



A Foot Note

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Conditions that affect the foot and ankle are due to structural or biomechanical fault, or often a combination of the two. Faulty biomechanics often lead to or contribute to many painful afflictions of the foot such as bunions, hammertoes, neuroma, plantar fasciitis, flatfeet, osteoarthritis, cavus foot, tendonitis and joint stiffness.

Unlike any other body part, the foot consists of horizontal weight-bearing joints that are put to extreme deforming force with each step. A small biomechanical fault, such as over-pronation or collapsing arches, over time can lead to any of the aforementioned conditions. Most are preventable with proper shoe gear, education and orthotic stabilization.

Orthotics are devices that fit into shoes. Orthotics fall into two categories: accommodative or functional. **Accommodative** orthotics are often purchased over the counter (OTC) as prefabricated inserts. These inserts function to distribute force across the foot or pad painful areas. They provide a small amount of foot stabilization, especially when combined with good shoes. They are appropriate and work well for minor conditions, such as acute plantar fasciitis, tendonitis or sore feet. For most conditions a trial of OTC orthotics is appropriate due to the low cost and possibility of alleviating pain. I particularly like the New Balance Multisport inserts as well as the Superfeet inserts. Many drug stores and sporting good stores now carry accommodative shoe inserts.

Functional foot orthotics are custom made. They work to control joint motion and stabilize foot and ankle joints, thereby alleviating tendon, ligament and joint surfaces. A custom orthotic will address the person's foot pathology and counteract the cause of the problem. While most people tend to seek orthotics due to symptoms from over-pronation, orthotics can also be used to treat leg length inequality, knee pain, arthritis, hip and back pain and high arch (supinated) feet. Custom orthotics require that each person is casted with their foot in a neutral position and the prescription is tailored to the individual's foot type and problem. Custom orthotics are often rigid with special modifications made to help rebalance and redistribute force in the foot. They usually require a break-in period before becoming comfortable. Functional orthotics change the way a person functions during walking or running and often cause some soreness prior to adapting to a more efficient gait cycle. Over time most patients feel they cannot be without them.



I feel that understanding a person's structural and biomechanical makeup is the fundamental element in successful treatment. In a podiatric practice dedicated to surgery and sports medicine, orthotics are excellent tools to keep people active, pain free and, therefore, happy. San Diego is a city full of people who walk, run, workout, golf, play tennis, hike, bike and everything else imaginable year round. It is very gratifying to help patients continue participating in activities they love. The key to orthotics is a thorough understanding of structural-biomechanical pathology and being able to construct an orthotic that will control pathological forces. ■

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