

Lightweight styles, such as the Ecco Biom Evo Racer, are still extremely popular, but brands seem to be mentioning 'barefoot' a lot less these days.

 Ecco



FOOTWEAR TECHNOLOGY: BAREFOOT

New research from academics at the University of Calgary suggests they have found little evidence to support claims from some barefoot running enthusiasts that shedding shoes can help avoid injuries.

Study questions 'barefoot' claims

Talk of minimalist footwear that can help runners emulate a 'barefoot' experience seemed to diminish during the course of summer 2013. Two years ago, research organisation SportsOneSource said minimalist styles had quickly risen to claim 5% of all running shoe sales in the US. This was at a time when brands such as Merrell, Fila, Ecco, Haglöfs, Saucony, Asics, adidas and New Balance were all launching their own styles to tap into the sector.

Lightweight, not barefoot

Launches have continued, with a slower momentum, but it appears that brands are being careful not to mention 'barefoot' these days, with all the emphasis on 'minimalist' and, of course, lightweight. The 2011 SportsOneSource study said lightweight sports footwear accounted for 28% of the running shoe market at the time. And the lightweight message continues to come across strongly.

In the build-up to summer shows such as Outdoor in Friedrichshafen and Outdoor Retailer Summer Market in Salt Lake City, launches included updates to the Biom Evo Racer and the Biom Evo Trainer from Ecco, which the Danish footwear brand describes as a "lightweight, flexible, minimalist shoe for competitive runners", and Haglöfs's LIM Low shoe, which weighs just 195 grammes. The Swedish brand calls it a "speed hiking shoe that combines extremely low weight with grip and comfort". German brand Vaude launched its own version of lightweight hiking footwear, the Tereo Sympatex, at the same time. But barefoot barely merited a mention from any brand at either exhibition.

Lack of evidence

At the end of May 2013, researchers at the Human Performance Laboratory at the University of Calgary in Canada published a series of findings on barefoot running's effects

on foot motion, training, running economy and injury.

In the new scientific paper, the researchers, Benno Nigg and Henrik Enders, first examine the claim that running without shoes encourages a 'forefoot' rather than a 'heel' landing, making runners less prone to injury. They dispute this, saying that not only does the available research not prove any reduced injury risk, other factors such as the running surface, shoe choice, speed and individual preferences play too large a role to make such generalisations possible. Likewise, the researchers have found no difference between shod and barefoot movements in terms of their ability to strengthen certain muscles.

The additional weight of a shoe (up to 300 grammes) doesn't seem to have much effect on performance, either, the paper says. What seems to make more of a difference is what they call the "preferred movement pattern": the combination of chosen footwear and a runner's preferred strike pattern.

The University of Calgary researchers say they know of no published research that provides hard evidence that people running barefoot have fewer injuries than people using shoes. They conclude: "It is not known whether people



Lightweight hiking footwear from Vaude, the Tereo Sympatex.

 Vaude

running barefoot have more, equal, or fewer injuries than people running in conventional running shoes." Runners perform best when they're comfortable, they state, whatever they're wearing on their feet.

Heresy

In the autumn of 2013, this appears to be sound advice, but a few short footwear seasons ago it would have sounded like heresy to many. In August 2011, SportsOneSource analyst, Matt Powell, said: "People who believe barefoot is the way to go are very emphatic about it. They want to spread the message. It sounds religious but some of them are evangelical about it."

Not everyone wanted to go to the length of casting off footwear altogether, so the minimalist shoe trend sought to tap into the sentiment, and in more ways than just by keeping weight down. San Francisco-based podiatrist Dr Jenny Sanders says she has come across foot injuries in patients that have made her doubt the wisdom of switching from running shoes with a conventional construction to 'zero-drop', the phenomenon of making the shoe with a zero height differential between the ball of the foot and the heel.

In one case, a patient, an ultrarunner, switched to a zero-drop minimalist shoe at the height of the craze in 2011 in an attempt to reduce unilateral infrapatellar pain in the knee. And it worked. But then, more recently, the patient started to experience increasingly painful peroneal pain in the outer foot and medial meniscal knee pain. "He did not have either pain prior to training in the zero-drop shoes," says Dr Sanders.

Her evaluation of the shoes identified an hourglass-shaped midsole and outsole, with the narrow width there meaning that only 25% of the midfoot was receiving support from the upper. "This significant lack of support in the mid-arch caused his arch to drop below the plane of the heel and forefoot, altering his knee and foot mechanics enough to produce compensatory pain in other areas," the doctor continues. She is too wise to dismiss minimalist and zero-drop shoes out of hand, but says runners must try to match the shoes they choose to their particular foot type, which is similar to the conclusion reached by the researchers at the University of Calgary.

Closer to nature

For some feet and some running styles, then, barefoot and minimalist shoes can continue to work. The recent study from Calgary and the comments from Dr Sanders only suggest that in this case 'less' won't be 'more' for everyone. PJ Antonik, media relations and communications manager for Vibram in the US, refuses to be put



off and still believes strongly in what is perhaps the minimalist shoe par excellence, the Vibram FiveFingers. "We are not moving away from this," he says. He puts great store in prominent supporters of barefoot and minimalist footwear, including Dr Mark Cucuzzella of West Virginia. Dr Cucuzzella, a family doctor, says the feet are great messengers and that shoes sometimes make it hard for us to 'hear' what they want to tell us. He also admires the way our feet develop thicker, although still soft (not calloused) skin through barefoot running and likes the foot control and stability he says he has learned from running barefoot himself.

PJ Antonik says: "A lot of people feel that barefoot or minimalist have helped them lead a healthier life. Minimalist shoes, including ours, have changed people's lives and I know this because they call or email to tell me. They say the product allows them to operate closer to nature."

He accepts that the evangelism SportsOneSource talked about in 2011 has waned, but says one of the reasons is that the market for minimalist footwear became flooded very quickly, with some brands jumping on the bandwagon while doing little to help wearers understand the ideas behind minimalism. If this rush is over now, it may be no bad thing.

Not just about the shoes. University of Calgary researchers have said variables such as running surface, shoe choice, speed and individual preferences play a large role in determining the likelihood of injury.

Haglöfs



Minimalist shoe par excellence, the Vibram FiveFingers.

Vibram