Newsletter

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www.chiropractorcapalaba.websyte.com.au

Publisher
Dr. Patrick J. Shwaluk
Doctor of Chiropractic
Certified Chiropractic Sports Physician

Educated - Safe - Effective Spine Care

Many patients consider this newsletter as a reminder to come in for their monthly good spinal health check up. Now is a good time to book your "tune up" appointment.

Clinic Hours

Mon	**10am -**	**7pm**
Tues	**9 am -**	**12pm**
Wed	**10am -**	**6pm**
Thurs	**3pm -**	**7pm**
Fri	**9am -**	**4pm**
Sat	**9:30 am -**	**12:30pm**

Capalaba Business Center
Suite 8
39 Old Cleveland Rd
Capalaba QLD 4157

Phone:
(07) 3823 2282
Fax: (07) 3823 2520
Mobile: 0409878180
Email:
chiropractor@bytesite.com.au

The advice in this newsletter is to be used in conjunction with chiropractic care and not as a substitute to professional care. Have your chiropractor evaluate your feet.

Take care of your feet

Feet are complicated. Each foot has 26 bones and 3 arches, figure 1&2.

A-B: Anterior Transverse Arch is on the front of the foot and is associated with metatarsalgia and Morton's neuromas.

B-C: Lateral Longitudinal Arch is the least known arch and is associated with lateral foot pain.

C-A: Medial Longitudinal Arch is the most known arch and is associated with foot pronation.

Figure 1

Immobilizing feet by squeezing them into tight fitting shoes and standing on them all day causes the muscles to shorten and cramp. The arches drop and the joints, fascia, tendons and ligaments of the foot to shorten, stiffen, become brittle and painful. By the time someone experiences plantar fasciitis they have a drop in one or more of the arches, stiffening of some of the joints of the feet and a 50% thickening of the plantar fascia ligament, figure 2.

Arch height and foot mobility can be restored with a combination of chiropractic adjustments, three minute fascial stretches, strength and proprioception exercises. Orthotics and a change of footwear may also be required.

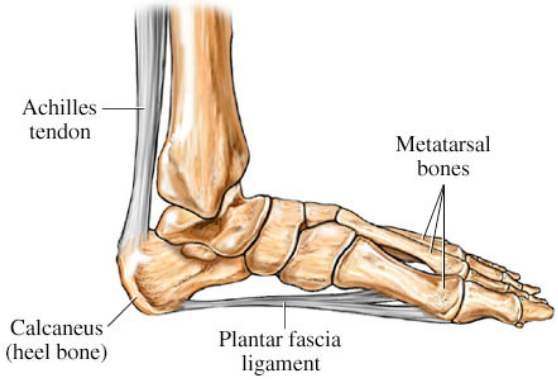

Figure 2

The stretches in figure 3 should be held for three minutes each. Long duration stretches, referred to as "melting stretches", are required to cause plastic deformation of the fascia and an increase in its length. Short duration stretches will feel good and mobilize the feet but not change the overall length of the fascia.

The figure 3.1 stretches effect the ankle, Achilles tendon, plantar fascia and calf muscles. This stretch with the knee straight will effect the gastrocnemius muscle. The stretch with the knee bent will effect the soleus muscle. The figure 3.2 stretch effects the top of the foot, ankle and the peroneus muscles. The figure 3.3 stretch effects toe extension. The first toe should be able to bend backwards 70-90 degrees without pain. Figure 3.4, stretch flexes the toes. Figure 3.5 stretches the

Figure 3

Another foot strength and proprioception exercise. Stand with equal weight on the balls and heels of your feet. Close your eyes and raise your toes up off the floor, just the toes, and then let them fall. Make sure you have equal weight on the balls and heels of your feet. Pay attention to what happens to your arch height as you raise and lower your toes. Lower each toe one at a time, as if you were playing the piano with your toes. Play it for 1-2 minutes multiple times/day. This exercise will increase the foot's proprioception and dexterity.

NONE, ONE, SOME, ALL OR TOO MUCH?
Many people never stretch. Some will stretch one or some of their muscles when they feel pain and tightness / stiffness. Others do full body stretches like yoga or fascia fitness classes routinely. Rarely, avid yoga fans, which are hypermobile to begin with, stretch too much too often and cause further hypermobility and instability.

Aging and a lack of full body exercise predisposes one to a loss of muscle strength and endurance. Likewise, the lack of activity causes fascial dehydration, tightening, and a loss of fascia strength and elasticity.

When muscles are too tight / out of balance they inadvertently apply abnormal compression forces to joints predisposing them to pain and degenerative arthritis. In other words, doing these stretches will help prevent toe, foot, ankle, knee and hip pain and degeneration. But you must do them regularly until normal flexibility, balance and strength are achieved then maintain them. The older we get the more we need to stretch and exercise to maintain fascia and muscle health.

plantar fascia and helps release painful trigger points, tight band of muscle, in the bottom of the foot. Roll the ball around until you find a tender spot then hold pressure on the spot for 3 minutes. Excessive rolling with a ball can bruise the bottom of the foot and make it sorer so just roll the ball around until you find a sore spot then hold pressure. A golf ball is useful for addressing particularly deep and painful spots. Let your foot deform to the shape of the ball to mobilize the foot. The above stretches can be done while sitting at your desk, dining table or watching TV. Progress to standing stretches.

The figure 3.6 stretch is useful for releasing tension and thickening in the Achilles tendon. It may be more useful to use a foam roller instead of just a tennis ball and to rest one ankle over the other for extra pressure on the Achilles tendon as in figure 4. Roll the ankle from side to side and roll up and down over the calf to identify the tender and thickened spots. Then hold pressure on the painful spot for 3 minutes or until the pain subsides by 70% or more. Then move on to another spot until all of the thick / tender spots have been released.

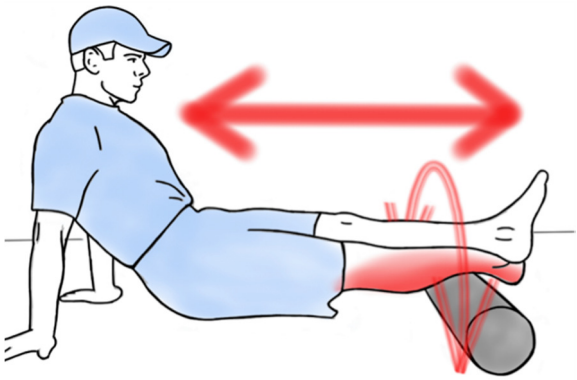

Figure 4

Most of the strong muscles which control foot movement are deep in the calf. After you have stretched your feet and rolled the calves at different angles you need to strengthen the feet and calf muscles. The single most useful foot strengthening exercise may be single leg calf raises, figure 5. If you are very weak you can start by doing calf raises with both legs at the same time while hanging on to a wall, chair or table for balance. As you get stronger progress to single leg calf raises with one foot tucked in behind the other for better form and balance. Your goal is to be able to do 10 free standing single leg calf raises in a slow non-jerky motion without hanging on to anything. Runners should be able to do 10 single leg calf raises with no problem.

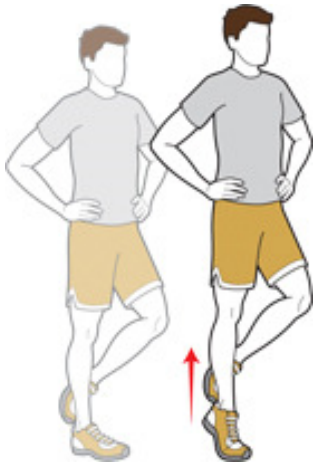

Figure 5

After you have developed reasonable calf and foot strength it is advisable to skip for 30 seconds once or twice a week. Skipping develops the fascial spring, referred to as the elastic recoil capacity. The spring, "stored energy capacity", in the fascia / tendons allow runners to run long distances with minimal fatigue as they use the elasticity in their fascia to run rather than constant muscle exertion.

Skipping is a form of plyometric exercise. Bounce exercises are essential for building the tendon strength and elasticity. Elasticity and strength are needed for Achilles tendon injury prevention and optimal sport / dance performance.

In the process of developing flexibility, strength and spring in the foot and calf it is common to experience some deep foot/ankle and calf ache/pain. This is normal. Do not be afraid. Continue doing the exercises daily unless you over do it and the pain becomes too much. If the feet become too tender from over rolling with a ball take a day or two off from the stretch / strengthen routine but do not give up on yourself.

A few sessions of mobilization with a ball under the foot will give some pain relief. 6 weeks of strength training will show nice changes in muscle size, strength and endurance. Fascia, on the other hand, is very slow to change. It takes a year to replace 1/2 of the fascia in our bodies. In some cases 3 months to 3 years of regular stretch and strength exercises may be required to achieve the desired outcome of strong and flexible feet with healthy arches.