**Original article:
A study of beet root derived dietary nitrate efficacy on performance of runners**

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**Abstract:**

Increased plasma nitrate concentrations from dietary sources of nitrate have proven to benefit exercise performance.Beetroot (BR) contains relatively high levels of nitrate (NO3), which increases nitric oxide stores. This study investigated whether dietary nitrate supplementation, in the form of a BR juice, would improve running performance .Limited data are available regarding the effect of nitrate ingestion on athletic performance, and limited studies were investigated the potential ergogenic effects of a small-volume, concentrated dose of beetroot juice. In a randomized open design, 100 male healthy volunteers aged between 12-30 years are assigned to consume the 250 ml of Beetroot juice for three consecutive days up to 9 weeks period. Present study demonstrate that dietary NO3-, administered in the form of beetroot juice (250 ml/day for 9 weeks), decreases systolic blood pressure (SBP). These results may provide a mechanism by which nitrate exerts beneficial effects on muscle function with applications to sports performance and a potential therapeutic role in conditions with muscle weakness.

**Keywords:** Beetroot, Betaine, Nitrate, Blood Pressure, Runners.