



A GUIDE TO: MEDIAL TIBIAL STRESS SYNDROME 'SHIN SPLINTS'

Shin splints are painful and they can ruin training plans for months if not managed correctly. This guide specifically discusses the form of shin splints felt on the inside of the shin - Medial Tibial Stress Syndrome ('MTSS'). This is a common injury even for experienced runners but this guide will show you how to get over it as quickly as possible.

If you're fairly new to running and have pain on the outside of the shin, contact me for separate advice.

WHAT EXACTLY IS MEDIAL TIBIAL STRESS SYNDROME?

- Pain on the inside (i.e. medial portion) of one or both tibia (your shin bone) when heavy load goes through the lower leg, such as when running
- It's a bone stress injury. The muscles and tissue around the bone are not able to cope with the demands placed on them. There is a resulting failure during loading and recovery and micro tears form in the tissue
- The pain (usually dull but sometimes sharper) often starts shortly after you start exercising, builds in intensity, and goes shortly after you stop
- The pain usually covers a 5cm+ area, with swelling and pain still present the following morning
- Gets progressively worse unless you take action

POSSIBLE CONTRIBUTORY FACTORS

Rapid increases in duration or frequency of training. This is the most likely cause of your shin splints. If you increase the loading gradually, your muscles will have the time to strengthen sufficiently. As a general rule don't increase speed or distance more than 10% in one week.

Stride Length. A long stride looks very graceful but puts more energy through the shin than a short stride. Shortening a long stride may help you.

Your training shoes may give too much or too little support. Also, the support disintegrates over time even when the shoes aren't used. BMC can offer advice on shoe selection.

Overpronation. Pronation (your foot rolling in) is a natural part of running gait, but some people have a foot strike that gives too much roll (i.e. overpronation). This can put too great a twisting force through the shin.

Tight calf muscles may not allow sufficient joint movement. Deep tissue massage can help greatly with this.

Running on hard surfaces increases the energy coming back from the ground, through the ankle joint and onwards to the knee and hip. This can sometimes prove too much.

Uneven surfaces increase the torsional forces the soft tissue has to cope with.

Running on gradients puts the joint through a greater range of movement, stretching the soft tissue more. Frequent runs of this type could contribute to the problem.

SELF-HELP

Your muscles need to get used to the requested loading. Whilst you need to stop running when you feel the pain, you need to get back to it once the pain has gone to allow the muscles to strengthen. In the meantime try a different activity that puts less load through the shin, such as cycling or swimming.

Ice the area (ice must be wrapped in a tea towel or similar to avoid ice burns). This reduces swelling and should be applied for the first 48hrs during painful phases. Ice for 10 minutes, take a 10 minute break and repeat the cycle for an hour. You can do this several times a day.

EXAMPLE EXERCISES

HEEL WALK DRILLS

Walk on your heels for 30 seconds to stretch the calf muscles. Do this periodically through the day.



SHIN STRETCHES (STANDING STRETCH AND FLOOR STRETCH)

Place one leg across the front of the other with the toes curled around. The foot of the front leg should be pressed into the floor. When you can manage it, progress to the sitting stretch.



CALF STRETCH

With a slight bend in both knees, lean into the wall. Keep your back upright. This stretches the soleus (a calf muscle that moves the ankle joint). Stand further from the wall to increase the stretch.

Straighten the rear leg to stretch the gastrocnemius (a calf muscle that moves both ankle and knee joints).



RESISTED PLANTARFLEXION

Sitting as per the picture and with your heel on the floor, hold the ends of the band and replicate the action of pressing down on a pedal. Do this slowly and make sure the ankle joint is put through the greatest range of movement possible.



RESISTED DORSIFLEXION

Pull the band towards your body slowly, making sure the ankle joint is put through the greatest range of movement possible.

