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Pediatric Flatfoot



Pediatric flatfoot



Normal pediatric foot

What is Pediatric Flatfoot?

Flatfoot is common in both children and adults. When this deformity occurs in children, it is referred to as “pediatric flatfoot,” a term that actually includes several types of flatfoot. Although there are differences between the various forms of flatfoot, they all share one characteristic—partial or total collapse of the arch.

Most children with flatfoot have no symptoms, but some children have one or more symptoms. When symptoms do occur, they vary according to the type of flatfoot. Some signs and symptoms may include:

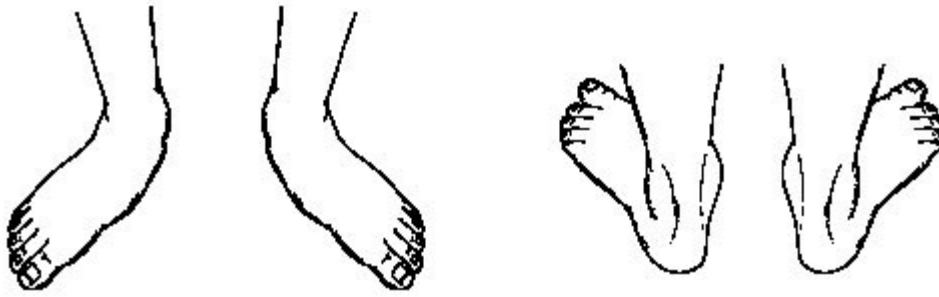
- Pain, tenderness, or cramping in the foot, leg, and knee
- Outward tilting of the heel
- Awkwardness or changes in walking
- Difficulty with shoes
- Reduced energy when participating in physical activities
- Voluntary withdrawal from physical activities

Flatfoot can be apparent at birth or it may not show up until years later, depending on the type of flatfoot. Some forms of flatfoot occur in one foot only, while others may affect both feet.

Types of Pediatric Flatfoot

Various terms are used to describe the different types of flatfoot. For example, flatfoot is either *asymptomatic* (without symptoms) or *symptomatic* (with symptoms). As mentioned earlier, the majority of children with flatfoot have an asymptomatic condition.

Symptomatic flatfoot is further described as being either *flexible* or *rigid*. “Flexible” means that the foot is flat when standing (weight-bearing), but the arch returns when not standing. “Rigid” means the arch is always stiff and flat, whether standing on the foot or not.



Several types of flatfoot are categorized as rigid. The most common are:

- **Tarsal coalition.** This is a congenital (existing at birth) condition. It involves an abnormal joining of two or more bones in the foot. Tarsal coalition may or may not produce pain. When pain does occur, it usually starts in preadolescence or adolescence.
- **Congenital vertical talus.** Because of the foot's rigid "rocker bottom" appearance that occurs with congenital vertical talus, this condition is apparent in the newborn. Symptoms begin at walking age, since it is difficult for the child to bear weight and wear shoes.

There are other types of pediatric flatfoot, such as those caused by injury or some diseases.

Diagnosis

In diagnosing flatfoot, the foot and ankle surgeon examines the foot and observes how it looks when the child stands and sits. The surgeon also observes how the child walks and evaluates the range of motion of the foot. Because flatfoot is sometimes related to problems in the leg, the surgeon may also examine the knee and hip.

X-rays are often taken to determine the severity of the deformity. Sometimes an MRI study, CT scan, and blood tests are ordered.

Treatment:

Non-surgical Approaches

If a child's flatfoot is asymptomatic, treatment is often not required. Instead, the condition will be observed and re-evaluated periodically by the foot and ankle surgeon. Custom orthotic devices may be considered for some cases of asymptomatic flatfoot.

In symptomatic pediatric flatfoot, treatment is required. The foot and ankle surgeon may select one or more approaches, depending on the child's particular case. Some examples of non-surgical options include:

- **Activity modifications.** The child needs to temporarily decrease activities that bring pain as well as avoid prolonged walking or standing.
- **Orthotic devices.** The foot and ankle surgeon can provide custom orthotic devices that fit inside the shoe to support the structure of the foot and improve function.
- **Physical therapy.** Stretching exercises, supervised by the foot and ankle surgeon or a physical therapist, provide relief in some cases of flatfoot.
- **Medications.** Nonsteroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen, may be recommended to help reduce pain and inflammation.
- **Shoe modifications.** The foot and ankle surgeon will advise you on footwear characteristics that are important for the child with flatfoot.

When is Surgery Needed?

In some cases, surgery is necessary to relieve the symptoms and improve foot function. Foot and ankle surgeons perform a variety of techniques to treat the different types of pediatric flatfoot. The surgical procedure or combination of procedures selected for your child will depend on his or her particular type of flatfoot and degree of deformity.