

## The Barefoot Running Debate

Among foot care specialists there is no real debate about if barefoot running or activity is good or bad, which is the way the barefoot community are framing the discussions. For example, there was a post on Twitter a while back that said something like, '*Nike and Podiatrists must be shaking in their boots at the thought of barefoot running*'. The implication being that barefoot running was going to put Nike and Podiatry or Chiropody out of business. How often do you read such nonsensical comments that foot specialists are opposed to barefoot activity as they would lose so much business? Foot orthotics for runners probably makes up less than 0.05% of what we do, so they clearly showing their ignorance about what our industry is all about.

I do not know a single podiatrist who is opposed to barefoot running! I would love to know where people are getting their information from that Podiatrists are opposed to it (*I assume there might be a few*). I think pretty much all podiatrists would agree that all runners, at whatever level they are at, should incorporate at least some barefoot drills into their training. It probably does not matter if it is barefoot or in minimalist shoes. There are even some podiatrists who are actively promoting barefoot activity!

So where is the debate that people should run barefoot or not? **So what is the debate or controversy about?** (*BTW, when I use the term 'barefoot running', I also mean 'minimalist running'*).

I have nothing against barefoot running, what I object to is the misuse, misrepresentation, misquoting and misinterpretation of the science by the *Evangelists from the Church of Barefoot Running*.

That is where the debate is. **It is not about if barefoot running is good or not, it is about the way the science is being used.** I always go where the evidence and science takes me.

### Let's deal with some of these:

The main claim from the barefoot running community is the reduction in injury rate that comes with barefoot running (and the claims that this why Podiatrists are opposed to it!). There is no doubt that some runners with a history of running injury are now running injury free by running barefoot. There is also no doubt that the opposite is happening (but that is not being acknowledged by the barefoot community). All the anecdotal reports from running injury clinics are that a lot of barefoot runners are getting injuries. Just go to any of the barefoot running websites, look at all the barefoot runners asking for advice on their injuries! Look at all the stress fractures occurring in those using the Vibram five fingers including Chris McDougall, author of "Born to Run". It is pretty clear from all this, there is probably a high rate of injury in barefoot runners, which is contrary to the claims made about barefoot running being so beneficial at reducing injuries. There is no actual research yet on the numbers and there are problems with designing such research in barefoot running.

When these anecdotes and reports of all the injuries are put to commentators from the barefoot

community, the usual response is that the injury would have been due to poor form or training errors and not actually the barefoot or minimalist running. Yet, they still insist that modern running shoes are evil and when a runner gets an injury in a running shoe, then the shoe is to blame. Why can those injuries in running shoes not also be due to poor form or training errors? You can still have good running form in running shoes.

One of the claims from barefoot runners is that one of the main benefits of barefoot running is that it strengthens the muscles. I have no doubts that it does, but the issues I have is that were the muscles really weak to start with? There are certainly unsubstantiated claims that motion control running shoes weaken muscles, but do they? We know the evidence is that motion control shoes do not really control motion at all, so do they weaken muscles if they not stopping motion from happening? If a non-runner starts running tomorrow in the most motion controlling running shoe, surely their muscles will get stronger from the running and not weaker? Can you see where I am going with this? I'm not convinced it's a problem. ....and we know that a weakness of the foot intrinsic muscles actually leads to a higher arch foot, not the flat pronated foot that is claimed by the *Church*.

Also if barefoot running makes the muscles stronger, then why are they getting stronger? They must be getting stronger as they have to work harder. Surely, if the muscles are working harder, then the argument could be made that this is a sign of an inefficient gait or running form? Surely, the aim of a good running form or gait would be an efficient gait which would mean the muscles do not have to work as hard? This also implies that you cannot run as fast barefoot, as the muscles are working harder? I am happy to be convinced otherwise on this and other claims, but can you see how the claims of increased muscle strength can be used to interpret the opposite outcome of what is being claimed?

Moving away from barefoot running, there is the research that shoes cause more foot deformity. Yes, the research has shown there are more foot problems in the shoe wearing populations compared to non-shoe wearing populations and I have no doubt that shoes are a problem. However, if you actually read the research (rather than just blindly tout the results) you cannot actually make that conclusion. When 99% of the population wear shoes, you are going to get more injured people than barefoot people. Those who ambulate on harder grounds are more likely to wear shoes, so what caused the foot problems, the hard ground or the shoe? This could be interpreted either way. Yet, the barefooters promote the shoes causing problems based on this research as it suits their agenda. See what I mean about the misuse, misrepresentation, misquoting and misinterpretation of the science. Do not get me wrong, shoes probably do cause some problems, but to use this research as evidence is flawed.

Another of the claims about barefoot running is the reduced impact on the heel and the effect this has on lowering the injury rate. Up until now research has not yet been able to link those impacts to any injury risk despite all the claims. The systematic reviews of that research have confirmed that. However, since the most recent systematic review there is now one study linking the impacts to injury but it is only been published in abstract form at this stage and not yet in a peer reviewed journal. How do we interpret that research in the context of all the previous research? One thing we do not do is jump to conclusions.

Then we have the research that the barefoot community claims prove barefoot running is better. There was Liebermann's research in Nature. It did not prove barefoot running was better. All it did show (despite the flaws in the methods such as the big differences in the age of the groups compared) was that barefoot running is different to shoe running. That is all, yet somehow this got widely touted on barefoot running websites and in the mass media as proof barefoot was better. Even Liebermann himself had to take the unprecedented step to publish a disclaimer on his website to distance himself from that sort of conclusion, yet that study is still be trotted out as proof that barefoot is better. Then there was Kerrigan's research that was widely touted on barefoot sites as proof that running shoes cause knee osteoarthritis (it was not even a study on osteoarthritis!), and there is plenty of other evidence is that runners do not get more osteoarthritis than non-runners! The work of Robbins and Gouw has been quoted several times as showing that impacts are related to plantar fasciitis (yet none of the experiments they did were even on runners with plantar fasciitis!). And the example of misuse, misrepresentation, misquoting and misinterpretation of the science goes on.

One of the benefits of barefoot running is claimed to be the economy of running based on the research on the weight of running shoes and the impact that this weight has on running economy. I have no doubt that it is probably the case (except that running shoes are a lot lighter now than they were when that research was done). However, this economy of running needs to be interpreted in the context of the increased muscle activity in barefoot running.

Then there is the claims made that running shoes are dangerous due to the wider flare of the sole under the heel increasing the lever arm and increasing the risks for ankle sprains. This is a theoretical argument based on the work of the late Alex Stacoff. The only problem with this claim is that in all the epidemiological studies of running injuries, ankle sprains has never been on the list of injuries that runners get.

Then there are arguments used on the elite runner. They cite Abebe Bikala winning the Rome Olympic marathon barefoot (*but forget to mention he went on to run faster and break a world record in the next Olympics wearing shoes*). They cite Zola Budd and her exploits at the 1500m Olympic level barefoot (*but forget to mention she is quoted as saying that she had to start wearing running shoes to stop all the injuries that she started getting!*). They cite Herb Elliot who did do some training barefoot (*but forget to mention that this was on the beach!*).

No elite runners are running barefoot. They have teams of people working with them looking for any advantage and if running barefoot would give them an advantage, then they will be doing it. Why aren't they? If you look at all the slow motion videos of the elite runners: some heel strike, some midfoot strike, and some forefoot strike ... yet they all run fast. **Conclusion: there is no one right way to run - its individual.**

Then there are the plain insane claims by barefooters that there is increasing amounts of research showing that there are immune system benefits to going barefoot (*when in reality there is not one piece*

*of research that comes remotely close to showing or even suggesting that*). Then there are the claims that you use less petrol in the car driving barefoot (*yet petrol consumption at 50MPH is going to be exactly the same if you have your shoes on or not!*).

If the *Evangelists from the Church of Barefoot Running* wants to be taken seriously, they need to stop the misuse, misrepresentation, misquoting and misinterpretation of the science.

When asked about the about the misuse, misrepresentation, misquoting and misinterpretation of the science, the evangelists agree and are somewhat embarrassed and cannot explain why so many in the barefoot community do that. They often urge not to be judgemental of all barefoot runners based on what some in the barefoot community say (i.e. the *Church*).

If you genuinely really want to understand all this, to be better informed, to be involved then you would purchased some barefoot books based on recommendations on some barefoot running sites. IF you do you will see that they are useless and full of nonsensical propaganda. The understanding of the foot biomechanics by the authors is appalling (e.g. one still talked about the 'tripod' model of the foot that was debunked by science many years ago). They provide no useful information. They are like manifestos from a political party, in that the party faithful love them, but they provide no useful information to others outside the party or 'church'. The only useful book that is available is Craig Richards' book, *The Complete Idiots Guide to Barefoot Running*. It does not try to ram the 'party line' down your throat; is sensible in the way it interprets the science; and actually has some good guidance on how to transition to barefoot running.

There is a shift happening; more emphasis on good running form vs. "bad" running form as opposed to shoe vs. barefoot running. There is a potential for greater tissue adaptation in running injury prevention.

If we consider the aim of foot orthotics to alter joint moments to reduce the load in injured tissues, then can a change in running form achieve the same alteration in joint moments? The answer is a qualified 'yes' (the *Church's* answer is going to be an emphatic 'yes'). Foot orthotics will be much more effective at reducing joint moments in the short term, so can certainly be much more effective at getting over an injury. Altering running form is more of a longer term measure and can form part of the transition away from foot orthotics. However, the reason it is a qualified 'yes', is that the *Church* have to realise that in some (or many?) runners, the abnormal joint moments can be so high that a change in running form or muscle strength is not going to be able to reduce the load in the tissues to below a level the tissues can tolerate or be adapted to. The only way to get them low enough in this group is with foot orthotics (or in the extreme case which happens now, surgery).

There is no debate about if barefoot running is good or not. The debate is about the misuse, misrepresentation, misquoting and misinterpretation of the science.