

# Journal Review

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MJ Salzler, et al. **Injuries Observed in Minimalist Runners** Foot and Ankle International. Vol 33. No 4. April 2012. Pgs 262-266.

Reviewer: Dianne Mitchell, DPM

Purpose: Raise awareness that there are indeed injuries associated with minimalist running.

History: Data on running injuries were first presented in the 1980s and the rate of injured runners ranged from 19-65%. Despite advances in shoe technology, newer data on injury rates presented in the 2000s still ranged from 28-79%! The thoughts behind barefoot, or minimalist, running is that it decreases injury rate due to less stress on the legs and therefore less injuries. Sales revenue from the most popular minimalist brand was approximately \$430,000 in 2006 and increased to \$11 million in 2009 with projections to \$50 million presently! Despite huge popularity, there is no evidence that the use of minimalist shoes actually decrease injury rate in runners.

Study Data: This is a case series of ten experienced runners who presented to the senior authors office with injuries following transition from standard running shoes to minimalist shoes. Eight men and two women, ages 21-57 years with an average of 18.9 years of running in traditional running shoes with weekly mileage of 6-45 miles. Injuries included: 8 metatarsal stress fractures, a calcaneal stress fracture and a plantar fascia rupture. All of these runners had been uninjured for a year or more prior to transitioning to minimalist shoe gear. Transition to minimalist shoes ranged from immediate to two months with injuries noted 1-3 months into the transition with one injury 10 months into transition. All runners fully recovered from their injuries and two continued to run in minimalist shoes with the eight others returning to traditional shoes.

Thoughts:

- This paper was very clear in stating that it was not promoting or demoting minimalist shoe usage, simply educating.
- 90% of injuries happened during the transition period. So, we need to develop better education tools for runners to use to safely transition to minimalist shoes if they choose to. For example, the calcaneal stress fracture was probably in a runner continuing to heel strike instead of changing their gait to accommodate the lack of padding in the shoe. The shoes presently come with an information handout for runners to use but this clearly isn't always being used.
- The authors argued that minimalist runners still have impact forces. These forces are simply in a different location than shod runners, the metatarsals versus the heel, respectively. And, while heel strike may really have higher impact forces, maybe the cushioning makes for a better and less stressful impact which would result in fewer injuries with traditional shoes ...
- Are there some runners who cannot ever make the safe transition to minimalist shoe gear? The authors point out that there are many runners who make the transition without any injury or problems ... Why? Maybe the change in vertical leg compliance during the transition period is more in injured runners versus the uninjured folks.