

# Fifth Metatarsal Fracture

FOOT

## What is a fifth metatarsal fracture?

The metatarsals are the long bones of the feet. The fifth metatarsal is the outermost foot bone and connects to the little toe. A fracture is a break in a bone.

## How does it occur?

A fifth metatarsal fracture can occur several ways and break in several places.

**Avulsion fracture:** This occurs when the foot or ankle rolls in (an inversion injury). When this happens a tendon that attaches a muscle to the fifth metatarsal can pull off a piece of the bone.

**Mid-shaft fracture:** This usually occurs from a violent twist of the foot, but can also happen if a heavy object lands on the foot.

**Jones fracture:** This is a stress fracture caused from overuse. Because of overactivity, the bone gradually wears out and breaks.

## What are the symptoms?

Pain, swelling, and tenderness on the outer side of the foot. There will be difficulty walking.

## How is it diagnosed?

Your provider will review your symptoms, ask how you injured your foot, and examine you.

A fifth metatarsal fracture is diagnosed by an x-ray showing a break in the bone. Some x-rays do not detect stress fractures, and a special test called a bone scan may need to be done.

## How is it treated?

The treatment depends on the type of fracture you have. There are several ways to treat each type of fracture.

**Avulsion fracture:** This can be treated by wearing a stiff-soled shoe or a removable cast boot for 4 to 6 weeks. You will usually be on crutches until you can walk without pain.

**Mid-shaft fracture:** This can be treated by wearing a stiff-soled shoe, a removable cast boot, or a

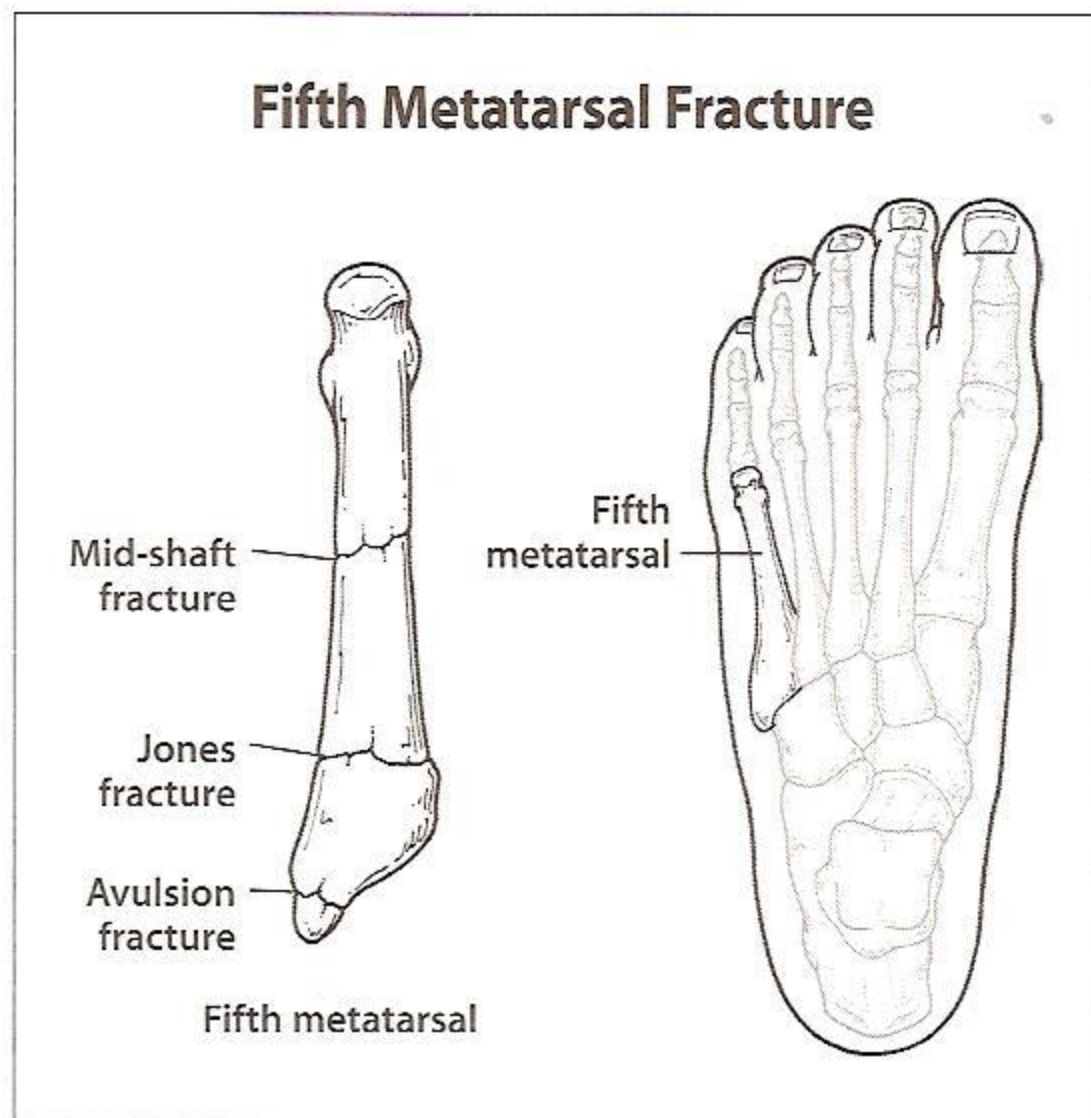
cast for 6 to 8 weeks. You will usually be on crutches until you can walk without pain.

**Jones fracture:** These fractures sometimes take a longer time to heal. A stress fracture can be treated with a removable cast boot or cast worn for 6 to 8 weeks. You may need to have surgery and have a screw placed in your bone to hold the broken bone together. You will usually be on crutches until you walk without pain.

Treatment will also include:

- ▶ Elevating your foot by placing a pillow underneath it. Try to keep your foot above the level of your heart.
- ▶ Taking an anti-inflammatory medication or other pain medication prescribed by your provider.

If you are not in a cast, you should apply ice packs to your foot for 20 to 30 minutes every 3 to 4 hours for the first 2 to 3 days or until the pain goes away.





Thereafter, ice your foot at least once a day until the other symptoms are gone.

### **When can I return to my sport or activity?**

You may start your rehabilitation when your provider has taken a follow-up x-ray and sees that your fracture has healed.

You may safely return to your sport or activity when, starting from the top of the list and progressing to the end, each of the following is true:

- ▶ You have full range of motion in the injured foot compared to the uninjured foot.
- ▶ You have full strength of the injured foot compared to the uninjured foot.
- ▶ You can jog straight ahead without pain or limping.
- ▶ You can spring straight ahead without pain or limping.

- ▶ You can do 45-degree cuts, first at half-speed, then at full-speed.
- ▶ You can do 20-yard figures-of-eight, first at half-speed, then at full-speed.
- ▶ You can do 90-degree cuts, first at half-speed, then at full-speed.
- ▶ You can do 10-yard figures-of-eight first at half-speed, then at full-speed.
- ▶ You can jump on both legs without pain and you can jump on the injured leg without pain.

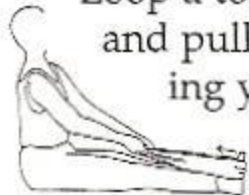
### **How can I prevent a fifth metatarsal fracture?**

Most fifth metatarsal fractures are caused by accidents that cannot be prevented. However it is important to wear proper fitting footwear and avoid playing or running on surfaces that are uneven.

## **Fifth Metatarsal Fracture Rehabilitation Exercises**

As soon as you can tolerate pressure on the ball of your foot, begin stretching your foot using the towel stretch. When this stretch is too easy, try the standing calf stretch and soleus stretch.

- 1. TOWEL STRETCH:** Sit on a hard surface with your injured leg stretched out in front of you. Loop a towel around the ball of your foot and pull the towel toward your body keeping your knee straight. Hold this position for 15 to 30 seconds then relax. Repeat 3 times.



- 2. STANDING CALF STRETCH:** Facing a wall, put your hands against the wall at about eye level. Keep the injured leg back, the uninjured leg forward, and the heel of your injured leg on the floor. Turn your injured foot slightly inward (as if you were pigeon-toed) as you slowly lean into the wall until you feel a stretch in the back of your calf. Hold for 15 to 30 seconds. Repeat 3 times. Do this exercise several times each day.



- 3. STANDING SOLEUS STRETCH:** Stand facing a wall with your hands at about chest level. With both knees slightly bent and the injured foot back, gently lean into the wall until you feel a stretch in your lower calf. Once again, angle the toes of your injured foot slightly inward and keep your heel down on the floor. Hold this for 15 to 30 seconds. Return to the starting position. Repeat 3 times.



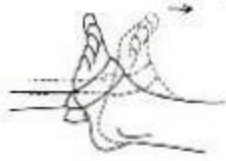
You can do the next 5 exercises when your foot swelling has stopped increasing.

- 4. ANKLE RANGE OF MOTION:** Sitting or lying down with your legs straight and your knee toward the ceiling, move your ankle up and down, in and out, and in circles. Only move your ankle. Don't move your leg. Repeat 10 times in each direction. Push hard in all directions.





**5. RESISTED DORSIFLEXION:** Sit with your injured leg out straight and your foot facing a doorway. Tie a loop in one end of the tubing. Put your foot through the loop so that the tubing goes around the arch of your foot. Tie a knot in the other end of the tubing and shut the knot in the door. Move backward until there is tension in the tubing.

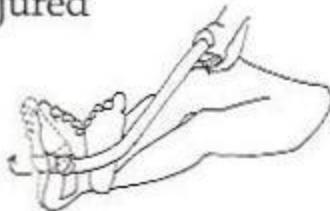


Keeping your knee straight, pull your foot toward your body, stretching the tubing. Slowly return to the starting position. Do 3 sets of 10.

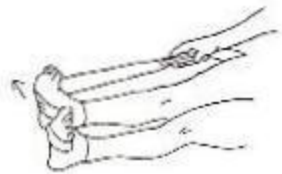
**6. RESISTED PLANTAR FLEXION:** Sit with your leg outstretched and loop the middle section of the tubing around the ball of your foot. Hold the ends of the tubing in both hands. Gently press the ball of your foot down and point your toes, stretching the tubing. Return to the starting position. Do 3 sets of 10.



**7. RESISTED INVERSION:** Sit with your legs out straight and cross your uninjured leg over your injured ankle. Wrap the tubing around the ball of your injured foot and then loop it around your uninjured foot so that the tubing is anchored there at one end. Hold the other end of the tubing in your hand. Turn your injured foot inward and upward. This will stretch the tubing. Return to the starting position. Do 3 sets of 10.



**8. RESISTED EVERSION:** Sit with both legs stretched out in front of you, with your feet about a shoulder's width apart. Tie a loop in one end of the tubing. Put your injured foot through the loop so that the tubing goes around the arch of that foot and wraps around the outside of the uninjured foot. Hold onto the other end of the tubing with your hand to provide tension. Turn your injured foot up and out. Make sure you



keep your uninjured foot still so that it will allow the tubing to stretch as you move your injured foot. Return to the starting position. Do 3 sets of 10.

You may do the rest of the exercises when you can stand on your injured ankle without pain.

**9. TOWEL PICKUP:** With your heel on the ground, pick up a towel with your toes. Release.



Repeat 10 to 20 times. When this gets easy, add more resistance by placing a book or small weight on the towel.

**10. HEEL RAISES:** Balance yourself while standing behind a chair or counter. Raise your body up onto your toes and hold it for 5 seconds, then slowly lower yourself down. Repeat 10 times. Do 3 sets of 10.



**11. STANDING TOE RAISES:** Stand with your feet flat on the floor, rock back onto your heels and lift your toes off the floor. Hold this for 5 seconds. Do 3 sets of 10.



**11. SINGLE-LEG BALANCE:** Stand without any support and attempt to balance on your injured leg. Begin with your eyes open and then try to perform the exercise with your eyes closed. Hold the single-leg position for 30 seconds. Repeat 3 times. When you have mastered this, try doing this exercise standing on a pillow.

