















**RUNNING CLINICS SUMMARY** 

# CLINIC 4 – COMMON RUNNING INJURIES AND HOW TO AVOID THEM

#### **Plantar Fasciitis**

The plantar fascia is the flat band of tissue that connects your heel bone to your toes. It supports the arch of your foot. If you strain your plantar fascia, it gets weak, swollen, and inflamed. Then your heel or the bottom of your foot hurts when you stand or walk. It is especially painful when you get up in the morning and after you have been sitting a long time. The discomfort may be present at the start of a run, subside during the run, and then recur later.



#### Causes of plantar fasciitis include:

- Feet with a high arch (supinator)
- Flat feet (overpronator)
- Shoes (excessive wear)
- Incorrect shoe type (cushion versus motion control)
- Tight calf muscles
- Training errors (increasing mileage or intensity too quickly)





























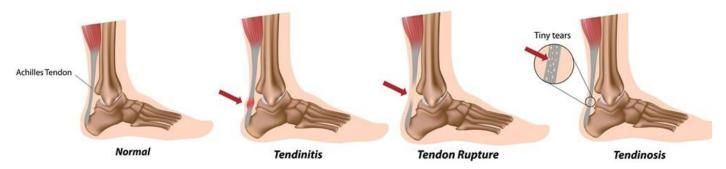
# Achilles Tendinosis and Tendonitis (sometimes spelt tendinitis)

Achilles tendinitis is the inflammation of the Achilles tendon and results from micro-tears – an acute injury. Tendinitis is still a very common diagnosis, though research increasingly documents that what is thought to be tendinitis is usually tendinosis.

Achilles tendinosis is a degeneration of the tendon's collagen in response to chronic overuse; when overuse is continued without giving the tendon time to heal and rest, such as with repetitive strain injury, tendinosis results.

Both are characterised by pain with heel strike, when the foot lands on a curb, when running up the stairs, or with a sudden change of direction. Pain may be more prominent in the morning with the first few steps out of bed. This is because the calf muscle in shortened in sleeping positions.

#### **Achilles Tendon Problems**



#### Causes may include:

- Excessive hill running or stair climbing
- Tight calf muscles
- Flat feet (overpronator)
- Incorrect shoe type
- Overused running shoes
- Change in shoes or running surface
- Training errors (increasing mileage or intensity too quickly)





















When a person has runner's knee or PFPS, the pain builds up gradually and is usually located beneath or around the kneecap. The pain is aggravated by squatting and going up and down stairs. Stiffness in the knee after prolonged sitting is also a symptom of this injury.



### Causes may include:

- Weak thigh and hip muscles
- Flat feet (overpronator)
- Tight hamstrings and weak quadriceps muscles
- Change in shoes or running surface
- Overused running shoes
- Incorrect shoe type

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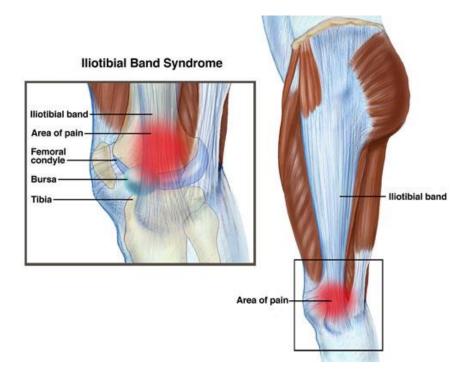








This type of injury is characterised by pain on the outside of the knee while running. A runner may also experience pain on the outside of the hip. With this injury, a runner may notice the pain more on slower runs than fast runs, running hills, or going up or down stairs.



#### Causes of this condition include:

- Running on a banked surface or changes in running surface
- Flat feet (overpronator)
- Training errors (increasing mileage or intensity too quickly)
- Overused running shoes
- Weak hip abductor and hip extensor muscles
- Tight hip muscles (especially iliotibial or IT band muscle)
- Incorrect shoe type

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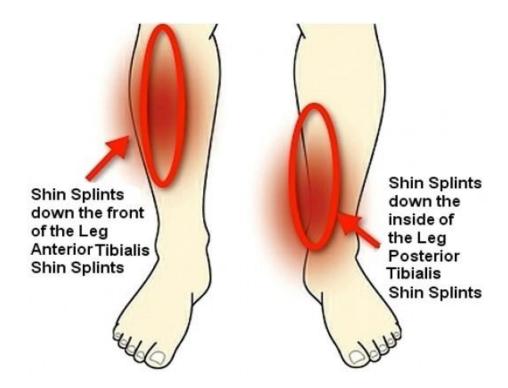








As the name suggests, a shin splint injury is typified by pain in the shin while running. The pain first starts after running, but then progresses to a persistent pain. If you continue to have pain, you should visit your doctor.



#### Causes of this condition include:

- Insufficient control of foot mechanics (incorrect shoe type)
- Change in running surface or banked surfaces
- Overused running shoes
- Flat feet (overpronator)
- Tight calf muscles
- Training errors (increasing mileage or intensity too quickly)
- Weak hip muscles

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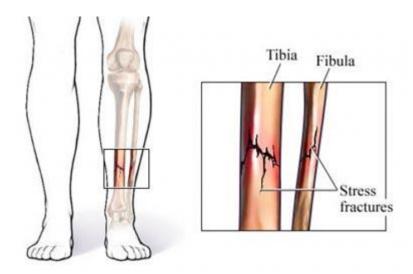






Stress fracture injuries cause persistent pain, most commonly in the shin, but at times in the foot.

Stress fractures are more severe than shin splints and require more conservative management. Some runners may be immobilised in a walking boot or be required to use crutches to allow the stress fracture to heal. Cardiovascular training must focus on non-weight-bearing activities like swimming. The best approaches to preventing stress fractures are proper training, proper shoe maintenance, and not running on excessively hard surfaces.



# Some Easy Ways to Avoid Injuries

#### **Avoid Overtraining**

Many running injuries are a result of overtraining: too much intensity, too many miles, too soon. It's important to go easy when adding mileage or intensity to your training. You shouldn't increase your weekly mileage by more than 10% each week.

#### **Wear the Correct Footwear**

Be sure that your shoes aren't worn out and that you have the right model for your feet and running style. The wrong shoe can actually aggravate existing problems, causing pain in your feet, legs, knees or hips. Wearing shoes that have lost their cushioning may also lead to injury. Go to a specialty running shop where you can be properly fitted for running shoes, and replace them every 600-800KM. If you have a biomechanical problem with your feet, you may also look into getting fitted for heel lifts or orthotics.

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Ideally, you want the ground to absorb shock, rather than passing it along to your legs. Avoid concrete as much as possible: It's about 10 times as hard as asphalt, and is a terrible surface for running. Try to find grass or dirt trails to run on, especially for your higher mileage runs. Consistency is important, too, because a sudden change to a new running surface can cause injuries. You'll also want to avoid tight turns, so look for slow curves and straight paths.

#### Stretch

A regular stretching program can go a long way toward injury prevention. Be diligent about stretching after your runs -- your body will make you pay if you get lazy about it.

## **Strengthen your Hips and Core**

A strong hip area and core section will help you avoid common injuries such as IT Band Syndrome and PFPS. Hip stabilisation exercises are essential especially if you want to remain as efficient as possible when you run.

# **Watch your Cadence**

Cadence is the amount of times that your feet strike the ground per minute. The ideal cadence for a runner is about 184 steps per minute (92 per foot). If your cadence is significantly lower than this then you will more than likely be over striding and therefore heel striking which can lead to inevitable injuries.

