

GET OUT THERE

kick off your shoes

Natural Running

If running is so good for us, then why are we always picking up injuries? Could modern running shoes be the problem rather than the solution? Nik Cook investigates, kicks off his shoes and goes back to running as nature intended.



In 2004 biologist Dennis Bramble and anthropologist Daniel Lieberman made the front cover of the illustrious scientific journal *Nature*.

By identifying 26 anatomical markers they concluded that as a species, modern humans evolved to run. However, our running prowess is hardly on a par with animals such as the cheetah – the Usain Bolt of the animal kingdom. What we can do though is maintain a reasonable speed for an awful long time. Our skin and sweat mechanism keeps us cool, we can take multiple breaths during our running stride and our hands are free to eat and drink on the go. These, and other factors, give us a real edge over hairy, non-sweating and 'one breath per stride' quadrupeds and means that we are able to run them into the ground (as long as they don't catch us at the start!). This hunting is not just a theory but has been observed by anthropologists studying living African Bushmen.

But despite having the right anatomical markers and evolutionary reasons for being excellent distance runners, we still sustain numerous running related injuries? You only have to look at a runners' forum on the net to see how discussion of injury treatment and re-hab is very often the number one topic.

Born to Run

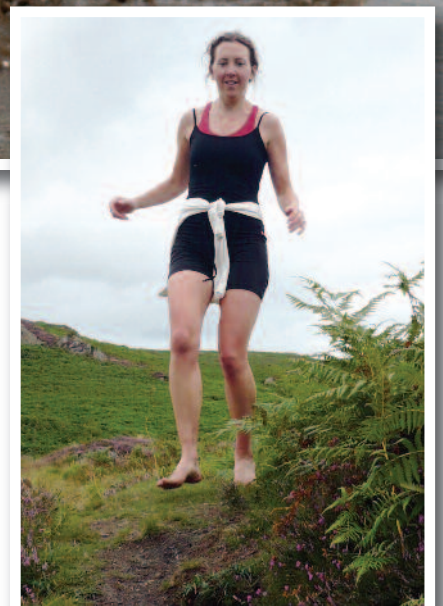
In his book *Born to Run: A Hidden Tribe, Super Athletes and the Greatest Race the World Has Never Seen*, Christopher McDougall profiles the Tarahumara Indians of New Mexico who regularly take part in 100km plus 'running games' and view all-day running as a simple fact of life. Even though they run super high mileage, on hard rocky trails in nothing but sandals fashioned from re-cycled tyres on their feet, they don't get injured. McDougall considered numerous factors, his and other experts analysis of the Tarahumara, the experiences of top ultra-runners and considerable scientific data and concluded that modern, highly cushioned and motion control running shoes are the root of all of our running evils. Amongst others he points out the following startling facts:

- 1 There's no evidence that running shoes are any help at all in injury prevention:** Dr Craig Richards published a research paper in 2008 in the *British Journal of Sports Medicine* that revealed that there have been no evidence based studies that demonstrate that cushioned running shoes make you less prone to injury. He went so far as to issue an open challenge to running shoe manufacturers to back-up their claims with peer reviewed data and is still waiting for any replies.
- 2 The more you pay the more you're likely to get injured:** Dr Bernard Marti of the University of Bern



The arch of our foot is a wonderful dynamic shock absorber so why cripple its natural movement by underpinning it with chocks of rubber?

- analyzed 4358 runners in the Bern Grand Prix, a 9.6 mile road race. He studied every aspect of their training in the year building up to the race and found that 45% had been injured. The most common variable for the injured runners was the amount they'd spent on their running shoes. Runners in shoes that cost more than £75 were more than twice as likely to get hurt as runners in shoes that cost less than £30.
- 3 A half-inch of rubber isn't going to do jot:** When you run, you can generate up to twelve times your body weight of force. A half-inch of rubber, gel pad or air pocket isn't going to absorb a significant amount of that energy. Also, studies have shown, that impact forces actually increase the more cushioning you have. Our feet instinctively seek stability so, if you put something soft and squishy underneath them, they'll come down harder.
- 4 Pronation isn't bad:** Pronation has been demonised but it's just the natural



movement of the foot. The foot is supposed to pronate. To see correct pronation in action kick off your shoes and run over a hard surface such as concrete. You'll find yourself landing on the outside edge of your foot, then gently rolling from little toe over to big. That pronation is a natural shock absorbing twist that allows your arch to compress. The arch of our foot is a wonderful dynamic shock absorber so why cripple its natural movement by underpinning it with chocks of rubber? Potentially bad over-pronation only occurs if you heel strike.

- 5 Heel striking is the problem:** Imagine standing on a high bench in your bare feet and jumping off onto a hard surface. How would you land? Certainly not on your heels, yet this is what the majority of modern runners do every time they stride. Modern cushioned shoes allow us to heel strike and that is not how, from a biomechanical perspective, our bodies evolved to run.

My own journey of discovery

Whilst living in London and running predominately on the roads I was constantly stuck in a cycle of niggling injuries, frustration and expensive 'solutions' such as gait analysis, ever more technologically advanced shoes and podiatrist appointments. After moving to the Peak District almost all my running was transferred to the fells and trails and despite increased mileage, the niggles simply faded away. I put this down to the variety of terrain and a more

John Woodward



yielding running surface, even though the rocky paths and tracks were hardly forgiving. I then read *Born to Run* and coming from an academic background in evolutionary science, the truths in what McDougall, and the scientific minds supporting him, presented really hit home. I couldn't believe that I hadn't twigged it earlier on but, by turning to the hills, I'd inadvertently stumbled onto the solution. Fell shoes are about as minimal a running shoe you can get with a flexible sole and almost no cushioning or support. It seemed that as much as what I was running on it what I was running in was making the difference.

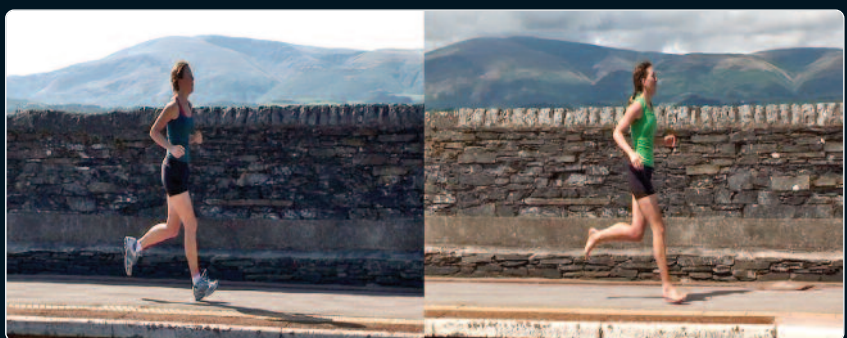
I started to look deeper into barefoot/minimal running and decided to invest in a pair of Vibram FiveFingers. I went to the Naked Ape in Sheffield where owner Wayne Biney fitted me with a pair of the strange looking 'foot gloves'. First run out I was immediately amazed by how connected with the ground I felt and how my individual toes suddenly came to life searching for grip and balance. Even on rocks, my feet naturally protected themselves and my foot-strike felt light, fast and efficient. There was a childlike



Video capture



Video analysis

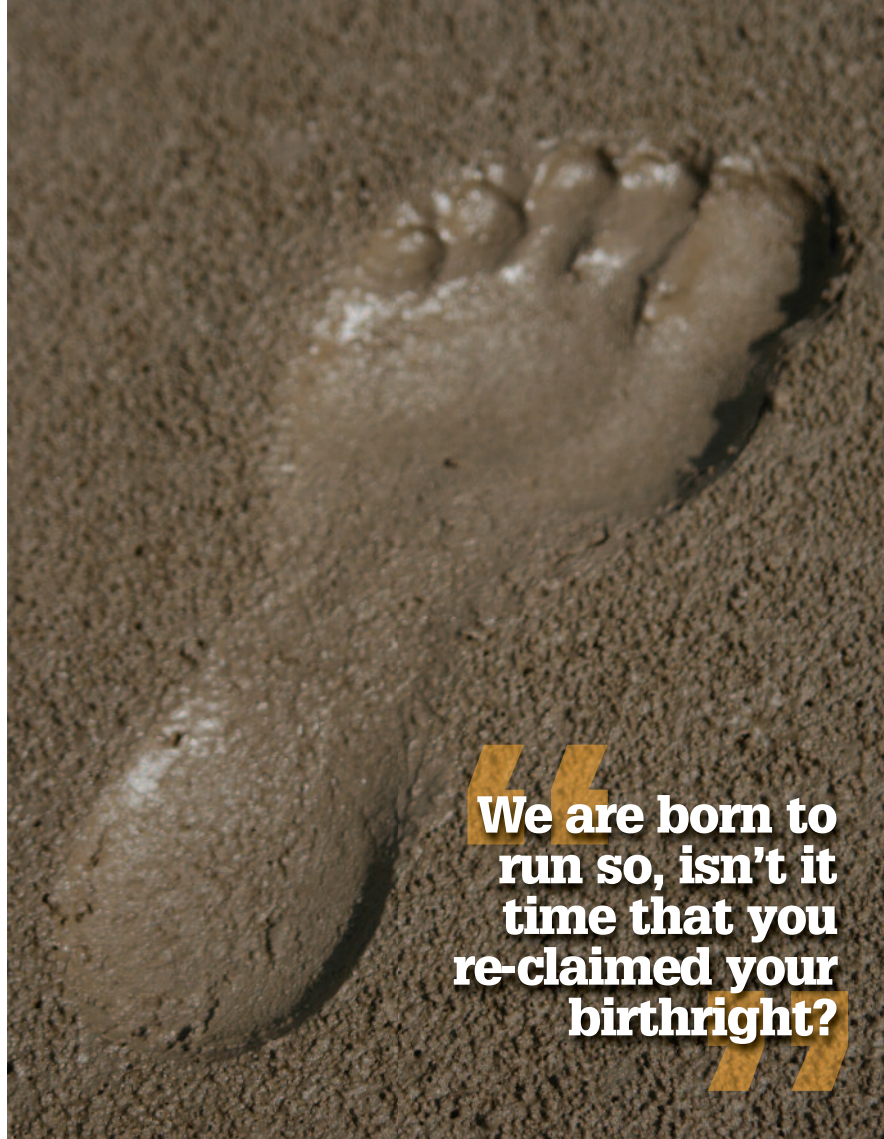


Before and after

sense of freedom and the feeling of the warm mud oozing between my toes was simply delicious! In the next few weeks I ran on a variety of surfaces, including road, and found my running form improving and the impact on my knees and hips reduced. Whilst Wayne was fitting me, he told me about a Natural Running Course in the Lake District and I immediately signed up.

John Woodward has been running barefoot for the last 25 years and has

found, by combining his background in Alexander Technique with barefoot running, he is able to fast-track people to a more efficient and body friendly' style of running. Immediately after arrival on the Friday afternoon, we were all filmed running in our shoes to provide a baseline for our progress over the weekend. John then began to explain his philosophy and showed us an image of a group of Ugandan footballers. All had grown up



“We are born to run so, isn't it time that you re-claimed your birthright?”

walking and running barefoot but, with the influx of aid money, some now had running shoes. The barefoot members of the group had a strong but relaxed posture with spread flexed toes ready to impact the ground. In comparison the shod players, looked sloppy and inefficient. John then took us through a warm-up sequence before we headed out barefoot onto the estuary. As with my first FiveFingers run, the sense of freedom and improved running form was immediate. Also the feedback from the changing running surfaces and instantaneous adaptation of my stride was something you'd never experience in shoes.

Throughout Saturday, the course progressed and John drip-fed us with concepts that were then reinforced with practical drills. He drove home the idea that our running stride is akin to a wheel. However, with inflexible shoes on our feet, part of that wheel is broken and with every heel-striking stride in front of our centre of gravity the wheel comes to an energy sapping sticking point. John encouraged us to think about flexing our toes, opening our ankle joints, not over-reaching and quickly bringing our foot through. By almost falling forwards into each stride, the 'wheel' rolls freely with gravity contributing significantly to the movement. During the afternoon we were

videod again, but this time running barefoot and the difference in everyone's technique and posture was startling.

Sunday began with a one-on-one Alexander technique session with another course tutor, Janet Dutton. We then headed up onto the moors for some hill work and I could see that everyone looked like totally different runners. Shoulders back, necks extended, no bobbing up and down, smooth economical striding and definitely no heel striking. This was then confirmed by our final video analysis.

Conclusion

In researching this article I've spoken to many people who've turned to barefoot/minimal footwear running as a last resort after struggling with numerous running injuries. In doing so they have been able to conquer their ailment and keep on running. From my personal experience I've found that by abandoning excessively cushioned/supportive footwear, learning what natural running feels like and thinking about that feeling every time I run, I've become a more efficient and less injury prone runner. We are born to run so, isn't it time that you re-claimed your birthright? **UF**

In the next issue Nik Cook discovers the thrills of scrambling.

GET OUT THERE

Natural Running Shoes



Vibram FiveFingers

KSO rrp: £98.99

www.nakedape.uk.com

tel: 0114 2739777

www.vibramfivefingers.com

As near to bare-footing as you can get whilst still protecting your feet from thorns, glass and so on. I'd strongly recommend going to a dealer for fitting, as your FiveFingers size won't necessarily match your regular shoe size and a glove like fit is essential. It takes a while to get use to putting them on but it does get easier with time as your toes become more mobile. Build up running in them slowly as, if you're not use to the more forefoot strike they encourage, you can suffer from tight/sore calves. I went for the KSO (keep stuff out) model as I tend to encounter plenty of puddles and mud on my running routes.



Inov-8 f-lite 230 rrp £75.00

and Inov-8 x-talon 212 rrp £75.00

www.inov-8.com

Inov-8 are a British company that believe, when it comes to designing running shoes, that less is definitely more. For road running and dry trails you'll struggle to find a lighter more natural feeling shoe than the f-lite and for off-road, the x-talon is like a ballet shoe with 4x4 capabilities.

For more information on the Natural Running Course and dates for 2010 go to: **www.naturalrunning.co.uk** or call: **01524 844299**.

To listen to an in-depth discussion with contributions from both Chris McDougall and John Woodward go to:

<http://runnersroundtablepodcast.blogspot.com/2009/08/rrt43-barefoot-running.html>