

Dietary supplement speeds silver cyclists

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Taking arginine supplements can improve the cycling ability of over-50s. Researchers writing in BioMed Central's *Journal of the International Society of Sports Nutrition* tested a combination of the amino acid and an antioxidant in sixteen cyclists, finding that it enhanced their anaerobic threshold - the amount of work done before lactic acid begins to accumulate in the blood.

Zhaoping Li worked with a team of researchers from the University of California, Los Angeles, USA, to carry out the [randomized controlled trial](#). She said, "The loss of exercise capacity with age often results in a reduction in physical fitness and more rapid senescence. A dietary supplement that increases exercise capacity might help to preserve [physical fitness](#) by optimizing performance and improving general health and well being in older people".

One way in which older people may reduce their exercise capacity revolves around the signaling molecule nitric oxide (NO), which is involved in many physiological processes, including those related to working out. NO production diminishes in quantity and availability as we age and is associated with an increased prevalence of other [cardiovascular risk factors](#). In the body, NO is created from the amino acid arginine and is inactivated by oxygen free radicals. By supplementing diet with both the precursor and an anti-oxidant, the researchers hoped to support the NO system in the cyclists and thereby enhance performance.

Sixteen cyclists aged between 50 and 73 were randomly assigned to

receive either the supplement or dummy placebo pills. After one week of study, the anaerobic threshold of the supplement group increased, while that of the control group did not significantly alter. This increase in anaerobic threshold was preserved at week three. According to Li, "We've demonstrated a 16.7% increase in anaerobic threshold. This indicates a potential role of arginine and antioxidant supplementation in improving exercise performance in elderly".

More information: Arginine and antioxidant supplement on performance in elderly male cyclists: a randomized controlled trial, Steve Chen, Woosung Kim, Susanne M Henning, Catherine L Carpenter and Zhaoping Li, Journal of the International Society of Sports Nutrition (in press), www.jissn.com/

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