Can Certain Running Shoes Convert Heel Strikers into Forefoot Strikers?

By Paul Langer, DPM

If it hasn't happened in your store yet, it will soon and with increasing frequency. Runners will come in asking for those shoes that "make you run on your forefoot" or "are like running barefoot."

The latest marketing trend in running shoes is about promoting a more natural gait and mimicking barefoot running. This is a significant departure from the messages we are used to hearing about how runners need as much cushioning, support and energy return as could be crammed into a shoe. The marketing messages are starting to catch up to what gait research uncovered ten to twenty years ago. Specifically, the cushioning and motion control features of running shoes haven't proven to be beneficial and that barefoot running is more efficient than running in shoes. That's good news, but just because a shoe is manufactured with a less-is-more philosophy does not mean that it automatically helps runners move in a more efficient manner.

Long before footwear was invented our ancestors were *all* running on their forefoot (or midfoot) while they tracked and killed game. We, on the other hand, live in a world where we wear shoes before we can even walk and are surrounded by concrete and asphalt. So our weak feet have become dependent on shoes and our hard environment requires us to use some form of protection on our feet. Our gait has changed because of this.

I want to preface the rest of this column by making a statement: World Class runners are not efficient, because they run on their forefoot. They run on their forefoot, because they are efficient. I emphasize this, because the marketing messages coming from some footwear manufacturers make it sound as though we can all magically change our running style by simply putting on a particular pair of shoes. Bloggers and internet chat rooms take this misconception and exaggerate it further to the point where unrealistic expectations are touted as facts. In clinic, I have to explain to some of my patients that expecting the shoe to instantly make you a better runner is like a basketball player expecting a new shoe to improve his jumping ability. If you lack the strength, biomechanical efficiency, and conditioning to develop a forefoot strike pattern then the shoe cannot instantly do it for you.

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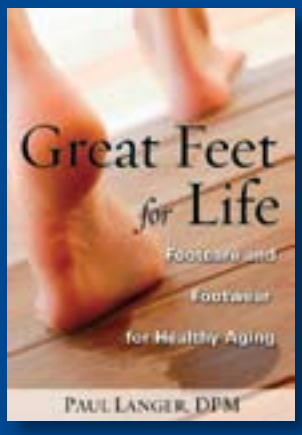
Notice I said "develop" a forefoot strike pattern – most runners who are forefoot strikers become so as they improve their running economy and increase their speed. (For the sake of simplicity I will use the term forefoot striker when referring to midfoot/forefoot landing pattern during running gait.) Eighty percent of recreational runners land on their heels when they wear running shoes but no one lands on their heels when running barefoot, because it hurts to land on the heel without shoes. According to the running coach, footwear designer and author Robert Lyden, when running faster than 6:00 minutes per mile all runners become forefoot strikers. Those of us who rarely run that fast may become forefoot strikers by training consistently and allowing our running gait to evolve – not by buying a certain shoe. However, there are certain types of footwear that may be useful in terms of helping us to build strength and efficiency.

The best way to make use of shoes designed to promote a forefoot running style is to use them as a supplement to conventional running shoes and not as a replacement. Nike makes a point of describing the Free as a training tool and not a panacea for faulty biomechanics. Used for shorter weekly workouts, they can help develop a more efficient running technique. Trail running and barefoot workouts on grass or sand have been used for decades by many college and world class coaches as a means for developing strength and avoiding artificially hard running surfaces.

Is a forefoot strike running pattern more efficient that a heel striking pattern? Under certain conditions it is. But there are some important factors to consider that can shed light on the contrast in different running styles. A recreational runner who averages 25-50 miles per week and weighs 180 lbs. is never going to have the same running gait as a world class runner who runs 100-150 miles a week and weighs 130 lbs. In addition to size/mileage differences, a less obvious difference between all runners is that our bodies self-select the running pattern that is most metabolically efficient for us. Anything that causes a significant change in that pattern will cause our body to fatigue sooner. What this means is that it does not matter what kind of running form the current marathon world record holder Haile Gebrselassie runs with, if I mimic his running form I would likely work harder than if I ran in the way that my body prefers. With work however, my body's preferred movement pattern would evolve so that my running gait might have some similarities to better runners.

Nike's Free in the 7.0, 5.0 and 3.0 models are progressively lighter, less stable, more flexible and less cushioned. This might provide a way to gradually build strength and running efficiency as a runner graduates from the 7.0 to the 5.0 and then to the 3.0 over the course of a few months. (some larger runners may not be able to run in the 3.0) Newton, a new footwear manufacturer based in Boulder, CO, has created a buzz in the triathlon and running communities with their shoes, which they publicize as "promoting the natural and more efficient forefoot strike of barefoot running." In addition, low profile trail running shoes like those made by Inov8, are made with minimal support and cushioning since trail running requires less from the shoe and more from the runner in terms of balance, agility and a forefoot running gait. These types of footwear designs, used over a period of time can facilitate a more natural running gait and help build strength.

So, for the runners seeking a shoe to instantly change their running form, tell them that none exists. But if they want to invest some time and effort, they can develop a more efficient gait by making use of some unique footwear innovations.



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To order *Great Feet for Life* in your shop visit: www.GreatFeetForLife.com.