

The Effects of Dietary Nitrate and Quercetin on Exercise Performance: A Review of the Literature

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Background:

An increased intake of specific nutrients that function naturally as physiological ergogenic aids can be used by athletes to bring about performance enhancements. Nitrate, found in beetroot, is a known regulator of vascular integrity and is a potent vasodilator. In addition to this it is also been shown to lower the cost of ATP muscle and force production. Quercetin, found in apples, is also known to affect endurance performance, via mitochondrial biogenesis.

Purpose:

The purpose of this literature review was to examine the effectiveness of both dietary nitrate (BR) and quercetin as nutritional ergogenic aids to enhance exercise performance.

Findings:

There is consistent agreement within the literature supporting both dietary nitrate and quercetin as nutritional ergogenic aids for endurance performance. Nitrate can be used both acutely (60 min pre exercise) or chronically (three to six days supplementation) to bring about performance enhancements. Quercetin has generally been supplemented with powder and very few studies have used natural food sources to supply high levels of quercetin. Both these compounds work at the mitochondrial level and a combination of these two compounds should therefore work synergistically to improve endurance performance.

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