

LEG

Tibial Stress Fracture

An overuse injury of the shin bone that needs respect — and rest

WHAT IS IT?

A stress fracture is a crack that develops gradually when bone is loaded faster than it can remodel. The tibia (shin bone) is the most common site in runners and jumping athletes. It sits on a spectrum with shin splints — but unlike shin splints, a stress fracture is a true bone injury and keeps getting worse if you train through it.

HOW IT HAPPENS

A rapid increase in mileage or intensity, hard surfaces, worn shoes, low energy availability (under-fueling), vitamin D deficiency, and low bone density all contribute. Women with irregular cycles are at particular risk — tell us, because it changes the workup.

WHAT IT FEELS LIKE

Focal pain on the shin that starts late in a run, then earlier and earlier, then hurts with walking or at night. Unlike shin splints (a diffuse ache along the inner border), a stress fracture is tender at one specific spot. X-rays are often normal early; MRI confirms the diagnosis and grades it.

HOW LONG RECOVERY TAKES

Most tibial stress fractures heal with 6–8 weeks of relative rest — pain-free walking first, sometimes a boot or crutches for the first weeks. Higher-grade injuries and fractures on the tension (front) side of the tibia take longer and are watched closely, because that location can fail to heal without protection or, rarely, surgery.

TREATMENT

Stop running and impact now — that is the treatment. We protect the leg until walking is pain-free (boot or crutches when needed), keep fitness with biking, pool running, or swimming, address vitamin D, calcium, and fueling, and rebuild with a graduated return-to-run program.

Surgery (an intramedullary rod) is reserved for the uncommon anterior tension-side fracture with the 'dreaded black line' that fails to heal, or for high-level athletes with recurrent failure of conservative care.

RETURNING TO SPORT

Expect a stepwise return: pain-free walking → 2 weeks pain-free daily life → walk-jog progressions → continuous running, adding no more than about 10% per week. Most runners are back to normal training 8–12 weeks from diagnosis; racing comes after training is re-established.

PREVENTING THE NEXT ONE

Increase training load gradually, rotate onto softer surfaces, replace shoes regularly, strength train the calves and hips, keep vitamin D and calcium adequate, and fuel enough for your training — under-fueling is the most overlooked cause of repeat stress fractures.

WHEN TO CALL US

Call the office at (513) 354-3700 for pain with plain walking or at rest, night pain, pain over the front crest of the shin, or any return of focal pain during your return-to-run program.



SCAN FOR THE LATEST VERSION ONLINE

robertpettitmd.com/handouts/tibial-stress-fracture.pdf

This handout is for general patient education and does not replace personalized medical advice. Always follow the specific instructions given by Dr. Pettit and your care team.