Keep Your Feet Happy

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Your foot may feel like a distant afterthought in the grand scheme of your body, but this remarkable combination of 26 bones, 30 joints, and over 100 muscles, tendons, and ligaments is a cleverly designed base for support, mobility, and balance. While we occasionally groan at the bothersome problems, aches, and smells, we should not take these useful appendages for granted.

From peripheral neuropathy and plantar fasciitis to ankle sprains and Achilles tendonitis—and everything in between—there is a broad range of ailments that can affect your feet at any age. Addressing foot and ankle problems is important because issues here can severely affect the way you walk and balance, especially if you have pain or diminished sensation.

Your foot has many joints and muscles so that it can be both flexible and rigid depending on the task at hand (or the task afoot!). When you walk, your foot needs to be flexible so it can adapt to the surface you are stepping on. If it were too stiff, you wouldn't be able to walk over a grassy field or go downstairs smoothly. Your foot can also become strong and rigid, an efficient lever that you use to push off from while walking quickly, going upstairs, or standing on tiptoes to reach that bag of candy from the top shelf.

Your foot is important to your balance for several reasons. The muscles, tendons, and ligaments give input to your brain about their position and movement. This sense of your body's position is called "proprioception," and, together with your vision and vestibular system, it keeps you on your feet. After a foot surgery or an injury such as a bad ankle sprain, your foot proprioception may be less keen, especially if you spent time not putting weight on your foot or walking in a protective Controlled Ankle Motion (CAM) boot. Certain exercises from a physical therapist can help retrain your proprioception.

You can also completely lose foot proprioception and your foot's sense of touch with "peripheral neuropathy," a condition usually caused by changes to small blood vessels which damages distant nerves. In this situation, it is important to train both the proprioceptive sense of other joints and the vestibular and visual systems to compensate for the loss of foot input. Thankfully, your body can adapt to avoid falling, but you may need to be cautious in situations that tax the visual and vestibular systems such as poor lighting or quick head movements.

The muscle strength of your foot and ankle is also critical to many functions and balance, and strength too can be affected by foot injury, surgery, and common pains such as tendonitis. In many cases of tendonitis, strengthening the muscles and tendons is a first line of treatment, but you may also need to modify your activities, flexibility, or footwear.

Shoes are the support under your feet, so of course they are also important and can affect the alignment and stresses put on your foot and leg. Having flat feet or a flattened arch may predispose you to certain foot or leg problems. Sometimes, exercise can help strengthen the muscles that support the arch of your foot, and other times having a shoe with a supportive arch or an arch insert can help alleviate foot pain such as plantar fasciitis. Going barefoot and wearing flip-flops or high heels is not necessarily ill-advised, but a rapid change in foot support can contribute to foot or leg pain. Remember to replace your shoes if the tread or insole is wearing thin.

Changes in your foot can have a ripple effect further up your leg. This is why a physical therapist may examine your knee and hip joint alignment and strength if you're being evaluated for foot pain, or vice versa. PTs train, stretch, and strengthen body parts further up to help your feet, or they may stretch and strengthen your foot and ankle to help the other body parts do their job.
As we age, the type of muscle fiber in our calf muscles tends to change from a muscle that provides quick, powerful contraction to one that is less powerful but can contract longer for endurance. We then tend to rely on larger joints such as the hip for walking and balance. The ankle is a more efficient means to propel your body in walking and to maintain your balance, but it won't do this job if it lacks strength or the neural pathways become "rusty" from disuse.

A heel raise or calf raise is a simple exercise that can be used to improve your muscle strength. Standing with your hands placed lightly on a counter-top for balance, raise yourself up onto your toes and then slowly lower yourself back onto your feet. Try going up quickly to train your muscle's power and going down slowly to train control. Try doing this exercise until you feel as though you cannot reach the maximum height, then stop.

If you do have foot or ankle pain or problems, physical therapy may be able to help you reach your goals. Don't be sorry or embarrassed if you bring your feet in for physical therapy—your feet do a lot for you, and they deserve to be taken care of just like you.