

FIFTH METATARSAL FRACTURE

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 the following:

- Elevate your foot by placing a pillow underneath it. Try to keep your foot above the level of your heart.
- Take an anti-inflammatory medicine or other pain medicine prescribed by your provider (adults aged 65 years and older should not take non-steroidal anti-inflammatory medicine for more than 7 days without their healthcare provider's approval).
- 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 see 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.

FIFTH METATARSAL FRACTURE



- 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.

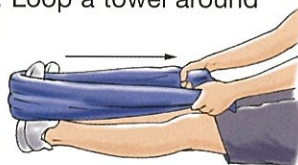
How can I prevent a fifth metatarsal fracture?

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

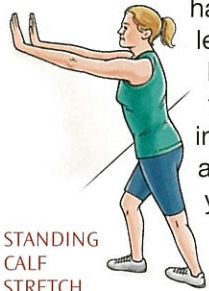
Do these exercises as soon as your healthcare provider says you can.

1. TOWEL STRETCH: Sit on a hard surface with one 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.



TOWEL STRETCH

2. STANDING CALF STRETCH: Facing a wall, put your hands against the wall at about eye level. Keep one leg back with the heel on the floor, and the other leg forward. Turn your back 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.



STANDING CALF STRETCH

3. STANDING SOLEUS STRETCH: Stand facing a wall with your hands on a wall at about chest level. With both knees slightly bent and one foot back, gently lean into the wall until you feel a stretch in your lower calf. Angle the toes of your back 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.



STANDING SOLEUS STRETCH

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 by pointing your toes toward your nose, then away from your body; in toward your other foot and out away from your other foot; and in circles. Only move your foot and ankle. Don't move your leg. Repeat 10 times in each direction. Push hard in all directions.



ANKLE RANGE OF MOTION

5. RESISTED ANKLE DORSIFLEXION: Sit with one leg out straight and your foot facing a doorway. Tie a loop in one end of elastic 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.



RESISTED ANKLE DORSIFLEXION

FOOT

- 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.

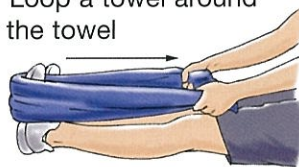
How can I prevent a foot sprain?

Unfortunately, most foot sprains occur during accidents that are not preventable. However, it is important to wear proper fitting footwear and to avoid running or playing on uneven surfaces.

FOOT SPRAIN 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 one 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.



TOWEL STRETCH

2. STANDING CALF STRETCH: Facing a wall, put your hands against the wall at about eye level. Keep one leg back with the heel on the floor, and the other leg forward. Turn your back 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.



STANDING CALF STRETCH

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STANDING SOLEUS STRETCH

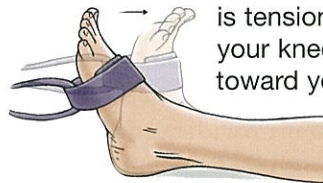
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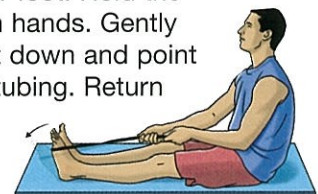
ANKLE RANGE OF MOTION

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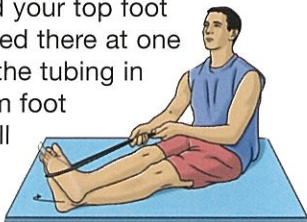
RESISTED ANKLE DORSIFLEXION

6. RESISTED ANKLE 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.



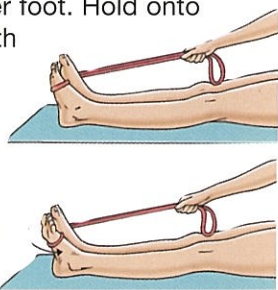
RESISTED ANKLE PLANTAR FLEXION

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



RESISTED ANKLE INVERSION

8. RESISTED ANKLE 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 elastic tubing. Put one foot through the loop so that the tubing goes around the arch of that foot and wraps around the outside of the other foot. Hold onto the other end of the tubing with your hand to provide tension. Turn the foot with the tubing up and out. Make sure you keep your other foot still so that it will allow the tubing to stretch as you move your foot with the tubing. Return to the starting position. Do 3 sets of 10.



RESISTED ANKLE EVERSION

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

9. HEEL RAISE: Balance yourself while standing behind a chair or counter. Raise your body up onto your toes and hold for 5 seconds. Then slowly lower yourself down. Hold onto the chair or counter if you need to. When this exercise becomes less painful, try lowering on one leg only. Repeat 10 times. Do 3 sets of 10.

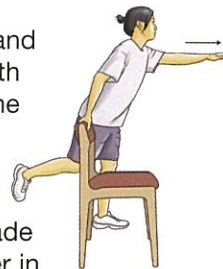


HEEL RAISE

10. BALANCE AND REACH EXERCISES

Stand upright next to a chair. This will provide you with balance if needed. Stand on the foot farthest from the chair. Try to raise the arch of your foot while keeping your toes on the floor.

- A. Keep your foot in this position and reach forward in front of you with your hand farthest away from the chair, allowing your knee to bend. Repeat this 10 times while maintaining the arch height. This exercise can be made more difficult by reaching farther in front of you. Do 2 sets.
- B. Stand in the same position as above. While maintaining your arch height, reach the hand farthest away from the chair across your body toward the chair. The farther you reach, the more challenging the exercise. Do 2 sets of 10.



BALANCE AND REACH EXERCISES



11. SINGLE LEG BALANCE: Stand without any support and attempt to balance on one 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.

SINGLE LEG BALANCE