

## Personalized Orthotics One Key to Addressing Foot Pain

*By John Tassone, DPM*

We see them everywhere...late night infomercials, state fairs, chiropractic and podiatry offices and retail stores. They go by many names and are touted to help not just foot pain, but fatigue, knee pain and back pain. Orthotics, custom fit inserts, arch supports, etc. have been around for many years. They are as popular as ever, for one very good reason—foot pain is common and intolerable to live with, and they can help.

Walking has been described as a series of “free falls” and collisions. The average person takes 5,000 to 7,000 steps per day. Each time the foot hits the ground, an amount equal to one to two times your bodyweight of pressure is transmitted up the leg. The foot needs to function in a certain way to dissipate these forces and provide a stable structure from which to propel.

Pronation of the foot occurs when the heel makes contact with the ground. It is essential and serves as a great shock absorbing system. As the foot pronates, the arch flattens, the ankle drops, and the knee “unlocks”, allowing it to flex. Each contributes to absorbing and lessening the shock that is occurring at this time. The foot becomes a “loose bag of bones”, allowing it to adapt to uneven terrain. As the ball of the foot becomes more weight bearing and the heel rises, the arch needs to rise and the foot should stop pronating and do the opposite motion which is called supination. This converts the foot into a rigid stable structure, which you need when pushing off the ground as you propel forward. If you are pronating at this time, you are pushing on an unstable foot which can lead to all kinds of foot problems such as plantar fascia, bunions, hammer toes, etc.

Thus, timing of pronation to absorb shock, and supination, to provide a stable foot, are critical to normal foot function. Custom fitted orthotics differ than over-the-counter arch supports, in that, they are intended to restore normal function of the foot. These require custom fitting (casting of molds), and a prescription, which provides specifications based on the individual patient’s needs.

Orthotics are not always needed. Better, more supportive shoes or over-the-counter arch supports and increased cushion can often do wonders for foot pain. However, if these are not helping and you continue to experience foot discomfort or pain, feel free to schedule an appointment with me by calling 602-938-6960.

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