

LOW BLOOD LEVELS OF VITAMIN D INCREASE THE RISK OF HIGH BLOOD PRESSURE

This prospective study examined the relationship between measured blood levels of vitamin D (25-hydroxyvitamin D) and high blood pressure among 613 men from the Health Professionals' Follow-Up Study (HPFS) and 1198 women from the Nurses' Health Study (NHS). Only individuals who did not have high blood pressure at baseline were used for the analysis and were followed for 4-8 years. They also prospectively studied (for 16-18 years) the relationship between predicted blood levels of vitamin D and risk of high blood pressure in more than 38,000 men and 77,000 women from the HPFS and NHS. Results showed that men with vitamin D deficiency (<15 ng/ml) had a 6 times greater risk of having high blood pressure than men with normal vitamin D status (≥ 30 ng/ml). When the same comparison was done in women, a deficient vitamin D level was associated with almost 3 times greater risk of developing high blood pressure. When using predicted vitamin D levels in the larger group, a low vitamin D status approximately doubled the risk of high blood pressure in men and increased it by more than 50% in women. These relationships were independent of several other factors that might influence blood pressure. The authors say that vitamin D may influence blood pressure through its effect on kidney and vascular function. They conclude, "Our prospective analysis suggests that lower plasma 25(OH)D levels are associated with a higher risk of incident hypertension." These findings should ultimately be tested in randomized trials. [Forman JP, et al., *Hypertension*, 49: 1063-1069, 2007]