

## DESCRIPTION

Shin soreness, commonly known as 'shin splints' refers to pain or discomfort over the front of the lower leg. The pain may also be felt along or between the two bones (and may involve bone, muscle, tendon or a combination of these).

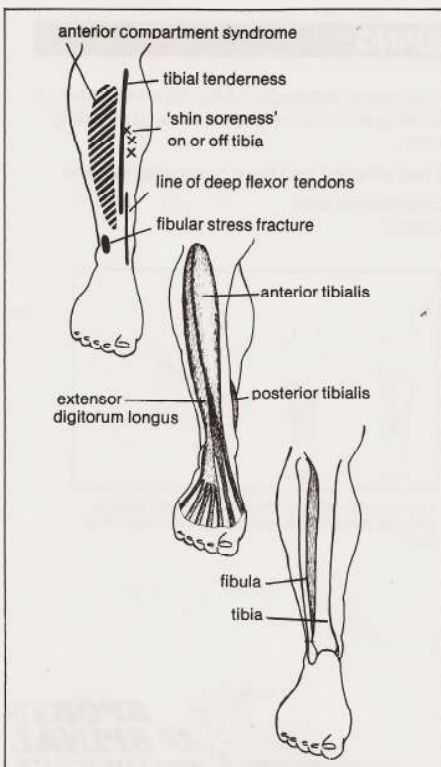
It is an overuse injury in which the body does not adapt to the repeated stress causing minute injuries to the soft tissues or to the bone, as in a stress fracture. This leads to inflammation, which is the body's response to injury. The inflammation causes pain, swelling and warmth at the injury site. If activity is continued, the inflammation is worsened.

## ANATOMY

The lower leg is composed of 2 bones, the tibia and the smaller fibula. Muscles attaching to the tibia on the inside run down behind the ankle and across the bottom (arch) of the foot. These include the posterior tibialis and the flexor digitorum longus (which, when contracted, curls the toes).

To the tibia on the outside is attached the muscles which uncurl and extend the toes and at the front, the tibialis anterior, which dorsiflexes (or picks up) the foot.

To the fibula are attached the peroneal muscles which turn the foot.



The most common site of shin soreness is on the inside of the tibia, where the tibialis posterior attaches. This muscle crosses the longitudinal arch of the foot, so excessive stress can be caused by anything which causes the foot to flatten more, e.g. flat feet, poor shoes, hard surfaces, excessive weight.

Common site is along the front of the leg, which is the anterior tibialis muscle. This muscle attaches to the top of the foot and is primarily responsible for dorsiflexion. The problem here can be tendinitis, myositis, stress fracture, anterior compartment syndrome.

## ETIOLOGY

Shin soreness may have many causes. These include:

1. Tendinitis (inflammation of one or more of the many tendons).
2. Myositis (inflammation of the muscle).
3. Periostitis (inflammation of the outer covering of the bone).
4. Stress fractures of the tibia and fibula.
5. Anterior compartment syndrome.
6. Referred pain from lower back.

## CAUSES

1. Footwear – may be inappropriate for activity or individual foot.
2. Sudden changes in training habits (distance, speed, surface).
3. Malalignment of foot and/or lower leg.
4. Lack of conditioning.
5. Weak or flat longitudinal arch of foot.
6. Running on slopes.
7. 'Tight' Achilles tendon.
8. A blow to the shin may set off inflammatory reaction.

