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Know the Difference: Strain, Sprain and Fracture

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Can the sudden pain in your ankle be just a strain? Perhaps a sprain? Or worse, maybe a fracture? Learn how to tell the difference.

Physical injuries do not discriminate. It can happen to anyone, anywhere and at any hour of the day.

The young and old are equally susceptible to physical injuries such as a strain, sprain or fracture. A child can suffer from a sprained ankle after falling from their first bicycle ride. A woman in her fifties may abruptly feel pain around her wrist due to the weight or intensity of everyday household chores, and a slight loss of footing can result in a hairline fracture.

Indeed, sprains, strains and fractures are common injuries with one shared symptom – pain in the affected area. So, how can you identify which is which? Read on as we dive into all 3 injuries and elaborate on the differences.

It's a strain



Strains occur when your muscle or tendon becomes twisted, overstretched or torn. Strains can happen as a result of a fall or a long-term result of repetitive movement that causes the overuse of muscles.

In other words, strains can occur abruptly (also known as acute strain) such as after lifting a heavy object or slowly develop over time (also known as chronic strain) due to repetitive actions performed such as while playing sports or daily household chores.

A strain is often sustained in the legs, wrist, neck, knees, feet and back.

How can I tell if it's a strain?

The best way to differentiate a strain from a sprain or fracture is to know its symptoms well. The symptoms of a strain include:

- Swelling
- Muscle weakness
- Muscle cramping
- Bruising
- Difficulties moving the affected area

For chronic strains, you will most likely experience some muscle stiffness at the affected area that will subside with rest. However, if you continue to engage in the same activity without ample rest, the affected site is not able to heal well and this could lead to torn and/or inflamed muscles and tendons. This often results in a sharp pain, numbness or a tingling sensation. With continued overuse of the affected area, the strain may develop into a repetitive strain injury (RSI), such as [tendonitis](#).

How are strains treated?

The ultimate aim of treating strains is to relieve discomfort and reduce swelling at the site. Your doctor may recommend some medications to manage the pain as well as the R.I.C.E protocol.

The R.I.C.E protocol stands for:

REST – Rest the affected area as soon as pain is felt. You're recommended to rest as much as possible for at least 48 hours. Do not try to withstand the pain by continuing to engage in activities involving the affected area as this could worsen and delay your recovery process.

ICE – Apply cold compress to the affected area for about 15 minutes, every 2 – 3 hours. It's important not to apply an ice pack directly on your skin as it can cause frostbites. Instead, wrap the ice pack with a towel. If you do not have an ice pack, a bag of frozen peas or corn will do the trick.

COMPRESSION – Reduce swelling by wrapping the affected area with a medical-grade elastic bandage. Do avoid wrapping the area too tightly as it can interrupt blood flow. If you're unsure about the right way to wrap a bandage, seek help from a medical professional for assistance.

ELEVATION – Keep the injured area above the level of your heart to reduce pain and swelling. For example, if you've strained your ankle, prop your leg up on the armrest of the sofa or with a pillow.

It's a sprain



Sprains occur when your ligament is torn, twisted or overstretched. Ligaments are tough fibrous tissues typically located around the joints. Their role is to connect your bones to each other or to the cartilage. This is why sprains commonly affect the ankle, wrist and fingers, with a sprained ankle being the most common.

How can I tell if it's a sprain?

A sprain is usually acute. It happens abruptly when your ligament gets stretched and pulled, such as from the impact of a fall or accidentally hitting an object. Symptoms of a sprain include:

- Limited movement around the joint

- A 'popping' sound during the time of injury
- Pain
- Bruising
- Swelling around the affected area

How are sprains treated?

Similar to treating a strain, medication to relieve pain as well as the R.I.C.E protocol will be recommended to treat the sprained area. Depending on the severity of the sprain, you may be required to refrain from strenuous activity for a couple of months.

Your doctor may also recommend physical therapy as part of your recovery process. During physical activity, you may learn a series of exercises to strengthen the affected area and regain mobility.

It's a fracture



A [fracture](#) is a partial or complete break in the bone. While it can occur to anyone, older individuals and those with lower bone density are at a higher risk. The severity of the fracture depends on the extent of the force that caused the break.

How can I tell if it's a fracture?

Common symptoms of a fracture include:

- When you hear a 'crack' or 'snap' during the time of injury
- Swelling
- Numbness or a tingling sensation
- Pain is felt over the affected bone

How are fractures treated?

Firstly, [an accurate diagnosis](#) is important. If you suspect that you or someone you know has a fractured bone, [immediate medical attention](#) is necessary.

Your doctor will conduct a physical examination of the injured area and suggest an X-ray, [computed tomography scans \(CT scan\)](#) or [magnetic resonance imaging \(MRI\)](#).

If the injury is diagnosed to be a fracture, your treatment plan will depend on the location of the fracture as well as its severity.

Some common types of fractures:

- [stress fracture](#) (also known as hairline fracture) – a small crack or break in the bone
- comminuted fracture – the bone gets broken into several pieces
- compression fracture – the bone becomes wider or flatter due to compression
- oblique fracture – a diagonal break across the bone

Treatment can include using a cast to stabilise the broken bone, or surgery to reposition the broken segments of the bone and fix the fractured area.

You will generally require a longer recovery period as compared to strains and sprains. Your doctor may also suggest [physical therapy](#) to help you regain mobility and confidence in using the injured area.

Sprains, strains and fractures cannot be avoided entirely, but the severity of the damage of these physical injuries can be reduced. Having sufficient calcium intake can help to maintain healthy bone density, which can reduce the risk of a fracture. Engaging in exercises that strengthen and stabilise your joints' supportive muscles can also help to lower your chances of sustaining strains and sprains.