



Orthotics as a Back Saver?

Nick Wegener, PT, ATC, CSCS

As a physical therapist I am always fascinated by the amount of over the counter orthotics sold at various retail and shoe stores that claim to be comfortable and help to reduce general lower body pain. With all the time we spend on our feet I agree that comfort is a valid concern but what about the functionality of the orthotics? What I want to talk about today is the amount of functionality that can be obtained by putting that orthotic in your shoe if you fall into the right category.

First, let me start by saying that I feel an orthotic is primarily beneficial for someone who demonstrates a general instability in the foot that is acquired from abnormal walking mechanics or through some congenital condition, thus, not something everyone needs to consider. One of the most significant populations that I see benefiting from a shoe orthotic are those suffering from lower back pain. This is because of the changes mechanically that occur at the foot that can contribute to low back pain while standing, walking, or running. Let me see if I can explain this in more detail to help you understand looking at the mechanics that occur at the foot, knee, hips and pelvis.

1. Most people that need orthotics tend to have excessively flat feet. Thus, the joints that compose the mid-section of the foot have become unstable and are falling further down toward the ground or pronation.
2. As excessive pronation of the foot occurs we see a gross positioning of the knee falling inward. This position is not efficient for the knee which primarily flexes and extends and actually has very little to do with rotational movement.
3. Thus, the muscle about the hip must work harder to rotate the knee outward back toward the original, neutral position. This is known as creating hip external rotation.
4. As the muscles in the hip and pelvis work to create hip external rotation, this often contributes to an anterior tilting of the pelvis which increases low back extension.
5. Finally, low back extension leads to increased pressure on the joints and individual complaints of discomfort.

So how does an orthotic help to correct this problem?

An orthotic serves to resolve this problem by reducing or controlling the amount of pronation that occurs at the foot. This can be accomplished several ways and if you are looking for a cost effective method to addressing these mechanical issues, an over the counter orthotic will provide a low cost alternative. The theory used by these orthotics is to provide a wedge to support the arch of your foot, or to adapt the contact point with the ground to the foot. While this generalized approach typically helps, it does nothing to account for the motion occurring in the joints of the foot. Over the counter orthotics are also typically made of lesser quality materials and are designed for comfort as opposed to function and individualization.

To truly get maximal improvement, an individually designed custom made orthotic to address the mechanical breakdown is the most effective route. A good orthotic is designed to adapt the foot to the shape of the ground. Not only will these orthotics help you feel better, they will help you function better. They also typically last longer because of the quality of construction. So, if you really want to reduce and keep away those aches and pains then this is the route you should consider.

*While I do not personally fabricate orthotics, I can put you in touch with someone that will always be able to meet your needs.