

About running injuries

If you're like many runners, you may be logging hundreds or even thousands of miles per year. The repetitive impact of all those foot strikes can take a toll on your muscles, joints, and connective tissue.

According to a [2015 review of studies](#)^{Trusted Source}, the knees, legs, and feet are the most common injury areas for runners. The review breaks down the location-specific incidence of running injuries as follows:

- **Knees:** 7.2 to 50 percent
- **Lower leg:** 9.0 to 32.2 percent
- **Upper leg:** 3.4 to 38.1 percent
- **Foot:** 5.7 to 39.3 percent
- **Ankles:** 3.9 to 16.6 percent
- **Hips, pelvis, or groin:** 3.3 to 11.5 percent
- **Lower back:** 5.3 to 19.1 percent

Let's take a closer look at some of the most common injuries that affect runners.

1. Runner's knee (patellofemoral syndrome)

[Runner's knee](#), or patellofemoral syndrome, is a general term that refers to pain in the front of your knee or around your kneecap. It's a common overuse injury in sports that involve running or jumping.

Weakness in your hips or the muscles around your knee can put you at a higher risk of developing runner's knee.

Runner's knee can cause pain that:

- is dull and can be felt in one or both knees
- ranges from mild to very painful
- gets worse with prolonged sitting or exercise
- gets worse when jumping, climbing stairs, or squatting

This type of injury may also cause cracking or popping sounds after prolonged periods of being stationary.

A doctor can often diagnosis runner's knee with a physical exam but may recommend an X-ray to rule out other conditions. A [physical therapist](#) can give you a [specific treatment plan](#) to treat a runner's knee injury.

2. Achilles tendinitis

[Achilles tendinitis](#) refers to inflammation of the tendon that connects your calf muscle to your heel. It may happen after increasing your mileage or the intensity of your running.

If left untreated, Achilles tendinitis increases your risk of rupturing your Achilles tendon. If this tendon is torn, it usually requires surgery to repair it.

Common symptoms of Achilles tendinitis include:

- dull pain in your lower leg above your heel
- swelling along your [Achilles tendon](#)
- limited range of motion when flexing your foot toward your shin
- a warm feeling over the tendon

3. IT band syndrome

Your iliotibial band, commonly referred to as your IT band, is a long piece of connective tissue that runs from your outer hip to your knee. This band of tissue helps stabilize your knee when you're walking or running.

[IT band syndrome](#) is caused by repetitive friction of the IT band rubbing against your leg bone. It's very common in runners due to tight IT bands. Weak gluteal muscles, abdominals, or hips may also contribute to this condition.

IT band syndrome causes sharp pain on the outer side of your leg, usually just above your knee. Your IT band may also be tender to the touch. The pain often gets worse when you bend your knee.

4. Shin splints

[Shin splints](#) (tibial stress syndrome) refers to pain that occurs in the front or the inner parts of your lower legs, along your shinbone. Shin splints can happen when you increase your running volume too quickly, especially when running on hard surfaces.

In most cases, shin splints aren't serious and go away with rest. However, if left untreated, they can develop into stress fractures.

Symptoms of shin splints can include:

- a dull pain along the front or inner part of your shinbone
- pain that gets worse when you exercise
- tenderness to the touch
- mild swelling

Shin splints often get better with rest or by cutting back on how frequently or how far you run.

5. Hamstring injuries

Your [hamstrings](#) help decelerate your lower leg during the swing phase of your running cycle. If your hamstrings are tight, weak, or tired, they may be more prone to injury.

Unlike sprinters, it's fairly uncommon for distance runners to experience a sudden hamstring tear. Most of the time, distance runners experience [hamstring strains](#) that come on slowly and are caused by repetitive small tears in the fibers and connective tissue of the hamstring muscle.

If you have a hamstring injury, you may experience:

- dull pain in the back of your upper leg
- a hamstring muscle that's tender to the touch
- weakness and stiffness in your hamstring

6. Plantar fasciitis

[Plantar fasciitis](#) is one of the most common foot injuries. It involves irritation or degeneration of the thick layer of tissue, called fascia, on the bottom of your foot.

This layer of tissue acts as a spring when you're walking or running. Increasing your running volume too quickly can put your fascia under increased stress. Muscle tightness or weaknesses in your calves can also put you at risk of plantar fasciitis.

Symptoms typically include:

- pain under your heel or midfoot
- pain that develops gradually
- a burning sensation on the bottom of your foot
- pain that's worse in the morning
- pain after prolonged activity

7. Stress fractures

A [stress fracture](#) is a hairline crack that forms in your bone due to repetitive stress or impact. For runners, stress fractures commonly occur at the top of the foot, or in the heel or lower leg.

If you suspect you have a stress fracture, it's a good idea to see a doctor right away. An X-ray is needed for them to diagnose a stress fracture.

Symptoms of a stress fracture typically include:

- pain that gets worse over time, which may be barely noticeable at first but as the pain progresses, may be felt even when you're at rest
- swelling, bruising, or tenderness in the area of the fracture

It generally takes 6 to 8 weeks to heal from a stress fracture, and you may need to use crutches or wear a cast for a period of time.

8. Ankle sprain

[Ankle sprains](#) are caused by overstretching the ligaments between your leg and ankle. Sprains often happen when you land on the outer part of your foot and roll your ankle over.

Common symptoms associated with an ankle sprain include:

- discoloration
- pain
- swelling
- bruising
- limited range of motion

Most of the time, ankle sprains improve with rest, self-care, or physical therapy. They may take weeks or months to heal.

Other types of running injuries

Other injuries that runners tend to experience include:

- **Ingrown toenails.** An [ingrown toenail](#) occurs when the edge of your nail grows into your skin. It can cause pain and inflammation along your toenail and may ooze pus if it becomes infected.
- **Bursitis.** [Bursae](#) are fluid-filled sacs beneath your muscles and tendons. They help to lubricate your joints. Repeated friction against these sacs from running can lead to irritation in your hip or around your knee.
- **Meniscal tear.** A [meniscal tear](#) refers to a tear of the cartilage in your knee. It often causes a sensation of your joint locking.
- **Anterior compartment syndrome.** [Anterior compartment syndrome](#) occurs when the muscles in the front of your lower leg put pressure on your nerves and blood vessels. This syndrome can be a medical emergency.
- **Calf strain.** Repetitive trauma from running can lead to a [calf strain](#), also known as a pulled calf.

Treatment options for running injuries

If you experience any kind of pain or discomfort or find it hard to run, it's a good idea to follow up with your doctor to get a proper diagnosis and to rule out other conditions.

For many common running injuries, treatment often includes:

- [physical therapy](#) sessions and specific exercises

- following the [RICE protocol](#) (rest, ice, compression, elevation)
- taking [nonsteroidal anti-inflammatory drugs \(NSAIDs\)](#) like aspirin or ibuprofen
- cutting back on how often and how far you run

Other more specific treatment may include:

- **For runner's knee:** strengthening your [quadriceps](#) and [hip muscles](#), and [stretching tight quads](#) or calves, wearing orthotic shoes
- **For Achilles tendonitis:** [stretching](#) or massaging your calves
- **For IT band syndrome:** [daily stretching of your IT bands](#) and strengthening your [hip muscles](#)
- **For hamstring injuries:** [strengthening your glutes](#), [stretching](#) and [strengthening your hamstrings](#), changing your running technique
- **For plantar fasciitis:** stretching and strengthening your calves
- **For stress fractures:** crutches, cast, or surgery
- **For an ankle sprain:** [ankle strengthening exercises](#)

Injury prevention tips

Running injuries can happen to anyone, but you can minimize your risk of injury with the following tips:

- **Warm up.** Warm up before you start running by doing an easy jog or [dynamic mobility stretches](#) such as arm or leg swings for 5 to 10 minutes.
- **Increase your running volume slowly.** Many runners follow the 10 percent rule, meaning that they don't increase their weekly volume of running by more than 10 percent at a time.
- **Take care of nagging injuries.** Rest nagging injuries right away so they don't develop into more serious issues. A physical therapist can give you a proper diagnosis and provide you with a customized treatment plan.
- **Work on your technique.** Poor running technique can increase the amount of stress on your muscles and joints. Working with a running coach or even filming your running technique can help you improve.
- **Strengthen your hips.** Include stability exercises in your training program such as [glute bridges](#) or [single-leg squats](#) to help you protect your knees and ankles.
- **Use soft surfaces.** Running on grass, rubber tracks, sand, or gravel is easier on your joints than running on pavement. If you're dealing with a nagging injury, try running on a soft surface until your pain subsides.
- **Consider cross-training.** Adding some low impact workouts into your schedule such as [cycling](#) or [swimming](#) can help improve your aerobic fitness while giving your joints a break from the repetitive impact of running.

The bottom line

Many runners deal with an injury at some point. The most common areas that sustain injuries due to running include your knees, legs, and feet.

If you experience any kind of pain or discomfort when running, it's best to follow up with your doctor to get a proper diagnosis and to rule out other conditions.

Using the RICE protocol, taking an NSAID for pain, following a physical therapy plan, and doing targeted exercises can help you recover from many common running injuries. Cutting back on how often and how far you run can help you recover faster, too.