

Ankle fracture

What you're feeling

A broken ankle usually hurts on the bony bumps at the side of your ankle, most often on the outer side. The pain is sharper when you try to stand or put weight on your foot. Swelling and bruising appear quickly, and the skin over the ankle can look stretched or shiny. Some people notice small blisters where the swelling is worst.

The pain tends to flare when the ankle is still for a while, so it can be worse at night or when you first wake up. It also flares after you have been on your feet. Resting with the foot raised usually settles it down a little. Walking, standing at the bench to cook, getting to the bathroom, and driving all become hard because you cannot trust the ankle to hold you.

Most ankle fractures happen during a simple fall or a stumble rather than a big accident. If your ankle looks out of place, or your foot feels numb, cold, or pale, that needs urgent attention.

A few things change how the injury behaves. If you have diabetes, wounds around the ankle heal more slowly and there is a higher chance of complications, so your team will check the feeling and circulation in your foot carefully. Smoking also raises the chance of problems with healing. Older patients often have other health conditions that shape the treatment plan.

How bad the injury is depends on which bone is broken and whether the ankle joint has shifted out of line. Fractures on the outer ankle bone alone are common and are often stable. When both sides of the ankle are broken, or the bone higher up the shin is involved, the ankle is less stable and usually needs surgery to hold it in place.

The aim of any treatment, whether a cast or surgery, is a healed fracture and an ankle that moves and works normally without pain.

What's actually happening

Your ankle is a joint where three bones meet. The end of your shin bone sits on top, and two smaller bones, one on each side of your ankle, grip it from either side. Together they form a socket that holds a small bone called the talus, which sits inside like a peg in a mortise joint. The whole thing works a bit like a clamp holding a block

in place. The bony bumps you can feel on either side of your ankle are the ends of those two smaller bones, and they stop the talus from sliding sideways.

Strong straps of tissue called ligaments hold these bones together. One on the inner side of your ankle is especially important for keeping the joint steady when you stand on it. Another set joins the shin bone to the outer ankle bone higher up, and these can also be torn in a fracture. When a bone breaks, or one of these key ligaments tears, the clamp loosens. The talus can then shift even slightly out of place, and that changes the way pressure spreads across the joint surface.

Most ankle fractures happen during a simple fall or while playing sport, not in a major accident. They are common, making up about 10% of all fractures. Even a small shift in the position of the talus raises the pressure inside the joint, which over time can wear the smooth surface away and lead to arthritis. That is why getting the bones back into line matters, whether that is done with a cast or with surgery. When both sides of the ankle are broken, or the break runs above the level where the shin and outer ankle bone join, the joint is unstable and surgery is usually needed to hold everything in place while it heals.

What we can do about it

Dr Kieran Hirpara, an upper-limb surgeon at Mater Private Hospital Rockhampton, matches the treatment to your specific injury. Patients are generally referred to our clinic by their GP; if a physiotherapist has suggested you see us, you will still need a referral from your GP in order to be eligible for the Medicare rebate. At the clinic we take a history, examine your ankle, and arrange X-rays where they are needed. Three standard views of the ankle are taken, and sometimes a CT scan is used to show a complex break in more detail. If you have diabetes, we also check the feeling and circulation in your foot before deciding on treatment.

The first question is whether the ankle is stable. If the broken bone has not shifted and the joint is holding firm, the fracture can be treated without surgery. Many of these injuries are managed in a brace rather than a rigid cast, because a brace is more comfortable and lets you move sooner. Some stable fractures need no splint at all, though a brace is often used for comfort. You may be allowed to put weight on the ankle early, and we will explain what applies to you. If you have diabetes, or the break has shifted, close follow-up with X-rays is essential, because any movement of the bone needs to be caught early.

Surgery is considered when the ankle is unstable, which usually happens when both sides of the ankle are broken or the joint has shifted out of line. The aim of the operation is to hold the bones in the right position while they heal, so the talus stays centred under the shin bone and pressure spreads evenly across the joint. This is done with plates and screws, and the exact plan depends on which bones are broken, the quality of your bone, and the state of the skin and soft tissues around the ankle. If a ligament joining the shin to the outer ankle bone is also torn, it may need to be stabilised at the same time.

What to expect

Most people do well after a broken ankle, and the aim of treatment is exactly that: a healed fracture and an ankle that moves and works without pain. Recovery is not instant, though. One year after surgery, many people

still notice some symptoms and find some activities harder than before. Pain that lingers affects more than one-third of all patients, so it is realistic to expect some discomfort for months rather than days.

How quickly you get back on your feet depends on your injury and your treatment. If your ankle is stable and treated without surgery, you will usually wear a below-knee cast or brace for 6 weeks, and many surgeons ask you to stay off the foot for that time, though there is no good evidence that this is necessary. If you have surgery, putting weight on the ankle early, within about 2 weeks, appears safe when the bones are held firmly in place, and it has not been shown to cause more problems than waiting. Early movement and weight-bearing improve early function, but they do not seem to change how long it takes to return to work.

Some things are worth knowing in advance. About 11.5% of people visit an emergency department within 90 days after surgery, most often in the first 2 weeks, usually for swelling, wound concerns or pain. More serious complications are uncommon. Deep vein thrombosis, a clot in the leg, happens in about 3% of cases, and a clot reaching the lungs in about 0.3%.

The longer-term picture matters too. Arthritis in the ankle joint is rare after simple, low-energy breaks but can develop in up to 30% of unstable fractures, and it may take years or even decades to show up. If the joint surface was damaged at the time of injury, or the bones did not heal in a perfect line, that risk is higher. Some people also develop irritation from the plates and screws, and removing them helps about half of those patients.

If you have diabetes, healing is slower and complications are more likely whichever treatment you use, so your team will plan extra care around that. Smoking, poor circulation and other health conditions have similar effects. Age on its own does not decide the outcome; the type of fracture and how far the bone has shifted matter far more.

When to see someone

Most ankle fractures are obvious: you cannot put weight on the ankle, and it swells and bruises fast. If your ankle looks out of place, or your foot feels numb, cold, or pale, go to an emergency department straight away. The same applies if the swelling keeps building and the pain becomes severe and tight, which can mean pressure building inside the muscle compartments of the leg. That needs same-day assessment.

If the skin is broken and bone is showing, that is also an emergency. Open breaks carry a real risk of infection, so do not wait.

See your GP promptly for any ankle injury where you cannot bear weight, or where the bony points at either side are tender to touch. Ask for a specialist review if you have diabetes and break your ankle, because wound problems are more likely and the checks around feeling and circulation matter more. The same applies if you have poor circulation in your legs.

After treatment, contact your team if you develop a fever, spreading redness, or fluid leaking from a wound. These signs can mean infection, and deep infections usually need surgery to clean the wound out.