

# Shohada Educational & Treatment Hospital

# Flat foot surgery



Flat feet



Normal feet

# What Is Flatfoot Surgical Correction?

**Adult acquired flatfoot deformity** (AAFD) is a collapse of the arch of the foot. Flatfoot surgery addresses the bones, ligaments, and tendons that support the arch, often through a combination of procedures. The goals of the surgery are to improve the alignment of the foot and restore more normal pressure during standing and walking. This surgery can also reduce pain and improve walking ability.

#### **Diagnosis**

Patients with a painful flatfoot frequently mention ankle and/or foot pain and difficulty with daily activities. A **foot and ankle orthopaedic surgeon** should do a complete evaluation of the foot, including a medical history, physical exam, and X-rays. Nonsurgical treatments such as rest, immobilization, shoe inserts, braces, and physical therapy should be tried first. If these are unsuccessful, then surgery may be considered.

Patients who have diabetes or take oral steroids should be evaluated by their primary care physician to determine if surgery is safe. Obese patients and smokers are at higher risk for blood clots and wound problems. Full recovery from flatfoot surgery can take up to a year. Patients who are unable or unwilling to complete this process should not have this surgery.

#### **Treatment**

Surgery can be performed under **regional anesthesia**, which is numbing of the foot and ankle with a nerve or spinal block, or general anesthesia, which may require a breathing tube. A nerve block often is placed behind the knee to reduce pain after surgery.

Comprehensive surgical treatment for AAFD usually involves a combination of several procedures. Your foot and ankle orthopaedic surgeon will develop a treatment plan based on your deformity and the surgeon's preferences. The following procedures may be considered.

# **Achilles Lengthening**

In AAFD, the Achilles tendon becomes tight and contracted. Almost every surgical procedure for AAFD includes some kind of Achilles tendon lengthening. There are multiple types, each with different benefits. The most commonly performed types are gastrocnemius recession and triple-cut/percutaneous Achilles tendon lengthening.

# **Medializing Calcaneal Osteotomy**

Also called a heel slide, this procedure involves cutting the heel bone to shift it back into correct alignment under the leg. The bone is then held in place with screws, staples, or a plate.

#### **Tendon Transfers**

Typically the flexor digitorum longus (FDL) tendon, which flexes your toes, is **transferred** to help bring some strength back to the posterior tibial tendon. It is cut in the foot and transferred to the navicular bone. If the posterior tibial tendon is severely damaged, your surgeon may remove it altogether. Sometimes, tendon transfers on the outside of the foot are also done to help realign the forces working on the foot.

#### **Ligament Repairs**

The spring ligament and the deltoid ligament are two ligaments that help hold the correct alignment of the foot and ankle. In patients with severe disease, one or both ligaments may be torn. In some cases, your surgeon may recommend repair or reconstruction of one or both of these ligaments.

#### **Lateral Column Lengthening**

In this procedure, the calcaneus bone is cut on the outside of the foot and "lengthened" to help correct the foot deformity. This is typically done by inserting either a cadaver bone or a metal wedge into the cut bone to lengthen it. Often, screws or a plate are used to help hold the bones in position while they heal.

# **Cotton (Medial Cuneiform) Osteotomy**

In this procedure, the medial cuneiform bone is cut through an incision on the top of your foot. Spreading the cut bone apart with a bone or metal wedge helps recreate an arch.

#### **Midfoot Fusion**

Some patients with arthritis and/or deformity of their midfoot may require a **midfoot fusion**. This may involve one or more of the multiple midfoot joints, including the tarsometatarsal joints or the **naviculocuneiform** joint. This procedure is also useful for restoring the arch.

#### **Subtalar Fusion**

This procedure is done for more severe deformities. The talus and the calcaneus bones are fused together, which allows the surgeon to correct more of the deformity.

#### **Double or Triple Arthrodesis**

This procedure is done for the most severe deformities or ones with arthritis. In a triple arthrodesis, three joints are fused: the subtalar, talonavicular, and calcaneocuboid joints. Often, just the subtalar and talonavicular joints are fused (double arthrodesis). The foot will be stiff after this surgery, but usually pain and alignment are improved and the foot feels more stable for walking.

#### **Recovery**

Patients may go home the day of surgery or they may require an overnight hospital stay. The leg will be placed in a splint or cast and should be kept elevated for the first two weeks. At that point, sutures are removed. A new cast or a removable boot is then placed.

It is important that patients **do not put any weight** on the corrected foot for 6-8 weeks following the operation. In most cases, patients may begin bearing weight after the first 6-8 weeks and progress to full weightbearing by 10-12 weeks. For some patients, weightbearing requires additional time. After 12 weeks, patients usually can transition to wearing a shoe. Inserts and ankle braces often are used. Physical therapy may be recommended. Swelling and discomfort can last for months after surgery, and full recovery can take 1-2 years.



X-ray views of a flatfoot before and after surgery.

**Risks and Complications** 

All surgeries come with possible complications, including the risks associated with

anesthesia, infection, damage to nerves and blood vessels, and bleeding or blood clots.

Complications following flatfoot surgery may include wound breakdown or incomplete

healing of the bones (nonunion). These complications often can be prevented with proper

wound care and rehabilitation. Occasionally, patients may notice some discomfort due to

prominent hardware. Removal of hardware can be done at a later time if this is an issue.

The overall complication rates for flatfoot surgery are low.

**Flatfoot Surgery FAQs** 

Will surgical correction of my flatfoot improve the cosmetic appearance of my foot?

Surgical correction of flatfoot is aimed primarily at reducing pain and restoring function.

Although surgery likely will improve the cosmetic appearance of the foot, it is not a

primary goal of treatment.

What activities will I be able to do following flatfoot surgery?

With proper correction and rehabilitation, many patients return to active lifestyles.

Activities such as walking, biking, driving, and even golfing are well tolerated. It is less

likely, however, that patients will be able to participate in very strenuous high impact

activities requiring running, cutting, or jumping.

Original article by Jeremy Chan, MD

Last reviewed by Elizabeth Cody, MD, 2020

Reference:

https://www.footcaremd.org

5