

Barefoot Running: Just Hype or Legit?

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The barefoot fitness revolution continues to gain speed with increasing numbers of people deciding to forgo their 'fitness' footwear for a more natural approach. At the office, you may have stared strangely at the girl wearing those weird looking 'toe shoes' or maybe you chuckled under your breath at the power-lifting brute in the gym wearing the old-school Chuck Taylors. Even in your own neighborhood you may have warned your kids to watch out for the 'strange' barefoot runner who dashes down your street. These sightings along with the growing media advertisement for shoes promoting the ability to train as if you are barefoot are evidence of a new, yet old, phenomenon.

There is a growing body of scientific evidence to support barefoot training along with thousands of amazing testimonials from the barefoot faithful. In fact, human beings have been participating in athletic events (and everyday life for that matter) without shoes far longer than we have been concerned about purchasing the most supportive running shoe. Proper foot development of young children is well documented to be directly linked to learning/practicing walking barefoot. Competitive weightlifters and track athletes have long capitalized on the greater force production and mechanical advantage that training barefoot can provide. Many experts believe the modern day running shoe is responsible for weakening the musculature of our feet and lower extremities, changing our natural walking/running pattern, and causing increased rates of overuse injuries. Currently, scientists around the world have turned their attention to the barefoot running craze in hopes of gaining a better understanding of its principles.

Shod vs. Unshod?

Research studies have demonstrated several important differences between running mechanics when shod and unshod. When running in shoes, the foot tends to land more on the rear of the foot due to the elevated heel and cushioned arch of the shoe design. You may have heard this referred to as a "heel-toe pattern." Barefoot runners tend to land more on their forefoot and mid foot before the heel becomes in contact with the ground. This is significant because it allows the foot to be more plantar flexed or pointed downwards like pushing on the gas pedal of a car and thus more flexible at impact. This action allows the feet to better absorb energy and decrease peak landing forces. Barefoot running has demonstrated lower ground impact forces as compared to shod running even on hard surfaces which is thought to be related to the decreased injury rate in barefoot running. Unshod runners have been shown to have shorter strides, increased stride frequency, and spend less time in contact with the ground than their shod counterparts. Several studies have reported that shoes can excessively limit the normal ability of the foot to roll inward, or pronate, as the foot contacts the ground. This limitation of movement leads to the inability to properly distribute forces across joint surfaces and use muscles efficiently. The result is a decrease in the efficiency of the running pattern, or ease of running, and can lead to muscular imbalances as well as increased stress to the joints. Barefoot running is thought to be more efficient due to studies that have reported lower heart rates during running, better abilities to use oxygen, and lower self-reported exertion levels as compared to those running with shoes. In addition to these benefits, higher levels of activity of the muscles of the lower leg and foot have been documented in barefoot running as compared to when wearing shoes. It is important to note that research analyzing differences between these two forms of running is still in its infancy at this time.

Is Barefoot Running Right for You?

Barefoot running/walking is certainly not for everyone. The spectrum of “normal” walking/running patterns as well as foot and ankle function is very broad. It should be noted that athletes who participate in sports which traditionally wear shoes/cleats to protect the foot should only use barefoot exercise as a training tool to increase performance and not attempt to be barefoot during actual competition. Barefoot exercise can be used during the rehabilitation of many injuries as long as it is overseen by a licensed Physical Therapist. It is recommended that you always consult with your Physician or Physical Therapist prior to beginning an exercise program or new competitive season of any kind. Here are a few medical conditions and symptoms that require further evaluation by a medical professional prior to beginning barefoot running/walking: history of chronic foot pain, bunions, plantar fasciitis, Achilles tendonitis, plantar neuromas, decreased sensation of the foot, numbness and tingling in the leg/foot, shin splints, arthritic conditions, and metal hardware in the foot or lower extremity. If you are in doubt, make sure you check with a professional first.

Tips to Get Started Properly

If you are interested in adding barefoot running/walking to your exercise program, there are a few things you should consider first. The following is a list of helpful tips to get you started off on the right foot:

- Call your local KORT Physical Therapy clinic to schedule a complimentary running/foot screen performed by a Physical Therapist to assess if barefoot running is appropriate for you.
- If you are obese or have poor body composition it is recommended that you begin with dieting and low impact exercise for a period of time until improvements are made.
- Allow yourself adequate time to transition. Begin with walking barefoot for a period of time during the day and gradually increase as you are able. Listen to your body and give it time to adapt.
- Try barefoot shoes first such as the Nike Free and Vibram Five Fingers. Barefoot mimicking shoes need to have a flexible sole with no raised heel or arch support.
- Plan barefoot running into your normal program by incorporating it for a period of time either before or after your usual run. Gradually build up the duration, distance, and intensity over time. Do not increase any of these variables more than 10% per week to avoid injury.
- Incorporate barefoot time into your strength training routine. Everyone, especially those who only run, should perform a total body strength routine several times per week to increase performance and prevent injury.
- Begin on soft surfaces such as grass and sand before progressing to nature trails or concrete. Keep time on concrete to a minimum. Be attentive to foot hazards such as nails, glass, rocks, and holes in your path.
- Plan to be sore! Especially in your calf and foot muscles. Always perform a light dynamic warm-up prior to running as well as more focused stretching and soft tissue work after running. Use ice as needed.