

## **PS2.008**

### **Vitamin D and cardiovascular disease - an association? An evidence based review**

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**Background and Aim:** It has been reported that low circulating concentrations of vitamin D are associated with higher risks of cardiovascular disease (CVD) and all-cause mortality. In fact, the interest of vitamin D to human health seems to be growing, considering its pleiotropic effects besides the well-known consequences in bone metabolism. We aimed to perform an evidence based review about the association between serum vitamin D concentrations and cardiovascular disease and mortality.

**Method:** We searched Medline, Cochrane library, National guideline clearing house, NHS, Scielo and DARE database for review studies assessing the association of vitamin D or supplementation with CVD. From the 375 articles found after the first search by MeshTerms, were selected 11 complete papers to be analyzed. Data were extracted by two independent investigators and evaluated according to the SORT taxonomy.

**Results:** Nine of the eleven studies found an association between low serum concentration (25 - 50 depending on the study) of 25-hydroxyvitamin D (25(OH)D) and CVD and mortality. Vitamin D was associated with CVD in general and specifically with coronary arterial disease, stroke, hypertension, other cerebral vascular diseases and vascular mortality. It is to note that there is a large variability among methodologies used to evaluate vitamin D effects. It has also been difficult to identify the level that consistently defines deficiency. Furthermore, there isn't a population pattern according to which it is recommended to measure vitamin D. Although an association was found, the effects of vitamin D supplementation are weaker than expected and so it is not recommended to the general population. However there might be some advantages for elderly and institutionalized individuals.

**Conclusions:** Evidence from observational studies indicates a possible inverse association of circulating 25(OH)D and risk of CVD and mortality but there are still many inconsistencies. More randomized control trials are needed.