

Vitamin D-fortified yogurt drink may lower risk of heart disease in type 2 diabetics

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Daily intake of vitamin D-fortified doogh (Persian yogurt drink) improved inflammatory markers in type 2 diabetics and extra calcium conferred additional anti-inflammatory benefits, according to a recent study accepted for publication in The Endocrine Society's *Journal of Clinical Endocrinology and Metabolism (JCEM)*.

Inflammation is known to have a central role in the development of type 2 diabetes and its further complications like <u>coronary heart disease</u> and stroke. Vitamin D carries benefits for skeletal health but evidence of an anti-inflammatory effect from clinical studies in humans remains scarce.

"Our previous research showed that improvement of vitamin D status by regular daily intake of a fortified yogurt drink resulted in lowered <u>blood</u> <u>glucose levels</u> in diabetic patients," said Tirang Neyestani, PhD, of Shahid Beheshti University of Medical Sciences in Tehran, Iran and lead author of the study. "The current study found that consuming a vitamin D-fortified yogurt drink also decreased serum substances like highly sensitive C-reactive protein (hsCRP) which are known to have an inflammatory role."

In this study, researchers conducted a double-blind, randomized, controlled trial over 12 weeks in 90 patients with type 2 diabetes. Study participants were randomly allocated to one of three groups to receive two 250mL bottles a day of either plain doogh, vitamin D-fortified doogh or calcium plus vitamin D-fortified doogh. Vitamin D levels, insulin resistance, and inflammatory markers such as hsCRP, fibrinogen



and adiponectin were measured in blood samples taken from study participants.

"Our study showed for the first time that adiponectin, a substance secreted by fat tissue that has an anti-inflammatory effect, increased when calcium and vitamin D-fortified doogh was consumed," said Neyestani. "Our findings may offer interesting therapeutic options for diabetic patients."

More information: The article, "Improvement of vitamin D status via daily intake of fortified yogurt drink either with or without extra calcium ameliorates systemic inflammatory biomarkers, including adipokines, in the subjects with type 2 diabetes," appears in the June 2012 issue of *JCEM*.

Provided by The Endocrine Society

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