

# Orthotics—What are they and do I *really* need them?

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Back pain is a common problem in the United States today. A large percentage of visits to a medical doctor's office, emergency room, urgent care or chiropractor's office are by individuals with back problems. These back problems can be caused by injury from slips and falls (especially in the winter), sports injuries, illness, work-related lifting problems or for no known reason. But whatever the reason, back pain is associated with structural problems and the ensuing inflammatory response. One of the primary reasons for putting ice or a cold pack on an injured area is to help control the inflammation and to reduce swelling. Injured athletes know this all too well; they know that to treat an injured ankle, knee, hip or low back, the first thing to do is to put ice on the injured area. Structural problems contribute to back injuries as well. Chiropractors are educated and trained to detect and treat these structural problems. They know that all joints in the body are related and one area of the body can affect other areas through what is known as the kinetic chain.

## KINETIC CHAIN

The kinetic chain is a concept stating that all joints in the human body are affected by other joints, and that any movement in one joint will affect the others in a positive or negative way. This concept was first introduced by a mechanical engineer in the late 1800s and later adapted to the human body to explain why when a runner injures a knee, pain can and often does occur in the hip, low back or even the neck. This concept affects all joints from the feet to the head and can help explain why foot problems can translate into not only foot and ankle pain, but knee pain, low back pain, upper back pain and even headaches. The feet act as the foundation of the spine, and just as a house has a foundation, when structural problems occur in the foundation, problems can occur in the remainder of the structure of the house. For example, structural problems could lead to cracks in the walls, windows sticking and even doors that won't close. When problems occur in the spine's foundation (the feet), problems can occur throughout areas controlled by the spine, such as knee pain, hip pain, low back pain and so forth. This is where the concept of orthotics comes in.

## ORTHOTICS

An orthotic is an item that is placed in the shoe that gives support to the arches of the foot. Most of us are familiar with what is called the arch of the foot but many are unaware that there are actually three arches, one on the medial or inside of the foot, one on the lateral or outside of the foot, and one between

these two, the transverse arch. The orthotic can be made of various materials, including soft sponge, gel, hard plastic or even leather.

The goal of most orthotics is to provide support for foot problems. At the Palmer Chiropractic Clinics, our goal is to provide patients with support for the foundation of the spine so that not only foot problems are treated, but spinal-related problems as well.

To get the best results from an orthotic, patients must be fitted in some fashion with the orthotic. The older methods of fitting orthotics involved casting in either plaster of paris or foam. More recently, however, by using newer technology, computerized scanning of the feet is the optimum way to determine the need for orthotic support. At the Palmer Clinics a 3-D scanner is used to examine a person's foot to measure things such as size of the arches, length of the foot, width of the foot, and pressure on the various parts of the sole of the foot, among other things. Once this scan is taken, technicians make sixteen measurements on each foot and design an orthotic for the foot that creates support in not only the three arches, but in the fore foot and heel areas as well.

If someone is suffering from plantar fasciitis or heel spurs, corrections can be made in the orthotic to accommodate those problems in the foot as well. The measurements made on the foot from the scan can also tell the technician if the foot is rolling in or out. With this knowledge, an orthotic can be constructed to help accommodate this condition. At the Palmer Clinics, the orthotics prescribed for patients are custom-designed with corrective arch support. Orthotics can be made with a variety of top coverings for durability, and can fit almost any style of shoe. Each orthotic is designed to provide support for all the phases of foot motion during walking or running, including heel strike, mid-stance and toe-off.

In order to determine whether you really need orthotics, you should ask yourself: "Am I having foot pain, low back pain, knee pain or hip pain?" If you are, custom-made orthotics could be an added component to your care that may provide you with additional relief.

To make an appointment to be evaluated for orthotic support, contact the Palmer Chiropractic Clinics by phone at (563) 884-5801 (Davenport Clinic) or (309) 764-4901 (Moline Clinic), or request an appointment online at [www.palmerclinics.com/qc](http://www.palmerclinics.com/qc).