



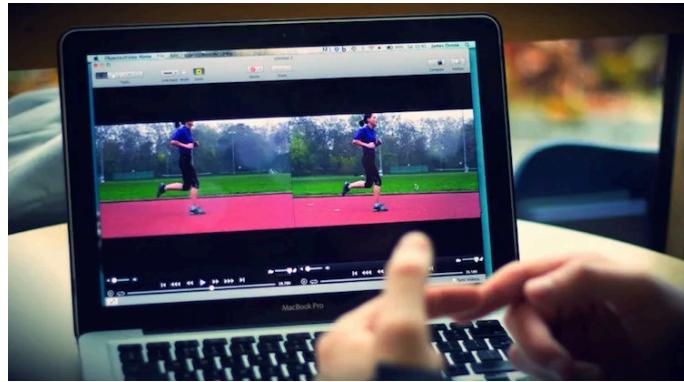
KINETIC REVOLUTION

by James Dunne

RUNNING TECHNIQUE

RUNNING TECHNIQUE RESEARCH: LISTENING TO THE EXPERTS

BY DR. BRAD NEAL



In this article, I want to share the findings of a recent paper which brings together the two worlds of scientific research, and expert running coaches. This unusual approach helps us greatly in further understanding how running technique can be coached to help athletes recover from injury.

I was fortunate enough to be amongst a group of authors from across the world that completed a 'mixed-methods' study on what we now term 'running retraining'.

Let's get some terminology out of the way to start with:

- By 'mixed methods', we mean a systematic review (the highest level of scientific evidence) combined with the opinions of world experts who meet some pre-determined criteria.
- By 'running retraining', we mean any form of feedback designed to change the way that someone runs (ideally for the better!).

The project was lead by [Dr. Christian Barton](#) from Melbourne and was published in the British Journal of Sports Medicine (BJSM).

If you want to read the hard science, good for you, please follow [this link](#). The article is open access for a short while, but it won't be forever. Be quick!

Review

BJSM  Running retraining to treat lower limb injuries:
a mixed-methods study of current evidence

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So what did we find?

EXISTING RESEARCH INTO RUNNING GAIT RETRAINING

I'd say the primary point is to stress that running retraining is still an emerging scientific area; just 6 studies investigated if running retraining produced in a change in pain. The good news, is that 2 very common running injuries were found to be improved significantly by running retraining:

- Patellofemoral Pain / Runner's Knee
- Anterior Compartment Syndrome / Shin Splints

For Runner's Knee, retraining should focus on reducing what is known as hip adduction, often referred to as a crossover gait or medial collapse. To do this, we found that increasing step rate ([running cadence](#)) or using visual/verbal cues was most effective.

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For Anterior Compartment Syndrome, the strongest evidence identified suggested that switching to a forefoot strike pattern is best for reducing pain.

However, we would like to exercise caution in this regard, remembering that running load cannot disappear, it simply gets moved around the body as we adopt a new technique, so please consider seeking the advice of a running professional before you attempt this.

- Also read: [Forefoot Running for Anterior Compartment Syndrome](#)

EXPERT OPINION

So what did the experts suggest?

As always, opinion will allow for much more data than hard science. Despite this, the experts interviewed suggest that running retraining has a role in the management of iliotibial band syndrome, plantar fasciitis, iliotibial band syndrome, hamstring or [gluteal tendinopathy](#) and running related calf pain.

As many of the experts interviewed are active researchers, lots of these hypotheses (ideas) are currently being tested.

A strong theme of interest, however, was that approaches often need individualising for specific injuries and runners.

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TAKE HOME MESSAGE

The final point I would make is that running retraining, or changing running technique, is just one of many tools to apply when managing injured runners.

For some athletes and/or injuries, it may be the most important tool. For others, exercise-based rehabilitation may be more important.

In reality, a good combination of both approaches is probably best.

We can be guilty of throwing the baby out with the bathwater when a new approach comes along, so please do not forget that good old exercise has a significant role to play in both injured and uninjured runners.

As always, thanks for reading, and if you have any burning questions, then please post them in the comments below.

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Last updated on May 19th, 2021.

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DR. BRAD NEAL

Dr. Brad Neal is Head of Research and a Specialist Musculoskeletal Physiotherapist at [Pure Sports Medicine in London](#). He completed his BSc in Physiotherapy at the University of Hertfordshire in 2006, followed by his subsequent MSc in Advanced Musculoskeletal Physiotherapy in 2011. In 2019, he successfully completed his PhD at the William Harvey Research Institute at Queen Mary University of London, within the centre of Sports & Exercise Medicine. His PhD thesis was titled “[the influence of lower limb biomechanics in the development, persistence and management of patellofemoral pain](#)”. Clinically, Brad has experience in both the NHS and private sectors of healthcare, alongside a career in various professional sports. His clinical interest lies in the field of patellofemoral pain (PFP), running biomechanics, tendinopathy and other lower limb overload pathologies.

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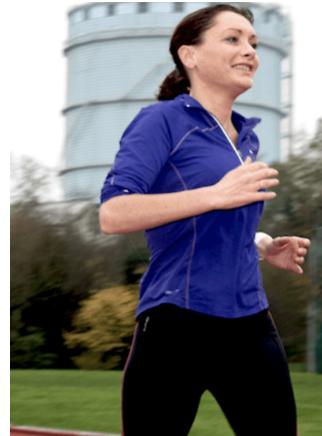
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FOREFOOT RUNNING: HOW TO AVOID CALF PAIN



CAN YOU CURE RUNNER'S KNEE [PART 3]

3 Comments



NEIL BARRIGAN says:

April 22, 2016 at 2:18 pm

I had an inguinal hernia operation in November last year so was unable to run for many months. After lots and lots of physio and hip strengthening work I finally started back with daily walking and then built up over 2 months so that I could run again. I felt really good for a month then boom, my right knee is too sore to run, pain is behind the kneecap. And my ITB on the left side is really sore on the lateral side of the knee. I have had ITB issues in the past in the same knee and it took months to recover. I have stopped running again in the hope I have caught it early. I still do a lot of Hip and Glute strength work almost daily but still seem to be really injury prone. Maybe I have started running too much too soon? I was trying to avoid this hence all the walking for months before I started running again but still having knee issues. Help.



ERIC says:

April 22, 2016 at 9:43 pm

I enjoyed this post. Glad to see science backing up what most coaches are saying already.

Where do you draw the line on retraining? Sometimes you can create

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DAVE says:
June 30, 2016 at 3:30 am
Hi Brad,

Nice article, thanks! What are your thoughts on gait retraining for uninjured runners? Would you want to try and modify what might be risk factors such as hip adduction or an overstride on an uninjured runner?

Thanks
Dave

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