

**Association between vitamin D and cardiovascular disease:
Findings from a national study**

Monica Ocampo, Amir Mohajeri, Man Hung

Roseman University of Health Sciences College of Dental Medicine

ABSTRACT

Introduction

Many studies have investigated the association between vitamin D and cardiovascular disease (CVD), but literature has shown various results. The aim of this study was to investigate the role of vitamin D in CVD.

Methods

Data source

The data were obtained from the 2015-2018 National Health and Nutrition Examination Survey database and included adults aged 20 years and older with a history of CVD. Descriptive statistics for participants' demographics, vitamin D levels, CVD status, and risk factors were reported. Chi-square tests and t-tests were performed to examine differences in participant characteristics among those who had CVD and did not have CVD. Regression models were used to explore the association between vitamin D levels and CVD.

Results

A total of 9,825 participants took part in this study with an average age of 50.28 years. Majority were female (52.1%) and Non-Hispanic White (34%). Most had normal vitamin D levels (64.8%) and had never been told that they had CVD (89.5%). Individuals with vitamin D deficiency or insufficiency had a higher likelihood of having CVD than those with normal vitamin D levels.

Conclusions

Both vitamin D deficiency and insufficiency were associated with an increased risk of CVD. Healthcare professionals may consider recommending the intake of vitamin D supplements to improve and prevent cardiovascular health in adults.

Keywords: Vitamin D, cardiovascular disease, healthcare, supplements

Word count: 242