

Low vitamin B6 status is known to increase the risk of cardiovascular disease. Newer research suggests that cardioprotective benefits of vitamin B6 are more far-reaching than originally thought, further emphasizing the essential role of vitamin B6 in supporting a healthy heart.

Higher vitamin B6 levels are related to lower cardiovascular disease risk

In a study published in the *American Journal of Clinical Nutrition*, researchers measured blood plasma levels of pyridoxal-5'-phosphate (vitamin B6), C-reactive protein (CRP), and an oxidative DNA damage marker (8-OHdG) in over 1,200 Massachusetts adults aged 45-75 years. Their goal was to examine the relationship between vitamin B6 levels and markers of inflammation and oxidative stress.

The analysis revealed a strong dose-response relation between plasma vitamin B6 concentration and plasma CRP (a marker of inflammation). Increasing vitamin B6 concentrations were significantly associated with lower CRP levels and decreased urinary 8-OHdG (a marker of oxidative stress). Low plasma vitamin B6 concentrations also correlated with metabolic syndrome, obesity, and diabetes. These negative associations remained even after controlling for homocysteine levels.

The results of this study suggest that low vitamin B6 concentrations may be associated with inflammation, higher oxidative stress, and metabolic conditions in older adults. Additionally, while the relationship between vitamin B6 levels and homocysteine has been known for many years, this new analysis demonstrates that vitamin B6 may influence cardiovascular disease risk through additional mechanisms.

Shen J, Lai CQ, Mattei J, Ordovas JM, Tucker KL. Association of vitamin B-6 status with inflammation, oxidative stress, and chronic inflammatory conditions: the Boston Puerto Rican Health Study. 2010. *American Journal of Clinical Nutrition* 91(2):337-42.