

ask the physio Q&A



Physiotherapist Orla Crosse of the Sports Surgery Clinic explains how to deal with two of the most common and problematic running injuries: shin splints and Iliotibial band syndrome.

Two of the most common running-related injuries I see in the clinic, and indeed in my own running group, are shin splints and Iliotibial band syndrome. If you have a race or event coming up they can put a serious wall in front of you, bringing you to a painful stop each time you put on your runners.

Frustration! I've heard it all, from 'try golf ball massage' to 'change runners frequently' and 'regular deep tissue massage on the shin bone'.

The good news, though, is that you can control many variables that cause these issues, you can change the situation. Such overuse conditions are usually affected by your running biomechanics (how you run), leg strength and flexibility.

Research has shown that many common running injuries such as ITB symptoms and shin splints could have been prevented if deficits had been identified and addressed earlier. Sports physiotherapists can identify in advance whether physical limitations or deficits exist which may lead to or delay the recovery of current injuries.

Shin Splints

This term relates to pain below the knee in the front of the shins. Most of us have experienced a pain along the front of our shins either during or after a run at some point.

Seasoned runners may be affected when breaking in new runners or changing running surface, lasting for a day or so. Sometimes it crops up when you haven't been running for a while and head out on a long run.

For others it can be more persistent and debilitating. Think a sharp stabbing pain in the front of the shins, worsened by heel strike when running. It lasts for the duration of the run and can be quite stiff and sore after the run and well into the next day. It settles when you rest, but even after a few weeks' rest, you run again and it's back!

Causes: shin splints are caused by many issues which a chartered physiotherapist can discuss with you. Overpronation, worn shoes, an inadequate stretching regime or running continuously on a deviated surface (Irish country roads!) are influential factors. True shins splints often occur because of an imbalance between the muscles at the back

of your leg (calf) and the front (tibialis anterior).

There is one common biomechanical flaw I find with the majority of shin splints patients and that's tight calf muscles. Your calf helps push you off the ground when walking/running, in other words it points your toes away from you.

In front, your tibialis anterior pulls your foot up from the ground, pointing your toes up towards the ceiling. If your calves are tight it will be difficult to pull your foot up from the ground due to the lack of flexibility in the back of your leg. Your tibialis anterior has to work extra hard to pull your foot up during running due to this pesky tight calf and - lo and behold - you suffer an overuse injury.

Treatment: decrease your mileage. Take the load off! Consider cross-training. Stretch your calf muscle and Achilles tendons regularly; I recommend stretching twice daily for 1-2 minutes and over a period of time they will loosen up, which will take the stress away from your shins.

Foam rollers are an excellent way to release tight or dense areas within the calf muscle; 4 -5 minutes once a day is recommended by most. When you begin to pick up your mileage again, do so gradually - no more than 10% per week. Check your runners; ensure they are supporting you where you need support.

A word of warning – shin pain doesn't always mean you have shin splints. Stress fractures and compartment syndrome will manifest like shin splints pain. They require different investigations to aid diagnosis and will need different treatment.

If you notice redness, swelling, heat and sharp, severe pain when pressing on your shin, I recommend seeing a chartered physiotherapist before commencing any self-rehabilitation.

Iliotibial Band Syndrome

This is an umbrella term for knee pain that can present on the outside of your knee. It is a stubborn and nagging injury and usually occurs after an amount of mileage has built up, but can also affect those new to running. The ITB is a long fibrous band that extends from your hip/gluteus muscles, runs down the outside of your thigh and attaches

to the outside of your kneecap and shin bone at the outside of your knee. The ITB is under most stress when the knee is bent and the thigh rotates inwards. It usually only hurts when the knee is moving through a particular angle and is often worse when running downhill.

Causes: the underlying causes of pain with ITBS are varied but tend to have a few common threads between patients. Overuse and inflexibility can shorten the ITB. Also, ITB length is influenced by our leg biomechanics or 'hip – knee – foot' alignment.

Runners who develop ITB pain may overpronate, have a leg length discrepancy, and suffer from weak hip abductor or gluteal muscles. When the ITB reaches the knee it becomes narrow and friction can occur between it and the underlying bone; this causes inflammation, thickening and pain.

Women are more likely to experience ITB symptoms due to the nature of our hip position. Our wider hips mean the ITB can already be stretched and compromised before we even start to run. Track running can leave people susceptible to developing this problem due to different forces loading through each leg.

Treatment: as always, prevention is better than cure. If you think you have ITB pain, rest from running, reduce mileage, or better still, do no miles at all. Ice the area for 10-15 minutes after a run if it is acutely sore. Check that you're not wearing old runners.

To address the imbalances that caused the problem in the first place, it is best to be assessed by a chartered physiotherapist who can tailor your return-to-run programme and also provide treatment to the affected area.

Whether or not you can effectively stretch and lengthen your ITB is debatable. You can have a definite effect on your hip-knee-foot alignment. Gluteus strength exercises may be required, such as lateral step-ups, single leg squats and side leg lifts. This will help stabilise your hips and pelvis, which will have a positive effect on your biomechanics.

Foam rolling the side of your thigh is an effective way to release tight underlying muscle and may help to reduce thickening in the connective tissue. It is important not to foam roll the side of your knee – this can lead to further complications.

If you're track running, change direction every few laps to prevent an imbalance developing. Improving the biomechanics can make a dramatic difference, which will cross over to your performance, resulting in less pain and improved running time and distances. As always, if you have any further queries, seek professional advice from your chartered physiotherapist.