

SHIN SPLINTS

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What is shin splints?

Shin splints is a term used to describe pain and tenderness in the front of the lower leg i.e. shin. The pain of shin splints tends to be dull, aching or throbbing. The pain comes on during or after exercise and can affect one or both legs. If left untreated, shin splints can get worse and end up causing pain at rest too.

Who gets shin splints?

Runners can be susceptible to shin splints. So too can dancers, tennis players or anyone who puts a lot of stress on their lower legs through repetitive activity, especially on a hard surface.

What causes shin splints?

Your shin bone (tibia) is covered with a layer of connective tissue (periosteum). When that layer of connective tissue becomes inflamed, it causes pain. The inflammation can be caused by several factors:

- Intensive periods of exercise, such as running, when your body is not used to it.
- Increasing your training distance or pace suddenly, rather than building up gradually i.e. doing too much too soon.
- Running on hard ground in shoes which don't give you enough shock absorbency. This can put a lot of force through your legs.

- If your foot rolls in excessively whenever it hits the ground, it can cause repetitive stress on your tibia. The term “over-pronation” is often used to describe this excessive rolling in of the foot.
- If your lower leg muscles are too tight, they can exert too much of a pull on your tibia and cause inflammation.

The term MTSS (medial tibial stress syndrome) is sometimes used instead of the term shin splints.

Some people include 2 other causes of lower leg pain under the heading of shin splints: stress fractures and compartment syndrome. In this article, these are discussed separately below in the “What else could it be?” section.

How do you treat shin splints?

Firstly, stop doing the activity that’s causing the problem for at least two weeks. You can still exercise during this time, but choose activities that don’t put too much force on your shins, such as swimming. It’s important not to run through the pain because continued force on your legs will make the shin splints (and therefore your pain) worse.

Pain and swelling can be relieved with ice. Ice acts as a local anti-inflammatory. Put an ice pack (or bag of frozen peas wrapped in a cloth) against the painful part of your shin and leave it there for ten minutes. You can repeat this every hour or two for the first couple of days after you experience the pain.

Gentle stretching, especially of your calves, is also very useful – see my article “Essential Stretches for Runners”. NB/ It’s always best to do stretches when you’re warmed up. When you’re injured, your warm up could simply be walking briskly round the block – something low-impact that increases your heart rate and gets your blood circulating through your muscles.

Sports massage can be a very useful treatment for shin splints. It can help to loosen your muscles and so take pressure away from your injured tibia. Massage can also help to recondition your muscles and improve the circulation and drainage from your lower leg, all of which can speed up recovery. Regular sports massage, as a maintenance approach, can help you to prevent future episodes.

Osteopathy also offers a very useful treatment and rehabilitation approach for shin splints. In addition, osteopathy aims to get to the bottom of what's caused your injury and to work with you to prevent future episodes.

As an osteopath, I take a whole body approach to diagnosis and treatment. In other words, I will assess your injury in the context of the rest of you, your medical history and your lifestyle. I can work out the likely cause of your shin splints by checking your body alignment, mechanics, posture and muscle balance. I can assess your foot, knee, hip, pelvis and spine to try to identify what has caused the stress on your tibia. I can then treat, as appropriate, your muscles, tendons, ligaments and joints, and advise you on corrective exercises and stretches.

How do you prevent shin splints?

Here are some top tips to avoid shin splints:

- Warm up *before* every training session and cool down and stretch *after* every training session. Post-exercise stretching is particularly important to help with your flexibility and with your recovery after training.
- Wear running shoes that give you the correct level of cushioning and support for your weight and foot type. If your feet over-pronate i.e. roll in excessively whenever they land on the ground, you will need some sort of arch support in your shoes. It is a good plan to visit a specialist running shop that has a treadmill if you're buying running shoes for the first time. A trained member of staff can then watch you, analyse your gait and advise you on which shoes are best for you.
- Avoid training on hard surfaces whenever possible.
- Build up your activity level gradually - don't do too much too soon.
- Try to lose any excess weight you're carrying to reduce the impact on your lower legs (and whole body).
- Think about having a regular sports massage to help keep your muscles in good condition.
- Think about visiting an osteopath for a check-up on your posture, muscle balance, alignment and body mechanics.

What else could it be?

Shin splints, or medial tibial stress syndrome, is not the only cause of shin pain. Compartment syndrome is another cause. Your leg muscles sit inside an enclosed compartment and have limited space in which to swell. When they swell too much, pressure increases and blood can't flow properly – compartment syndrome. It causes severe pain and can also cause odd sensations and eventually weakness.

The pain of compartment syndrome is usually felt on the outside aspect of the shin whereas shin splints tends to be felt more on the inside aspect. It's always worth seeking an expert opinion if you have any doubts what's causing your shin pain. With compartment syndrome, sometimes surgical "decompression" is required.

Pain in the shin could also be caused by a stress fracture (an incomplete crack in the bone). A stress fracture is a more serious injury than shin splints. It can develop after repeated impact exercise (like running or dancing) over a long period of time.

The pain of shin splints tends to be more generalized i.e. covering a longer section of the shin than that of a stress fracture. A stress fracture tends to have a definite spot of sharp pain. Sometimes a stress fracture feels better in the morning because the bone has rested all night. Those are just clues to help differentiate between shin splints and a stress fracture. Sometimes it's necessary to have an X-ray and/or a bone scan to be sure.

Note

This article has looked at 3 causes of shin pain; there are others. It's always best to get any new pain checked out, especially if you're also experiencing symptoms other than leg pain.

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