

# **AGONY of deFEET!**

## **By Joshua Morton, LMP**

The foot consists of 19 bones, 31 joints, 23 muscles, 6 nerves, 3 arteries, 3 veins and numerous ligaments. This structure alone makes the foot a very dynamic and complex part of the body. A foot that is malfunctioning contributes to problems up the kinetic chain into the ankles, knees, hips and even affects your spine if the problem is not resolved and continues over a long period of time. Believe it or not, if left unchecked, a tight gastrocnemius can lead to TMJD!

Several factors contribute to foot problems. Genetics, muscular strength and flexibility, injuries, diabetes, poor fitting footwear, and unfavorable work conditions can lead to foot pain. There are also many factors higher up the kinetic chain that can lead to or perpetuate foot problems. Weak hip muscles are an example of a problem that can lead to foot pain. When hip muscles are not strong enough to hold up the pelvis and support the weight of the body, excessive pressure is placed on the knees and then the arch of the foot. Some of the more common problems associated with feet are plantar fasciitis, heel spurs, bunions, fallen/raised arches, hammer/claw toes, ankle sprains/strains, and muscle cramps.

Your feet work incredibly hard throughout the course of the day. They hold up your weight as you stand and move about often on “unforgiving” surfaces. Add on participation in various sporting activities and your feet have a lot to do. Did you know that when you are sitting some of your calf muscles are in a shortened position? Eventually constant tightness is all the calves remember and they keep this position of shortness even when you are on your feet. Stop what you are doing and see what position your foot/ankle is in. If you are standing, is your weight on the balls of your feet or distributed equally on all 4 points? If you are seated, are you on the balls of your feet? Even seated, your calf muscles are in a very short position, while the anterior muscles are lengthened.

With all of this in mind, it seems as if the average person does little more with their feet than clean them at the end of the day. Feet often get little attention and care despite what they are asked to do on a daily basis. And we wonder why our feet become painful!

Pain is not the only indicator of a foot problem. There are other signs of malfunctioning feet. Do all of your toes point straight ahead? Are your arches too high or too low? Do you have calluses? Do you have swelling around the ankle or any other part of the foot? Are your feet cold? Has the size of your shoe increased even though you stopped growing a long time ago?

If you are experiencing foot pain, you might have already considered orthotics or a shoe insert for pain relief. Before you choose to use one product over another, do some research. Inserts are typically poorly made without sufficient consideration of the mechanics of the foot, let alone *your* feet! Not all orthotics are created equal and some

products are lacking. Specifically, typical orthotics and inserts lack proper arch support. If you do choose one of these options, consider making them part of a comprehensive solution which includes stretching, strengthening and balance exercises so that your feet are flexible and strong enough to carry you around on a concrete surface for 12 hours.

## HOW STRETCHING HELPS YOUR FEET

Stretching helps your feet by reestablishing proper mobility in your foot. This gives your feet “breathing” room and allows blood to flow better to every part of your foot. Stretching changes the shape of the foot by taking stress off the joints, allowing them to fall back into alignment. Active Isolated Stretching is a comprehensive, in-depth stretching protocol that targets all 31 joints and 23 muscles. There is no other system as comprehensive as this.

## HOW STRENGTHENING HELPS YOUR FEET

Strengthening provides joint stability in your feet to keep the joints in alignment. Proper strength holds up your arches, improves your balance and helps provide spring to everything you do. Strengthening the muscles of the feet, especially the calf muscles, pumps more blood into your feet.

## I AM ON MY FEET ALL DAY; AREN'T MY FEET STRONG?

When you are on your feet for long periods of time you will usually develop weak/tight feet. As your feet get tighter from working too hard, the muscles begin to atrophy from not being used the way they should be. On top of that, typical footwear in the workplace such as in a warehouse is wholly inappropriate for foot health. Feet are usually confined within the box of the shoe. This limits our foot's ability to work. Eventually your foot may become little more than a giant stump with your toes twisted and curled. In time your feet may begin to ache and eventually the pain becomes a more serious problem.

## GETTING STARTED

AIS Stretching: Gastrocnemius (Calves)

AIS Strengthening: Heel Lifts

## OTHER RESOURCES:

Barefoot running or wearing minimally protective/supportive footwear is becoming a popular option for some runners and walkers for stretching and strengthening their feet and improving performance. For more information, check out this Wikipedia article: [http://en.wikipedia.org/wiki/Barefoot\\_running](http://en.wikipedia.org/wiki/Barefoot_running).