

Researchers pinpoint upper safe limit of vitamin D blood levels

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Researchers claim to have calculated for the first time, the upper safe limit of vitamin D levels, above which the associated risk for cardiovascular events or death raises significantly, according to a recent study accepted for publication in The Endocrine Society's *Journal of Clinical Endocrinology & Metabolism (JCEM)*.

There is increasing evidence that vitamin D plays a pivotal role in human physiology. Vitamin D deficiency has been linked to cardiovascular events and mortality, but previous studies have found supplementation fails to decrease mortality or [cardiovascular events](#), while other studies found only minor positive effects.

"The unpredictable results from previous studies may be due to the misconception that 'the higher the better,'" said Yosef Dror, PhD, of Hebrew University in Rehovot, Israel, and lead author of the study.

"Although our study did not directly test the impact of vitamin D supplementation, we believe our results suggest it may be possible that only moderate supplementation within a narrow range of serum calcidiol (the main vitamin D fraction in the blood) will be associated with the most positive results."

Researchers conducted a study of 422,000 people aged 45 years or older, who underwent vitamin D blood assays. They found for the first time that the safe range of vitamin D levels with respect to coronary morbidity lies between 20 to 36 ng/mL. Vitamin D levels below and above this range adjusted rates of increased mortality and morbidity

significantly.

More than 60 percent of the tested population had insufficient blood levels of vitamin D. Half of these subjects had severely low vitamin D levels which was associated with a 1.5 times increased risk of acute coronary morbidity or mortality. Three percent of those tested had elevated vitamin D levels above 36 ng/mL, which was associated with a 1.13 times elevated risk of coronary morbidity or death.

"Supplementing the entire population may jeopardize those found within the upper-normal range, shifting them to levels that are beyond the range associated with the lowest morbidity rates," said Dror. "Although we could not assess the impact of Vitamin D supplementation, our results may suggest that such supplementation to increase [vitamin D blood levels](#), with strict monitoring to avoid overload, may have a significant influence on public health. This hypothesis still needs to be assessed in intervention trials."

More information: The article, "Vitamin D Levels for Preventing Acute Coronary Syndrome and Mortality: Evidence of a Non-Linear Association," appears in the May 2013 issue of *JCEM*.

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