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Mini review

Beet Juice: The Science Behind the Sale

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Mini Review

Have you noticed the increased ads for beet juice and its benefits? Are the claims justified? This paper will attempt to discover the research behind the plant that supports its use as a super food specifically, regarding reducing the components of the metabolic syndrome. The metabolic syndrome is a constellation of high blood pressure, abdominal fat, high blood sugar, and unhealthy cholesterol levels [1]. The ability to reduce these risk factors is important as they are precursors for heart attacks and strokes. So, what do we know about beets and the effect of its juice on high blood pressure?

Beets are rich in inorganic nitrates which are converted to nitric oxide within the body. The nitric oxide then relaxes blood vessels and dilates them, which helps the blood flow more easily and lowers blood pressure. This has been supported by a systematic review and meta-analysis of research studies from 2009 through 2017 by looking at 22 studies with 47 interventions (n=650) and 43 control (n=598) groups [2]. These studies did not address the impact of beetroot juice on glucose metabolism.

A study by Mirmiran P, et al. [3], showed that the persistent consumption of beetroot juice effectively postpones the postprandial glycemic response and decreases the blood glucose peak. However, in randomized controlled research studies in 2016 Shepherd A, et al. [4], there was no effect on plasma glucose concentration in healthy adults.

Finding only one research study that supports the effect of beetroot juice on glucose metabolism and several that did not, the results were inconclusive. Will the same result occur in relation to the effect that beetroot has upon lowering cholesterol? Several research studies have supported the reduction in low-density-lipoproteins after the administration of beetroot juice [5-8].

While abdominal fat is one of the metabolic syndrome criteria no research studies specifically addressing this criterion could be found. However, beetroot juice was seen to be effective at lowering blood pressure and low-density lipoprotein but not plasma glucose. As always, more studies are needed to confirm these findings.

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Conflict of Interest

Author declares no conflict interest.

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