Taking Care of Flat Feet in Children

by Mark N. Charrette, DC

Flatfoot (pes planus) is a condition which is defined as the lack of a medial longitudinal arch in the foot. Although the exact incidence of this finding in children is unknown (1), we do know that it is very common. Given that almost all children start out with little or no arch, does this condition pose a real problem? When, if ever, is intervention appropriate? Are arch supports, special shoes, or in-shoe orthotics necessary? Parents want to know, and doctors need to understand the natural history of flat feet.

Almost every child’s foot initially has a large medial fat pad which slowly decreases during maturity. This eventually results in a more prominent medial longitudinal arch. (2) A study by Notari (3) has confirmed that 28% to 35% of school children have a flatfoot deformity, 80% of which are classified as “mild.” Without treatment, over 90% of these children will have normal arches by the age of ten. (2,4) The vast majority of children who present with the appearance of a flatfoot will, therefore, eventually develop normal longitudinal arches.

However, it is very important to differentiate a normal, flexible flatfoot from a congenital, rigid flatfoot. A rigid flatfoot is usually due to an osseous deformity, such as a tarsal coalition (abnormal fibrous or bony fusion of one or more tarsal bones). A simple test to determine the existence of a rigid flatfoot can be easily performed in the chiropractor’s office. If an arch is present when the child is sitting with the foot dangling, or when standing
up on the toes, then the flatfoot is “supple and is correctable with an arch support.” (5) If the foot remains flat and rigid during this test, any attempt to support or lift up the arch may be painful and unsuccessful. (6) This condition may require referral to a specialist. (7)

When to Intervene

When a parent brings in a child with flat feet who is between the ages of six and ten, and the in-office tests mentioned above confirm a flexible flatfoot, immediate intervention is necessary to encourage normal development of the longitudinal arch, and to prevent pelvic and spinal postural deformities. (8) This is especially true when one foot is flatter than the other. The resulting asymmetrical forces, which are imposed during locomotor activities, can eventually result in significant cumulative trauma to the foot/ankle complex, knees, hips, and low back. (9) If the child is ten years of age or older, the flexible flatfoot can be considered permanent, and he or she will require long-term use of orthotics to prevent future problems in the foot, lower extremity, and spine. This is especially true for overweight or athletically active youngsters.

Recommended Treatment for a Flexible Flatfoot

1. Strengthen the child’s lower leg muscles with home exercises, especially Tibialis Posterior, and Internal/External Rotation exercises. Also, have the child perform the towel-gathering exercise (“scrunching” a towel lying on the floor with the toes) for 15 minutes daily. (10)

2. Insist the child wear supportive shoes with a stable heel (not worn down on either side) and a strong shoe counter. The counter is the shoe material that fits around the heel of the foot.

3. If excessive pronation and flatfoot are noted to persist as the child matures, correction with custom-made orthotics is indicated.

Shoes
Proper footwear is important for the developing foot. Whenever safety and comfort allow, going barefoot stimulates proprioceptors and encourages muscular coordination and strength. Children's shoes should have flexible soles to allow for proper foot joint movement (thick rubber soles may hamper and confine). Proper shoe sizing and fit is critical, since the developing bones are soft and malleable. Tight, constricting shoes will interfere with normal growth and may result in deformity. Frequent evaluation of size and fit (palpate the child's foot for pressure points while standing with shoes on) is an important concept for parents to understand and accept.

Orthotics
As described above, the majority of pediatric foot problems will resolve with exercise and proper footwear. Orthotics are seldom needed in the early years of growth. If a supple flatfoot and/or excessive pronation is seen to persist beyond ages six or seven, or is responding poorly to home care interventions, custom-made flexible orthotics are appropriate. The additional corrective support they provide will encourage normal development while preventing further deformity and reducing abnormal kinetic chain stresses on the pelvis and spine during the formative years.

Conclusion
Parents need reassurance and appropriate recommendations when they bring in a child with a “flat foot.” Most common childhood foot conditions will resolve during normal growth and development, needing only home-care recommendations. As always, the developing spine should be evaluated and appropriate chiropractic care is recommended. Specific exercises may hasten the maturation and coordination of the support muscles. In some cases, custom-made orthotics may be needed to provide additional corrective stimulus and support.

References


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**About the Author**

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