

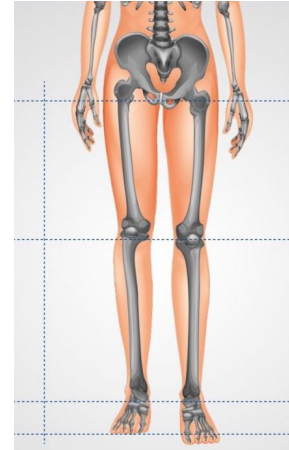
LEG LENGTH DIFFERENCE

Up to 90% of people have small leg length differences – an average of about 5mm. Just like differences in our foot size, this can be a normal difference that doesn't cause any pain. For others, their leg length difference makes it painful to walk and complete activities around the house, let alone playing sports or staying physically active.

There are two types of leg length differences. **Structural differences** refer to a difference between the length of one or more bones, typically the thigh bone (femur) or the shin bone (tibia). These differences may be due to the natural shapes of the bones, as a result of an injury, surgery or disease.

Functional differences occur when the length of the bones are structurally the same (or close enough to the same to not cause any problems), but the way your joints, muscles and ligaments work together as you stand and walk means a difference is created. Picture this: you have one foot with a normal arch and one that rolls in quite a bit to have a flat arch. This may create a functional leg length difference when you stand, tilting one hip further down on the flatter foot, even though the measurable length of the bones is the same.

The functional differences we see are often the result of contracted muscles, often at the hips, where one side is tighter than the other. The same can occur when ligaments on one side of the hips or lower limbs are looser, or when a tendon on one side isn't working quite right. For some of our patients, neurological diseases cause their muscle contracture and their leg length differences.



THE SIZE OF A LEG LENGTH DIFFERENCE

We've seen patients with differences that we've measured at 12-15mm and have no symptoms, and others that are getting knee pain or other problems. The reason for this difference is because bodies compensate differently for a leg length difference. Some can naturally adapt to a slight difference easily, while others may compensate in a way that overuses joints or muscles and may result in pain. Generally speaking, studies show that differences of over 20mm are significant enough to lead to pain or other symptoms starting.

SIGNS OF A LEG LENGTH DIFFERENCE

One of the first things we look for is an imbalance in the position of your knees, hips and ankles relative to one another. If this is present, it's a big sign that a leg length difference may contribute to your symptoms. Looking at your gait is also a good way to see what's happening with your lower limbs and if a difference may be present. Other signs include:

- Limping or hitching your hip while walking – this can occur when you want to help the longer leg clear the ground
- Uneven steps – shorter steps on the shorter leg
- Uneven pressures distributed between the feet on a pressure mat
- Uneven wear patterns between the two shoes – one shoe wears down faster than the other, which may also exacerbate the difference
- Pain in the hips, knees or back
- Stress fractures or other problems that don't appear to have a traditional cause

TREATING A LEG LENGTH DIFFERENCE

Treating a leg length difference starts by understanding the cause of the difference. In some cases, where muscle contracture is the cause, we can help relax the muscle and get it back to a healthy state through care like mobilisation therapy or stretching programs. If the difference is a result of different positioning or function of your feet, we may use orthotics to evenly support the feet and promote symmetrical movement.

If a leg length difference is structural, like when one leg ends up shorter than the other after a surgery like a hip or knee replacement, then it's important to have a 'raise' of some sort to bring the shorter foot in contact with the ground at the same level as the longer foot.

Our Values – We:



love what we do



challenge the status quo



are stronger together



aim to continuously improve



do what we say, sometimes more, never less