

Lisfranc injury

What you're feeling

A Lisfranc injury affects the middle of your foot, where the long bones of your toes meet the small bones of your arch. The pain is usually felt across the top of the midfoot, and the area often swells. With a mild injury the swelling may sit in one spot, so you can point to exactly where it hurts. With a heavier injury the whole top of the foot can swell, which makes it harder to say where the pain is coming from.

Weight bearing is what flares it. Walking, standing, climbing stairs and pushing off the ball of your foot all hurt, and pushing off is often hard even after a mild injury. Twisting the foot in or out can also be painful. Bruising may appear on the sole of your foot, which is a well known sign of this injury. Some people can still walk, but the foot does not feel right, and the pain does not settle the way a simple sprain would.

Day to day, the problems are practical. You may find you cannot push off properly when you walk, so you favour the heel or hop on your other foot. Getting out of a chair, standing at the bench to cook, or carrying shopping while walking becomes awkward. Stairs are slow because you cannot trust the middle of your foot to take your weight.

One thing worth knowing: this injury is easy to miss. Up to 20% of Lisfranc injuries are misdiagnosed or overlooked at first, and about 20 to 24% are missed at the first check-up, sometimes even on early x-rays. Low-energy injuries, where the foot was hurt by a twist or a stumble rather than a big accident, are the hardest to spot because the swelling and bruising can look mild. If you cannot put weight on your foot, or it hurts to do so, along with swelling and tenderness in the midfoot, that combination should always be taken seriously.

What's actually happening

The middle of your foot is built like a Roman arch. The long bones that lead to your toes form one side of the arch, and a row of small bones forms the other. Where they meet is a cluster of joints called the Lisfranc joint, and it acts as the sturdy link between the front of your foot and your heel. Every time you walk, this area takes the load and absorbs the shock.

The arch is held together by bone shape and by strong straps of tissue called ligaments. One ligament matters more than the rest: it runs from a small bone in the arch to the base of the bone that leads to your second toe. It is about 8 to 10 mm wide and 5 to 6 mm thick, and it is the main thing keeping your arch from collapsing.

There is no ligament between the first and second toe bones, so this one strap does the work of holding the whole arch in place.

In a Lisfranc injury, that strap is sprained or torn, or the bones around it crack and shift. The bones can spread apart, which flattens the arch. That is why pushing off hurts and why you cannot trust the middle of your foot: the structure that should take your weight is no longer holding together. Bruising on the sole happens because the injured tissue sits close to the underside of the foot.

These injuries range from a stable sprain, where nothing has shifted, to a severe one where the bones have visibly spread apart or broken. A stable injury may settle without surgery. When the bones have moved out of place, they usually need to be held back in position, because an arch that heals out of line often stays painful and stiffens up over time.

What we can do about it

Dr Kieran Hirpara, an orthopaedic 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 foot, and arrange imaging where it is needed. Standing x-rays of both feet are the usual starting point, because the joints of the midfoot only show their true position when you are on your feet. If those x-rays do not settle the question, a CT or MRI scan can show the ligaments and small bones in more detail. Once we know how much the bones have shifted, and whether the injury is a sprain or a fracture-dislocation, we can talk through what suits you.

For a stable injury, where nothing has shifted out of place, we usually start with non-operative care. That means staying off the foot so the injured ligaments can rest, then physiotherapy to rebuild strength and get you walking normally again. We watch how you progress over the following weeks before deciding what comes next.

Pain relief is straightforward. Simple pain medication and anti-inflammatories help with the soreness while the foot settles, and they let you take part in the physiotherapy rather than guarding against it.

Surgery is considered when the bones have moved out of place, or when the joint is unstable and will not hold itself together. The aim is to put the bones back in their normal position and hold them there while they heal, which protects the arch of your foot. One option uses screws or small plates to hold the bones in line while the ligaments heal. Another option is to fuse the affected joints, meaning the bones are encouraged to grow together into one solid piece, which is considered for certain injury patterns because ligament healing is less reliable than bone healing. Some injuries can be treated with flexible fixation instead, using soft material rather than rigid screws, which holds the bones steady while allowing some movement and avoids a second operation to remove hardware. For an injury that was missed or left unstable in the past, surgery can still help if arthritis has not yet set in. We will talk through which approach fits your injury, and decide together.

What to expect

Most people with a Lisfranc injury do well when it is found and treated properly. The key is getting the bones back into their normal position and holding them there while they heal. When that happens, the arch of your foot keeps its shape, and you have the best chance of walking without ongoing pain. If the injury is stable and nothing has shifted, it can settle without surgery, though you will still need to stay off the foot while the ligaments heal.

If a Lisfranc injury is missed or left untreated, the outlook is different. The arch can flatten and the foot can turn outward, leaving pain across the top of the midfoot and under the arch. Over time this can lead to arthritis in the middle of your foot, stiffness, and a lasting change in how you walk. Some people need a later operation to fuse the affected joints because the damage has already been done. This is why this injury is taken seriously even when it looks mild.

Even with good treatment, recovery is not always perfect. Some people still have pain even when the bones have been put back exactly where they belong. That lingering soreness can come from scar tissue or from cartilage that was bruised at the moment of injury. Healing takes months rather than weeks, and it is normal for the foot to feel stiff and tired while it rebuilds strength.

If you play sport, the numbers are encouraging. Between 93% and 94% of athletes return to some level of sport after treatment, and between 74% and 88% get back to their preinjury level. That range is honest: some people return fully, others find they need to modify how they train or compete.

The main thing to hold onto is this. Treated early and properly, most people get back to walking, working and living normally. Left alone, the same injury can cause lasting problems. Getting the right diagnosis at the start makes a real difference to how your foot feels years from now.

When to see someone

See your GP promptly if you cannot put weight on your foot, or it hurts to do so, together with swelling and tenderness across the middle of your foot. Ask for a specialist review if the pain does not settle the way a simple sprain would, or if you keep struggling to push off when you walk. Go to an emergency department if your foot becomes severely swollen, tense and painful, because a bad injury like this can raise pressure inside the foot and that needs checking straight away. This injury is easy to miss, sometimes even on early x-rays, so it is worth pushing for a proper look if your foot does not feel right.