



NATIONWIDE CHILDREN'S
When your child needs a hospital, everything matters.™

Helping Hand™

Health Education for Patients and Families

Sports Medicine: Tibial Stress Fracture

The tibia (shin bone) is the larger, and major weight bearing bone, of the two lower leg bones. A tibial stress fracture is a complete or incomplete break that develops over time, usually as a result of repeated activity. It can occur anywhere within the tibia, but it is most common in the middle to lower one third of the bone.

Signs and symptoms

- pain and tenderness in just one specific area of the leg
- pain increases with impact activity (running or jumping)
- worsening pain that develops over a period of weeks to months

Increased risk

- sudden increase in the length, intensity or frequency of physical activity
- extreme training with limited rest periods
- those who participate in high intensity training (military recruits, distance runners)
- previous stress fracture
- poor physical conditioning, including poor flexibility and weak calf muscles
- running on hard surfaces
- flat feet or high arches
- improper footwear or poor shock-absorbing capacity or worn-out equipment
- bone health issues or bony defects (including osteoporosis, tumors, cysts)
- metabolic disorders, hormone problems and nutritional disorders (anorexia, bulimia)
- loss or irregular menstrual periods in females

Treatment

- Medicine
 - Anti-inflammatory medicines, such as ibuprofen (Motrin® or Advil®) or naproxen (Aleve®) may be recommended. Take these as directed by your health care provider.
 - Other minor pain relievers, such as acetaminophen (Tylenol®), may be used.
- Use cold
 - Cold should be applied for 10 to 15 minutes every 2 to 3 hours and after any activity that makes symptoms worse. Use ice packs or an ice massage.
- Orthopedic aids
 - A boot, cast, brace or crutches may be used to protect the bones while healing.
- Rehab
 - After a period of rest, rehab may be needed. This will help with flexibility and strength.
- Surgery
 - Rarely, surgery may be needed for fractures at a high risk of not healing.

How to prevent

- Do correct warm-up and stretching before practice or competition.
- Maintain suitable conditioning, leg and ankle flexibility, strength and endurance, and cardiovascular fitness.
- Use proper technique with training and activity. Gradually increase amount and intensity of training and activity. Modify activity level to ensure proper rest.
- Wear proper footwear (for example, change shoes after 300 to 500 miles of running).
- Correct hormonal, metabolic and nutrition disorders.

When to call the health care provider

Call your health care provider or the **Sports Medicine team** at **614-355-6000** if:

- symptoms get worse or do not improve in 2 weeks despite treatment
- new, unexplained symptoms develop, or there are side effects with drugs in treatment

To schedule an appointment with Sports Medicine, visit [NationwideChildrens.org/SportsMedicineScheduling](https://www.NationwideChildrens.org/SportsMedicineScheduling) or scan this code

