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A recently published study showed that adults with low vitamin D levels had more than double the risk of prehypertension and prediabetes than adults with higher vitamin D levels.

LOW VITAMIN D LEVELS LINKED TO PREDIABETES AND PREHYPERTENSION

Prediabetes and prehypertension have been associated with low vitamin D levels. In a recent issue of the journal *Diabetes Care*, scientists report a correlation between reduced vitamin D levels and prediabetes and prehypertension in adults. Both prediabetes and prehypertension are estimated to exist in at least one-fourth of disease-free adults.

Researchers analyzed data from 898 men and 813 women who participated in the National Health and Nutrition Examination Survey (NHANES), 2001-2006. Blood pressure measurements were obtained during examinations conducted upon enrollment, and blood samples were evaluated for glucose, serum 25-hydroxyvitamin D and other factors.

Prediabetes was defined as having a fasting serum glucose of between 100 and 125 milligrams per deciliter, and prehypertension was defined as systolic blood pressure of 120 to 139 mmHg and/or diastolic blood pressure between 80 and 80 mmHg. Prediabetes was 33 percent higher among those with vitamin D levels of 76.3 nmol/l (30.5 ng/ml) or less compared to those with higher levels. Prehypertension was evident in 61 percent of those with the lower vitamin D levels. Participants with undiagnosed diabetes and untreated hypertension had even lower vitamin D levels on average. Serum vitamin D levels tended to decline with increasing age and body mass.

When the risk of having both conditions was considered, those with low vitamin D levels had 2.4 times the risk of that experienced by subjects with higher vitamin D levels.

It is reasonable that among those with prediabetes or prehypertension, vitamin D supplementation resulting in increased serum vitamin D levels may help reverse subtle changes in fasting serum glucose and resting blood pressure that may lead to more advanced disease states.

Alok K. Gupta, MD, Meghan M. Brashear, MPH and William D. Johnson, PHD. Prediabetes and Prehypertension in Healthy Adults Are Associated With Low Vitamin D Levels. Diabetes Care March 2011 vol. 34 no. 3 658-660.