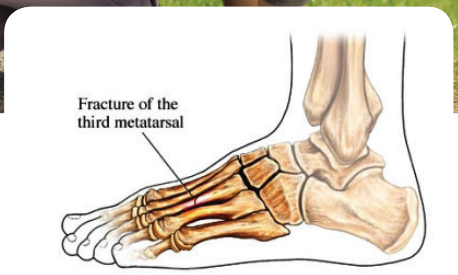
PT & Me
YOUR GUIDE TO PHYSICAL THERAPY

Foot Conditions: STRESS FRACTURE



A Stress Fracture is a tiny crack in the bone from chronic overuse. Stress fractures in the foot are commonly found in the metatarsals (called a march stress fracture) and navicular fracture (bone of top of the midfoot).

Causes

A march stress fracture is an overuse injury caused by repetitive stress to the foot.

A navicular fracture can be caused by a fall, severe twist, or direct trauma to the navicular bone. It can also be caused by repeated stress to the foot, creating a fracture not due to any acute trauma.

Risk Factors

These factors increase your chance of a stress fracture. Tell your doctor if you have any of these risk factors:

- Participation in high foot impact sports
  - Running
  - Basketball
  - Dancing/gymnastics
  - Jumping events in track
- Soldiers/military recruits
- Osteoporosis
- Women with amenorrhea (absent menstruation), osteoporosis, or an eating disorder
- Feet with high arches (*march*)
- Use of poor or improper footwear (*march*)
- Trauma (*navicular*)

Symptoms

If you have any of these symptoms, do not assume it is due to a march stress fracture. These symptoms may be caused by other conditions. Tell your doctor if you have any of these:

- Pain in the middle of the foot
- Swelling of the foot
- Foot feels better when resting
- Foot feels worse with activity

Symptoms of a navicular fracture include:

- Vague, aching pain in the top, middle portion of your foot, which may radiate along your arch
- Increasing pain with activity
- Pain on one foot only
- Altered gait
- Pain that resolves with rest
- Swelling of the foot

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Diagnosis

Your doctor will ask about your symptoms and medical history, and perform a physical exam, which will include a thorough examination of your foot. Other tests may include:

- X-ray – to take a picture of possible bone fractures
- CT scan – to take a picture of possible bone fractures
- MRI scan – to take a picture of possible bone fractures (this is particularly useful with stress fractures)

Treatment

Rest is the first thing you can do for a stress fracture. This includes avoiding the activity that caused the fracture and any other activities that cause pain. Rest time required is at least 6-8 weeks. Once you are ready to restart activity your physician may prescribe physical therapy. The following is a common progression for physical therapy treatment:

- Begin with non weight–bearing activities, such as swimming, cycling, use of an Alter-G treadmill etc.
- Next, weight-bearing, nonimpact exercise may be prescribed.
- Gradually, low-impact activity, starting with walking, will be added to your treatment.
- Once you can do fast-paced walking with no pain, your physical therapist will give higher impact activities, such as light jogging.
- This gradual progression will continue until you have reached your pre-injury activity level and no longer feel tenderness of the bone.

Prevention

To reduce your chance of a stress fracture and other fractures of the foot:

- Wear well-fitting, supportive shoes appropriate for the type of activity you are doing.
- Eat a diet rich in calcium and vitamin D.
- Do weight-bearing exercises to build strong bones.
- Build strong muscles and practice balancing exercises to prevent falls.
- When starting a new sport or increasing your workout, do so gradually.

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