

Foot & Ankle Safety



FOOT FACTS

- Feet are “sensory organs” gathering ground information.
- There are 52 bones and 66 joints in both feet.
- $\frac{1}{4}$ of the bones in whole body are in your feet.
- A total of 224 ligaments are in feet alone.
- Of the 38 tendons in feet-36 *attach to toes*.
- *Toes “grasp” ground to assist balance, stabilization, and propulsion.*
- The soles and *tips of toes* have 200,000+ nerve endings.

Flexible Shoes: *Flexible shoes allow feet to feel the ground better.* The sensory information gathered from ground goes to brain. Brain interprets ground sensory input then makes adjustments to prevent falls and enhance movement. Stiff shoes do exactly the opposite because the sensory information is decreased to brain. Having poor sensory information from ground is like your brain trying to navigate with a “fuzzy map” as the brain is confused about the body’s positioning.

Foot/Ankle Mobility: Your foot should be elastic through gait cycle but should also be able to “grip” the ground and stabilize the tall column above. While the ankle also stabilizes, the ankle’s primary job is mobility so it can adjust for uneven ground below the foot. Poor joint mobility in feet and ankles will INCREASE your chance for trips and falls—so will “binding your ankle mechanically” with stiff boots or ankle support!

Foot/Ankle Fitness: Having better “Foot Fitness” increases both neurological feedback off the ground and muscular strength so you can better stabilize and control gait. Flexible shoes will increase your foot fitness. Walking barefoot at home will also increase your foot fitness. For even more foot fitness, consider barefoot joint mobility exercises or barefoot agility and strength exercises.

Neutral Fall Line: Proper foot posture and good ankle mobility will maintain a neutral 90° angle between horizontal ground and vertical body column above. ANY heel lift will alter this neutral angle forcing compensations up the kinetic chain while also decreasing Achilles function and reducing gait efficiency.

Posture: Poor foot/ankle posture will force compensations taking away structural support from skeletal bones and putting more load on soft tissues like muscles, tendons, ligaments, and fascia. For optimal movement, get your feet flat on ground with neutral foot/ankle position and stand upright.

Summary! For comprehensive overview of feet/ankles/shoes, please attend one of my “Foot Fitness” Workshops, but in brief, wear flexible shoes, minimize heel lifts, walk barefoot at home as able...and remember when it comes to safety and function...*trust your feet—not the shoes!*