

Celebrate Wellness!

Feet & Ankles

Foot and ankle problems are very common... and very painful. What can a chiropractor do to help? What can you do to help yourself?

There are 26 major bones in each foot. The bones are held together by ligaments and moved and controlled by tendons that attach muscles to other bones of the foot, ankle, and leg. Sensation (feeling) and movement are controlled by nerves that originate in the lower back (L4, L5, and S1 nerve roots), travel down the sciatic trunk, and become the tibial and common peroneal nerves before branching into local motor and sensory nerves. A rich blood supply feeds all of these tissues.

When you stand, walk, run, or jump, the foot adapts to control the movement and absorb shock. Walking requires adaptation to body weight, and running or jumping requires adaptation to somewhere between 2.5¹ and 4.6² times body weight. Poor adaptation to those forces can lead to anything from an evening of achy feet, to more serious conditions like plantar fasciitis (inflammation of the tissues under the foot), stress fractures in the foot and ankle... even knee and back pain. What happens in the foot translates upwards via the "kinetic chain" -- in other words, if your feet hit the ground lightly and with good control, then your knees, hips, and spine will have a gentler "ride." On the contrary, poor foot and ankle mechanics -- or overwhelmed or arthritic feet and ankles -- will fail to soften impact, allowing it to transfer jarringly upwards.

Doctors of chiropractic (DCs) are trained in biomechanics, and in caring for your frame and nervous system. Of course, a chiropractor will not attempt to manage true surgical cases; but if your problem has a nerve and/or structural component, a chiropractic evaluation is prudent. Sports chiropractor Dr. Dale White relates the case of NCAA Division I 400 meter hurdler Clint Renfro. Clint had literally seen ten doctors, including two of the Dallas Cowboys' team physicians, without resolution of his persistent foot problems. Dr. White evaluated the patient from a chiropractic perspective and found two fixated bones in the patient's foot which, when adjusted, relieved the pain and allowed Clint to compete at a very high level (a TCU school record 50.82 seconds).³ Such cases are not uncommon; and many people find relief from plantar fasciitis and other foot pain via chiropractic evaluation and management. Yes, doctors of chiropractic will also evaluate the spine and hips; and it's not uncommon that the nerves emanating from the spine will affect muscles and tissues down the line. Many chiropractors will also evaluate and adjust (manipulate) the feet when appropriate, and may suggest appropriate footwear or custom orthotics.

DCs are trained in many ways to care for you... and to help you care for yourself. Here are some self-care tips for your feet:

- **Select your shoes wisely.** Be sure there's plenty of room for your toes in the toe box. If you wear a heel, less is more. High heels shorten the achilles tendon, stress the bones and soft tissues of the forefoot, and increase pressure on low back joints and discs.
- **Rotate your shoes.** If you're a regular walker, runner, or athlete, it's healthy to give your shoes a day off to recover and regain full shock absorption capabilities. Yes, this means purchasing at least two pairs of shoes. If you're a runner or walk regularly, retire your shoes every six months or 300-500 miles; or sooner, if your feet, legs, and back start to complain. Ladies, if you insist on wearing high heels, don't wear them every day. Give your feet and achilles tendons time to recover.
- **Switch up your surface.** If you work on concrete floors, your body will soon complain. Ask the boss for shock-absorbing mats. If you run or walk on a hard surface, find an alternative surface such as dirt or grass or a rubberized track. A tile or concrete basketball court will wear you out, and quickly; and so will dancing on a wood floor installed directly over concrete. Find a modern surface, whether it is a dance floor installed over springs or rubber, or a basketball or other surface with at least a few millimeters of shock-absorbing layer.
- **Try ice.** Inflammation and pain tend to go hand-in-hand. Icing or cooling your aching feet for 5-10 minutes can literally cool down the inflammation. Don't overdo it -- when you're numb, you're done. If you have any doubt, err on the side of caution.
- **Try heat, or contrast.** Though heat is not a correct choice for acute or chronic inflammation, warming an area can be a good option for increasing local circulation to carry away waste products and bring in nutrition. If icing doesn't offer you relief, try a warm foot bath -- or try contrast therapy with 5 minutes of ice, 10 minutes of heat, and a final 5 minutes of ice. Remember that ice and heat won't fix any nerve or structural problems! They may provide some temporary relief, though.
- **Take a load off.** Yes, sitting breaks can take pressure off your feet. So too can losing some unwanted pounds. Your feet will thank you for each pound of fat you shed. So will your heart, and back... and your self-esteem might take a gentle, positive nudge as well. Your chiropractor can advise you on beginning an exercise program, safely.
- **If your feet are going numb, or get "pins and needles," get a chiropractic evaluation.** The problem could be as simple as your shoe lacing pattern, or that wallet in your back pocket; or more serious conditions like diabetes, or pinched or irritated nerves and spinal discs.

References:

¹ *Gait Analysis: Normal & Pathological Function.* Jacquelin Perry, NJ, 1992, pgs. 416-417.

² Peter J McNair, Harry Prapavessis. Normative data of vertical ground reaction forces during landing from a jump. *Journal of Science in Medicine & Sport* Volume 2, Issue 1, Pages 86-88 (March 1999).

³ Case study and accompanying popular press documentation, as reported in *ACA News*, August 2010, pg. 10.



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