

# Orthotics can play significant role in athletics

June 14, 2011 1:04PM

Prescription in-shoe orthotics have proven to be a major weapon in the treatment and prevention of foot-related ankle and leg problems, as well as enhancing performance.

Orthotics, which are prescribed from molded casts of the feet in special positions, have various uses and indications. Examples could be to redistribute weight to different areas of the feet to control abnormal motion or position of the foot or ankle, to enhance alignment of the lower leg and to help dissipate shock forces generated through the foot, leg and spine. Proper orthotic prescriptions should include foot mold casting — not foot scans.

A common misconception is that orthotics are arch supports. Actually, orthotics do much more than support the arch. Their major role involves controlling positioning of the feet and lower extremity during the different phases of gait.

The foot has three jobs in the walking or running athlete: Shock absorption when the heel hits the ground, shaping to the ground surface in stance, and pushing off or propulsion. Each of these actions demands particular motions of the foot and rotational motions of the lower and upper legs, pelvis and spine. The terms used to describe these foot motions are “pronation” and “supination.”

These are complex motions taking place in the joints of the foot and lower ankle, three motions in three directions taking place simultaneously. Pronation and supination are normal motions. Problems can arise when the timing velocity, or amounts of pronation or supination, are off.

Various inherited foot types and leg shapes are common problems for these motions. Examples are flat feet, high arches, bow legs, knock knees and leg length differences. Each of these imbalances can cause abnormal pronation or supination. These factors contribute to excessive wear and tear and overuse injury problems. Arches and heel pain, shin splints, Achilles tendonitis, and knee and back problems are examples.

It is important to note that these foot imbalances are more common than uncommon.

National health statistics and surveys state that up to 75 percent of Americans exhibit some minor to major foot or leg mal-alignment syndrome. It's not surprising then with so many people active with walking, running and playing sports that overuse-type injuries have risen dramatically. Persistent recurring problems are often warning signs that these foot mechanics imbalances should be examined.

Many athletes will ask, “Do I need orthotics?” Here are some better questions: Would I benefit from them? Will I be less susceptible to injury? Will they help my performance? My experience says the answer is yes to all those questions.

Once it's understood what the role of the orthotics are — to capture the optimum alignment and dysfunctional position of the feet and lower legs, and to enhance normal motion and position of the foot and ankle — then athletes, parents and coaches can look at orthotics with better understanding.

Dr. Robert Weil is a sports podiatrist from Naperville with an office in Aurora. You can hear him on his weekly radio show at 6:30 p.m. Thursdays on 90.9 FM. Contact him at [drweilsportsdoctor@yahoo.com](mailto:drweilsportsdoctor@yahoo.com) and visit his website at [Sportsdoctorradio.com](http://Sportsdoctorradio.com).