Time-wasting shin splints – how to avoid them, how to get rid of them

By Paula Shingler, BSc,MCSP

This can be one of the most irritating and frustrating of injuries and anyone who has suffered has my sympathy. Its technical name is Medial Tibial Stress Syndrome, for those who like to know these things but it really means pain along the inside of the leg just behind the shin (tibia). Let's look at the anatomy to help explain why it occurs- and how to get rid of it!

Anatomy lesson

The shin bone runs from the knee to the ankle. Behind this is the gastrocnemius (calf) muscle and sandwiched in between these two is the soleus muscle (and a few other little muscles with long names that run down to the foot). The main ones we are interested in are gastrocnemius and soleus. These two start at the knee and join together to form the Achilles tendon. The gastrocnemius helps to propel the body forward. The soleus is a minor muscle that assists with maintaining balance in the standing position.

How do you know you have it?

The symptoms of shin splints are:

- pain on weight bearing - sometimes on starting an activity, it then eases but then returns after the activity has stopped. This pain is along the inside of the tibia and can run all the way down the leg or be isolated to a smaller area.
- swelling over the inside of the tibia that will decrease with time and overnight but return after activity
- tenderness over the area, worse when swollen but can be present all the time on palpation

The causes are related to a change in training. This can be an increase in training mileage over a short period of time, change in terrain - usually from soft to hard e.g. from squashy winter bush to pounding the streets in Summer Series, a change in sport - going from low intensity to high e.g. jogging to playing competitive tennis.

Why, oh why?!

The mechanism that occurs is that the calf tries to cope with the change but is unable to, so the soleus muscle, which is normally not a major contributor, has to come into play and work extra hard to help with propelling the body forward. With this extra work the soleus muscle grows in size but the small space where it is sandwiched between the tibia and the calf is not big enough so this causes pressure to build up, leading to pain and inflammation.

Prevention and recovery

So how do you stop it happening or get rid of it? Well initially it is vital to work out how it has happened and get a proper diagnosis. Shin pain can be a sign of other things like stress fractures, poorly fitting shoes, old non-bouncy shoes or wrongly prescribed orthotics; it is worth just checking these things out too.

If you have been rapidly increasing training or changing terrain then you need to rethink your schedule and build up much more slowly. It is important that you do keep up with activity but change intensity. If you stop the pain will go but when you restart then the problem will annoyingly recur. The reasoning behind this is that you let the calf slowly adapt to the change that is occurring and that gives it time to grow and strengthen so the soleus does not get too involved! Then when you are doing increased work the calf is strong enough to cope alone.

Treatment

Treatment is initially our old faithful ice. This should be used for 10 minutes before and after exercise to help limit inflammation. If it is very acute then ultrasound treatment from your physio can be really effective in reducing the swelling and pain. Calf strengthening exercises are good too, just to give the calf an extra boost. Using a resistance band or doing step-ups are a good start but a programme tailored to your needs might be better - ask your friendly physio!

Normally shin splints should not need formal treatment but just an adjustment to your demands on your poor calves. It can take a while for the calf to adjust but try to be patient as it will pay off. You will be able to fight your way through the green and push hard with those newly strengthened calves.

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