

ITB FRICTION SYNDROME

What is ITB Friction Syndrome?

ITB friction syndrome (or Ilio-tibial band friction syndrome) is a relatively common overuse injury seen in runners causing localized pain on the outside of the knee.

The ITB is a taut band of fibres, known as fascia, that runs from the side of your hip to the side of your knee. Unlike normal muscle, it is designed to be a taut band to help provide stability from the hip to the knee. This means it cannot be stretched or contract like other muscles can.

What are the symptoms?

Pain is localised on the outside of the knee around the bony point on the side of the knee (lateral condyle). It is aggravated when bending and straightening the knee, for example, walking, running, going down stairs and crouching down. Some people feel like there is a snapping sensation on the side of the knee and there can be localised swelling as well.

Why do you get ITB Friction?

ITB friction occurs when the ITB band rubs against the lateral condyle. This happens when you repetitively bend and straighten your knee. It is a compressive overuse injury and therefore builds up over time. This rubbing will often happen before you even notice the pain. If it continues then eventually the tissue can't tolerate it and pain will develop.

There are a number of factors that can predispose you to getting ITB friction:

- **Sudden increase in training load or distance**

It is commonly seen in novice runners or those increasing their running distances, for example when training for a marathon. This is likely because their bodies aren't conditioned to the longer distances and they lack muscle strength and endurance.

- **Lack of strength and control**

This is often the biggest factor and an example is the Glute Medius muscle. This is a small muscle on the side of your hip that helps to absorb ground reaction forces and stabilise your pelvis. If you have weakness in your Glute Medius muscle you will have a tendency to let your knee drop inwards when you run. You might even find your knees knock together. When your knee drops inwards, the ITB band is put under more tension causing more friction.

- **Change in running surface**

Running downhill or the camber of a road can put more strain over the ITB.

- **Change in footwear**

Different shoes can provide varying amounts of stability to the foot, which in turn can influence your knee position.

- **Lack of flexibility**

Having a sedentary desk-based job can cause tightness into your hip flexors and hamstrings from sitting down. Lack of flexibility means some muscles can't function as well as they should.

- **Running technique**

Over-striding, taking long slow steps, or having a low cadence (e.g. the number of steps taken per minute) can put more stress through your hips and knee.

How can you manage ITB Friction Syndrome?

- **Modify your training load or 'active rest'**

ITB friction is one of those running injuries that you can't 'run off'. Once it is there is can be quite stubborn to get rid of so listen to your body. The more you run on the painful knee, the worse it will get. If it is very irritable then you will have to rest from running. However, it doesn't mean you have to stop all exercise and it can be beneficial to swap to swimming or cycling if it is pain-free.

If the pain is quite intermittent and very low level then you can continue running, focusing on shorter distances and running technique.

If you are new to running, incorporate rest days into your running plan, or plan to run every other day. Aim to gradually increase your distances by 10%.

- **Strength and control**

This is the most importance factor, and in particular focusing on strength around your glutes, calf, hamstrings and the trunk.

A single leg squat is a great assessment tool to see how good your strength and control is. You should be able to do a single leg squat that is controlled – your knee should point forwards and your hips stay level. If your knee drops inwards, then it can be a sign that you lack strength and control around your hips.

Aim for 2-3 strength sessions per week, which can be as little as 10minutes.

- **Manage the inflammation**

Over the counter anti-inflammatories like Ibuprofen and icing the knee.

- **Flexibility**

Focus on flexibility around your knee and hips. This could be with the use of a foam roller, dynamic stretches or massaging. Avoid using the foam roller on the ITB itself. It's painful and won't achieve anything. Instead focus on hamstring, quads and glutes.

- **Running technique**

Try running with a quicker cadence (number of steps per minute) to avoid over-striding. Aim for 160+. If you are unsure then listen to music with 160-170 BPM and aim to run to the beat of the music.

Use cues such as 'creating space between your knees' to try and prevent your knees dropping inwards and knocking together.

- **Running plan**

Try an interval run:

e.g. Walk for 1 min, run for 2 mins, x 5 rounds.

If this is pain-free, then increase the run.

e.g. walk 1 min, run 4 mins x 5 rounds.

This walk or 'rest' period gives you a chance to offload the knee, so you are able to do a further distance with no pain.

- **Running surface**

Aim for flat surfaces. If you get to a hill you can run up but walk back down.

- **Footwear**

Aim to have a couple of good pairs of trainers to run in, alternating between them. Having a gait analysis is a good way to determine which running trainers would be good for you, especially if you are new to running.

What exercises can you?

Here are four **stretches** to get you started:

1. Hamstring stretch x 10 each side



2. Adductor stretch x 10 each side



3. Glute stretch x 30 secs



4. Quad stretch x 30 secs



And four **strength** exercises:

1. Single leg glute bridge – 3 x 10



2. Crab walk – 3 x 12



3. Single leg split squat – 3 x 10



4. Calf raise – 3 x 10

