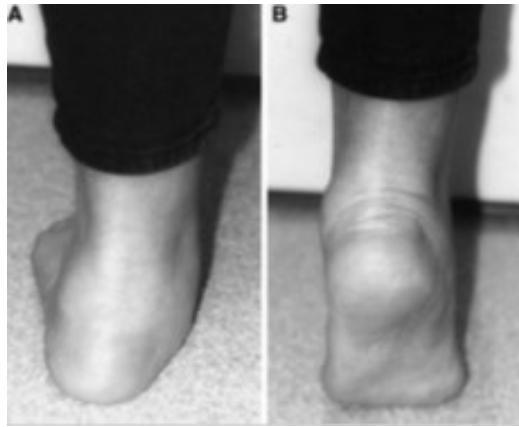


Flexible Flatfoot in Children and Adolescents

Flexible flatfoot is a normal foot shape. It is very common, rarely painful and may run in families. Most children and many adults (20%-30%) have a flat foot when standing. The arch develops in the first ten years of life if it develops at all. There is no evidence that any type of support, orthotic, shoe or other device can cause an arch to develop. In fact, several studies have shown children who walk barefoot develop a better arch than children who wear shoes.



Cause

Flexible flatfeet are due to excessive ligamentous laxity. Also known as "double jointed" or "loose jointed". This condition is extremely common in children and persists in many adults. Basically, the tissues (ligaments and capsules) that connect and surround the joints are lax or "loose" which allows the joints to move through a greater range of motion. This allows the foot to flatten out when weight bearing.

Examination

Your doctor will examine your child's gait and extremities to look for any abnormalities in motion, function or alignment as well as check for ligamentous laxity. He may also examine the child's shoes and may even look at your feet. A typical flexible flatfoot appears normal when the child is seated but flattens out when he stands. The arch comes back when the child stands on his toes.

X-Rays (Radiographs)

X-rays are generally not needed for flexible flat feet unless another diagnosis is suspected such as tarsal coalition or congenital vertical talus. There is a very wide range of normal values for flexible flatfeet and treatment, if needed, is not directed by the x-ray findings.

"Painful Flatfeet"

There are generally two pain patterns seen in people with flat feet. The first is easy fatigability – "he can't walk for very long and wants to be carried" with pain or achiness at the end of the day in the feet and legs. This is usually seen in younger children and is likely due to muscle fatigue. The muscles in the legs and feet are trying to support the foot and are tiring out. The second pain pattern is pain with activities with occasional pain in the mornings. This is usually seen in older children and adolescents and is likely due to altered mechanics because of a tight heel cord (Achilles tendon) which limits ankle motion and puts more stress on the foot. Approximately 25% of patients with flexible flatfeet have a tight heel cord.

Treatment

Flexible flatfeet that are pain free need no treatment. As noted previously there is no way to force the foot to grow an arch and most flexible flatfeet are not a problem and do not cause problems in the future. If the child is having significant complaints of pain that are limiting his activity or life style then treatment may be helpful and is directed at the reason for the foot pain.

Truly flexible flatfeet that are symptomatic may be "treated" with orthotics that help support, cushion and align the foot. Again, this will not cause the foot to grow an arch! Over the counter orthotics should be tried first before custom orthotics. The child should not have to wear these "forever" and should try to discontinue them when symptoms resolve.

In children and adolescents with flatfeet and tight heel cords stretching is recommended. Orthotics often make the pain worse. Stretching can be done at home without a therapist. Attention must be paid to the position of the foot and heel when stretching. The heel must be held straight or slightly inward to lock the hindfoot. The knee should be straight. If not the stretch may occur in the arch of the foot and not the ankle and may break the arch down more. Heel cord stretching may also be accomplished with stretch casting. Surgical lengthening is rarely needed.



Surgery for Flexible Flatfoot

Surgery for correction of flexible flatfoot is rarely indicated. It may be considered in those patients who have failed conservative treatment (which includes activity modification, anti-inflammatory agents, custom orthotics and stretching) and still have severe, life-style limiting pain to the point they are having trouble performing their activities of daily living i.e. walking, standing, attending school or job. Surgical correction includes a heel cord lengthening, calcaneal lengthening osteotomy with bone graft and plate, medial cuneiform plantar flexion osteotomy with bone graft and plate and tightening (imbrication) of the talonavicular joint capsule and the posterior tibialis tendon. The surgery takes about 3 hours. Patients spend 2-3 days in the hospital and are in a cast, non-weight bearing, for at least 6 weeks. Full recovery takes at least 6 months.



Updated 1/2018

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