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## **Not All Feet Are Created Equal**

**By: Dr. Stephen O'Neil**

We all have them, we all use them every day and when they're doing their job, we hardly notice them. We all take our feet for granted until they hurt or are somehow not functioning properly. Feet seem very simple and straightforward when in fact they are very complicated and can have far reaching biomechanical implications to the rest of the body.

Feet are made up of 52 bones, 66 joints, 214 ligaments and 38 tendons. All of their structures have to work together for proper gait. There are also many receptors in the muscles and tendons that send signals to the brain, which help us to achieve and maintain balance. And if this doesn't seem complicated enough, feet have to change and adapt to our ever changing body weight, footwear and walking conditions. Due to the many structures involved and the many stressors placed on the feet, they are very susceptible to injury and compensatory changes. This can then cause changes in every joint up the kinetic chain. The ankles, hips and spine are all required to compensate for alterations in the feet.

Many people suffer from foot pain. The causes of foot pain can vary in severity and nature of symptoms. Some conditions can be congenital such as Morton's Syndrome (second toe longer than the first), overpronation (low arches) and Pes Ploris (flat feet). Some problems such as plantar fasciitis, heel spurs and bunions can arise from the mechanical stressors of footwear or from walking conditions. Some of these conditions can be fully corrected through conservative treatments and some require surgical intervention. All of these may be treated symptomatically and may be managed.

The most common foot problem is overpronation or dropped arches. It is estimated that up to 85% of the population suffer from dropped arches. Some people are born with this variant and some people develop this over time. It is particularly common amongst the many factory workers wearing hard soled work boots and walking on cement floors for eight hours per day. When the natural arch in the foot is lost, so is the natural shock absorption value of the foot. This shock is then translated to all the joints above the feet. When we are talking about over 100 million steps per lifetime, this becomes a great deal of stress. Unfortunately once dropped, this natural arch cannot be restored without an orthotic appliance or arch support.

Orthotics are medical insoles for shoes that can be custom built to fit the exact contours of your feet. They work on feet in much the same way braces work on teeth - by exerting gentle and consistent pressure to bring foot muscles and bones back into proper alignment. They artificially support the arch in the feet and restore the shock absorption value of the arches. Appliances may be added to the orthotics to correct or prevent the many syndromes associated with overpronation. Chiropractors are qualified to diagnose and evaluate foot disorders and prescribe an appropriate treatment. Many Chiropractors also take impressions of your feet and order appropriate custom fit orthotics that can correct or prevent biomechanical changes in the feet and every joint above.

Remember even small functional problems in the feet can place uncomfortable stress on the rest of the body. Visit your Chiropractor for a full foot and spine evaluation because the key to comfort starts from the ground up.