"Fallen Arches" or Posterior Tibial Tendonitis:

What it is

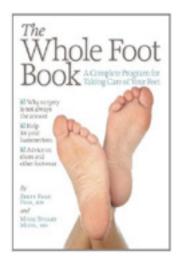
And

How to control it!





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## What is a "fallen arch"?

"Fallen arches" are more than just flat feet. Having flat feet is not a disease. It is a description of the shape of the foot. Most flat feet have been flat all of the person's life. Usually they are not painful.

A "fallen arch" is a change in the shape of the foot. The normal gap between the floor and the arch on the inside of the foot narrows. It is usually painful, sometimes cripplingly painful.

The heel leans to the inside, giving the inner ankle a bowed appearance. The joints of the outside of the crush together causing pain and swelling. The ligaments on the inside of the ankle stretch causing additional pain. Over time, the joints of the midfoot and forefoot adapt to the tilting of the ankle so that the front of the foot remains on the floor, complicating the deformity if it is surgically corrected.



What causes a "fallen arch"?

The most common associated problem with "fallen arches" is stretching and tearing of the posterior tibial tendonitis, a tendon that supports the arch and inverts the heel. The tendon begins to develop small tears that do not heal properly. While the tendon does not usually completely rupture, it lengthens and looses strength as it lengthens. As the tendon fails to position the joint properly, other joints and ligaments, especially the spring ligament in the arch, exposed to forces that gradually tear them. As the ligaments lengthen, the arch sags.

It is not known why this process begins. It is often associated with diabetes and rheumatoid arthritis and other inflammatory diseases. It also is more common as a person enters the fifty to seventy year age range.

"Fallen arches" are much more common in people who are already flat footed. This is probably because the flat foot uses the posterior tibial tendon to stabilize itself more than the foot with a normal arch. It also has been suggested that people with tight calf musculature tendon to develop it more than others.



## How do I get better?

Some of the aspects of the pain with a "fallen arch" are related to the crushing of the joints of the outside of the foot and from the stretching of ligaments and tendons of the inside of the foot. Unfortunately, some parts of the damage from the

fallen arch, the weakness in the tendons and the new shape of the foot, are not correctable without surgical reconstruction. Nonetheless, it is possible to often make it feel and work better through nonoperative treatment.

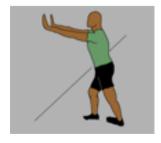
The first goal is to stabilize the collapsed arch. This can be done through braces. If the deformity is mild, an over-the-counter arch support may be sufficient. In more severe deformities an hinged or solid ankle brace may be necessary.

Rehabilitative exercises under the supervision of a physical therapist will help increase the strength of the remaining muscles. Stiffness of certain tendons including the Achilles and hamstring is also very helpful as tightness in these structures is very common in people with "fallen arches". Postural training is beneficial.

These stretches focus on the reduction of forefoot pressure throughout the step. The most important tight areas are in the plantar fascia, the hamstrings, and Achilles areas. Flexibility exercises that focus on theses areas are demonstrated in the illustrations. They should be done several (2-5) times a day and each stretch should last 30 seconds. Stretches should be repeated three times per session.



Hamstring Stretch



## Achilles Stretch



Plantar Fascia Stretch

Strengthening exercises that work out the entire chain of muscles from the shoulders and neck to the back, abdomen, hips, and legs are important. Important causes of foot pain center around poor conditioning and the shifts in body weight (back and abdominal posture) that result from fatigue of these important muscles. However, a complete conditioning program cannot be outlined in this handout. It is, however, available in my book, The Whole Foot Book, which costs much less than the co-payment for a single therapy visit.

A short period of casting or walking in a cast boot will improve swelling of a recent partial tear of the tendons and ligaments on the inside of the ankle.

Non-steroidal anti-inflammatory medications such as ibuprofen and naprosyn can help to relieve the pain, but do not heal the injuries associated with this or decrease the swelling significantly.

Surgical reconstruction is available if the pain cannot be controlled reasonably with these measures.