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Shin Splints

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Description

The term "shin splints" refers to pain and tenderness along or just behind the inner edge of the tibia, the large bone in the lower leg. Shin splints--or medial tibial stress syndrome as it is called by orthopaedists--usually develops after physical activity, such as vigorous exercise or sports. Repetitive activity leads to inflammation of the muscles, tendons, and periosteum (thin layer of tissue covering a bone) of the tibia, causing pain. The bone tissue itself is also involved.

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Risk Factors

- Flatfeet or abnormally rigid arches
- Running/jogging
- Dancing
- Sudden increase in training or new vigorous impact training
- Military training

Certain factors seem to contribute to shin splints. The condition commonly affects runners, aerobic dancers, and people in the military. Shin splints often develop after sudden changes in physical activity, such as

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running longer distances or on hills, or increasing the number of days you exercise each week. Flat feet are another factor that can contribute to increased stress on the lower leg muscles during exercising.

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Treatment

Nonsurgical Treatment

Nonsurgical treatment for shin splints includes several weeks of rest from the activity that caused it. Other forms of conditioning can be substituted. The doctor may recommend that you take anti-inflammatory medications, or use cold packs and mild compression to feel better. Stretching exercises can also help.

In most people, the pain is not so bad with ordinary walking. After several weeks of rest, low-level training may begin. Be sure to warm up and stretch thoroughly before you exercise. Increase training slowly. If you start to feel the same pain, stop exercising immediately. Use a cold pack and rest for a day or two. Return to training again at a lower level of intensity. Increase training even more slowly than before.

Surgical Treatment

Very few people need surgery for shin splints. Surgery has been done in very severe cases of shin splints that do not respond to nonsurgical treatment. It is not clear how effective surgery is, however.

An accurate diagnosis is very important. Sometimes, other problems may exist, which will have an impact on healing.

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Other Causes of Shin Pain

Stress fracture

When shin splints are not responsive to treatment, your doctor may want to make sure you do not have a stress fracture. A bone scan and magnetic resonance

imaging (MRI) can often show if a fracture is present. The diagnostic tests, causes of shin splints, and treatment regimens all bear a similarity and relationship to stress fractures. It is possible that there is a relationship between shin splints and stress fracture, but this has not been clearly identified.

Tendonitis

Tendonitis can be present, especially if there is a partial tear of the involved tendon. MRI can also help the doctor diagnose the presence of tendonitis.

Chronic exertional compartment syndrome

An uncommon condition called chronic exertional compartment syndrome involves swelling of muscle with exertion. This happens within the muscle's usually tight compartment in the leg. These compartments are nonyielding. Swelling can raise pressure within the compartment to levels so high that blood will not flow into the muscle. This causes severe pain and is best treated surgically. The tests that are used to diagnose chronic exertional compartment syndrome are highly specialized and not easily available. They involve measuring the pressure within the leg compartments immediately after exercise.

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