

Acquired Adult Flatfoot Deformity

Other names: **Progressive Collapsing Foot Deformity**
Posterior Tibial Tendon Insufficiency

Symptoms

- Painful flatfoot deformity
- Commonly a history of flatfeet that has recently become painful
- Flatfoot deformity may be worsening --particularly compared to the other side
- Pain often on the inside (medial side) of the ankle
- Pain on the outside of the ankle (lateral side) is also common
- Can occur at any age, but more common in patients 50 or older
- A recent increase in activity level, or injury may precipitate symptoms
- A limp is common which worsens with increased, standing and walking

Physical Findings

- Commonly there is a notable flatfoot deformity --worse than on the other side
- Pain and swelling may be noticeable on the inside of the ankle --over the course of the posterior tibial tendon
- Some patients will experience more pain on the outside of the ankle
- Calf muscle may be tight
- Often difficult or impossible to stand on one foot and raise heel off the ground
- Noticeable limp and a shortened stride length is common on affected side

Imaging

- Weight-bearing x-rays will demonstrate evidence of collapsing of the arch.
- MRI or weight-bearing CT scan may not be indicated unless surgery is being contemplated.
- An MRI will usually show swelling and internal tearing of the poster, tibial tendon, although the tendon is often still intact.

Non-Operative Treatment

Effective nonoperative treatment can often improve or eliminate symptoms of pain. However, the underlying deformity is often not improved. It commonly takes 8–12 weeks of concerted treatment to optimize the results of nonoperative treatment. Typical elements of nonoperative treatment include:

- **Comfort shoes**
- **Ankle bracing** – at least until symptoms settle
- **Supportive orthotic** with an arch to support the inside of the foot
- **Activity modification** to avoid prolonged, weight-bearing and standing
- **Weight loss**
- **Physical therapy:** a coordinated rehabilitation program that emphasizes high repetition, low resistance muscle strengthening, range of motion exercises (including calf, stretching), and a **coordinated home exercise program is often the central element of an effective nonoperative treatment program.**

Operative Treatment

Patients who do not improve significantly with non-operative treatment, or whose deformity is too pronounced, may benefit from operative treatment. Surgery can be effective although recovery time is often prolonged. There are a variety of different combinations of procedures that can be performed to address the specific underlying deformities. Surgery generally involve:

- Shifting or fusing bones of the foot to realign the foot to a more neutral shape
- Transferring a tendon to aid the function of the weakened posterior tibial tendon

Figure 1:

- A. Flattened Arch
B. “Too many Toes” Sign



Figure 2:

- Normal and Collapsed arch on x-ray

