

SUNDAY SUPPLEMENT

When he found out about a new supplement boasting PB-smashing potential, **David Bradford** couldn't resist giving it a try. Would it help him achieve his goals? And is taking supplements a smart way to improve - or an unsporting shortcut?

At the end of last year, I read a report heralding a new supplement as: "the biggest discovery for distance running for a long while". The article's author, an experienced club runner, had used the substance, called Ark-1, in several races, and deduced that it had improved his 10-mile and half marathon PBs by four and five minutes respectively. Could it be true? A performance-boosting drink offering instant results was certainly an enticing prospect. Could Ark-1 really help me run faster? There was only one way to find out.

Despite having improved steadily over the past few years, my race times had plateaued recently. I'd not set a PB at any distance above 5k since spring 2010. A fear was creeping in that I'd hit my natural limit and would not improve without seriously increasing my mileage

- with all the associated injury risks. Now there was another way: a powder promising immediate improvements. I couldn't resist giving it a try... all in the name of journalistic research, you understand.

Having taken delivery of a tub of Ark-1, I wrote down the objectives I hoped it would help me achieve: new PBs at 10k and half marathon. I would launch an Ark-assisted assault on my current 10k PB (33:17), at Chichester, in February, and my half-marathon mark (73:41) would come under attack two weeks later, at Brighton. I was not expecting to transform, superhero-like, into Mo Farah: I would strive for sub-33 minutes at 10k and sub-73 at half marathon. Training had been going well; I'd hit 50 miles per week for two months, including a good mix of easy runs, speed endurance and tempo sessions. Could Ark-1 provide the extra boost I needed to revise my overripe records?



Equalling his 10k PB at Chichester

The scientific case for Ark-1 (and L-arginine) is compelling but not overwhelming. There is evidence that it increases NO production in the body, which in turn helps circulate blood and nutrients to working muscles. The University of Exeter study was very encouraging, but its subjects were "recreationally active" - the results may have been different with highly trained athletes. Likewise, alternative test methods may have produced a different outcome; in the method used, measuring exercise-tolerance until exhaustion, psychological factors are liable to influence participants' performance.

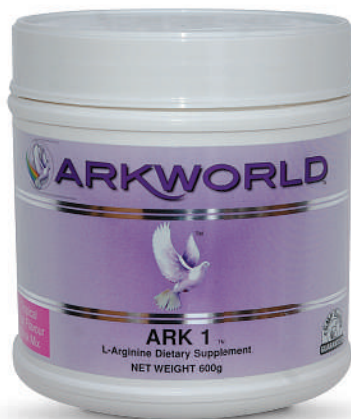
Other investigations with supplemented L-arginine have failed to demonstrate a clear link with increased NO production and/or improved performance. It is worth bearing in mind too that the body produces NO from nitrates (and arginine) which occur naturally in nuts, cereals, fruits

and vegetables. Indeed, in a similar study with beetroot juice (rich in nitrate), the University of Exeter researchers recorded results almost as promising as those with the L-arginine supplement Ark-1.

Having improved my half marathon PB by more than a minute 'under the influence' of Ark-1, I can hardly conclude that "it didn't work for me". But the fact remains - I am not convinced. In my most recent 'supplemented' race, a local cross-country, I recorded a time that was marginally slower than my performance over the same course a year ago. So, the experiment is over; it is time for me to go cold turkey.

I feel slightly nervous about competing without Ark-1, but I don't want to become psychologically dependent on drinking the bitter-sweet tippie before every race just to feel confident. Even so, if your running has hit a plateau despite consistent training, an L-arginine product like Ark-1 may be worth a try. My experience testing it reminded me that running always involves uncertainty because innumerable variables influence each and every performance. Investing in a supplement, as with any attempt to run a PB, requires the courage to speculate, to take a leap of faith.

RF



At the moment, Ark-1 is only available in 600g tubs, costing £59.95, but that's enough for 30 races. To order, go to: www.highperformancearginine.com

Q&A WITH PROFESSOR ANDREW JONES

Andrew Jones is an internationally respected physiologist who has worked with many elite athletes including Paula Radcliffe. Last year, he led a study investigating the effects of the L-arginine supplement Ark-1

Rf: *In layman's terms, what is L-arginine and how does it affect the body during exercise?*

AJ: L-arginine is one of the substrates required for the body to produce nitric oxide (NO). NO is essential in a wide variety of physiological processes including the regulation of vasodilation and therefore blood-flow to tissues. NO also seems to play a key role in matching cell oxygen supply to demand, in regulating muscle contraction, and in aerobic energy production in the mitochondria.

Rf: *Based on your research, do you think L-arginine supplements will prove effective for runners?*

AJ: Our work with the Arkworld product [Ark-1] suggested a reduced oxygen cost in submaximal cycle exercise (i.e. improved efficiency) and an increase in the time to exhaustion during high-intensity exercise. However, although the Ark-1 is sold mainly as an L-arginine supplement, it also contains a variety of other potentially bioactive components, so we cannot say for sure that the effects we saw were due to L-arginine per se.

Rf: *Does L-arginine have any detrimental side-effects?*

AJ: Not to our knowledge. It is a naturally occurring amino acid and any excess would simply be excreted.

Rf: *Are there natural alternatives to this supplement?*

AJ: Yes. High-nitrate products such as beetroot juice also result in increase NO production but via a different mechanism.

Alternative supplements - 5 other supplements popular among runners

1. CREATINE

One for the sprinters, creatine boosts muscle strength. Not advised for endurance athletes as the extra muscle mass leads to greater bodyweight.

2. IRON

Iron is vital to help blood carry oxygen to muscles. A balanced diet usually

provides a sufficient quantity, but the supplement form is highly effective for those suffering from a deficiency.

3. GLUCOSAMINE

Believed by many to help protect joints and ligaments, glucosamine is particularly popular among older runners. However, some recent studies

have called its effectiveness into question.

4. OMEGA-3

Available in fish oil and flaxseed supplements, Omega-3 fatty acids are believed to have an anti-inflammatory effect, as well as protecting heart health and even boosting brain function.

5. SODIUM BICARBONATE

Commonly known as baking soda, sodium bicarbonate has been shown to increase exercise tolerance by suppressing the build-up of lactic acid - but only for short, intense bouts of exertion. Another one for the sprinters, then.