

Beta-alanine supplement considerably improves running performance

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Dr Ducker says the findings have the biggest implications for elite athletes and designing supplement programs aimed at giving them a winning advantage.

Credit: pau.artigas

Supplementing runners with the naturally occurring amino acid beta-alanine considerably improved their performance over 800m according to a study aimed at field-testing laboratory research around the popular performance enhancing sport supplement.

The study results have been published in the *International Journal of Sports Nutrition and Exercise Metabolism*.

It used 18 male recreational club runners; some were given high quality beta-alanine supplements and others a placebo for 28 days.

Some of the runners using the supplement showed a 3.6 second improvement in their times (of around two minutes) over 800m—well beyond what researchers anticipated.

Curtin School of Physiotherapy and Exercise Science lecturer Kagan Ducker undertook the study as part of his PhD research at UWA.

He also investigated 2000m rowers and team sport athletes with the aim of extending laboratory test results with practical field studies.

Dr Ducker says the most significant finding of the 800m-runner study was how big the improvement was for athletes using the supplements.

"In our world, where we are usually talking in tens and hundredths-of-seconds, 3.6 seconds is a lot faster," he says.

"Looking at the rowing data we had collected over six or seven minutes worth of exercise—we got benefits of three seconds.

"So in the 800m run I was expecting an improvement of maybe 1.5 seconds and so it was definitely a larger increase than what we were expecting.

"What is also surprising too, is that [the] improvement is larger than some of the sodium bicarbonate studies over similar sorts of running distance because sodium bicarbonate as a buffering agent is a lot more powerful than beta-alanine."

Dr Ducker says the findings have the biggest implications for [elite athletes](#) and designing supplement programs aimed at giving them a winning advantage.

"Really up to the point of an elite athlete, there's a lot more to be gained from basic nutrition than from supplements," he says.

"So we really discourage people below the elite level from bothering with supplements because there is more to be gained from really putting your head down, doing the work, getting some good coaching and making sure your nutrition is 100 per cent right."

Dr Ducker says the majority of exercise performance studies assessing beta-alanine supplements had been laboratory-based not sport specific.

His study is the first to report enhanced running performance following supplementation with beta-alanine but Dr Ducker acknowledges that the results of club-level recreational runners may differ from elite athletes and more research needs to be done in this area.

Provided by Science Network WA

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