk of kidney stones if your dietary calcium intake is already high, however.

- Change the surface you typically run on. Many runners anecdotally report that soft, natural surfaces like dirt trails and grass fields feel kinder on their bodies than hard, even surfaces like roads and sidewalks. However, there’s no experimental evidence that runners that train on any particular surface are more or less at risk for injury. In fact, there’s some suggestion that soft surfaces may *increase* the loading on your bones somewhat, as they demand your body maintain a higher overall leg stiffness. This may be counterbalanced by the fact that soft surfaces are usually more irregular, and hence stress your body slightly differently every step. You’ll have to experiment with running surfaces to see what type you feel is more beneficial for you.