

Lower vitamin D, higher risk of death

By **Mary Brophy Marcus**, USA TODAY

Low levels of vitamin D may raise a person's risk of premature death, a study by Johns Hopkins researchers shows.

The research follows other recent studies showing **low levels of vitamin D are linked to certain cancers, diabetes, and bone and immune system problems**, but this is the first research to connect **vitamin D deficiency to a higher risk of death**, says study author Erin Michos, assistant professor of cardiology at **Johns Hopkins School of Medicine** in Baltimore.

The study appears in this week's ***Archives of Internal Medicine***.

Michos and her colleagues analyzed data from a large government observational survey of more than 13,000 people who represented a realistic, diverse swath of U.S. adults ages 20 and up. Participants' vitamin D levels were collected by blood test from 1988 through 1994.

By 2000, Michos says, 1,807 deaths had occurred, 777 from cardiovascular disease. The researchers divided the total population into four groups based on vitamin D levels. One group included people with the lowest vitamin D levels, 17.8 ng/mL (nanograms/milliliter) or less.

A normal vitamin D test result for both children and adults is 30 ng/mL or higher. Under 20 ng/mL is considered deficient, and results between 20 and 30 ng/mL are labeled insufficient, says Catherine Gordon, director of the bone health program at Children's Hospital Boston.

In the study, people who had low vitamin D levels — 17.8 ng/mL or lower — were 26% more likely to be dead at the end of the study than those with higher vitamin D levels, Michos says.

"We took into account 30 different variables — including age, weight, diabetes, cholesterol, high blood pressure, whether they

exercise, smoking — and we found that low vitamin D levels, independent of all these other risk factors for heart disease, predicted an increased risk of dying from any other cause. So we found a new risk factor for death," Michos says.

Michos says the results lead her to suspect that low vitamin D is related to heart disease deaths, but that theory has to be tested in further studies.

"We also need to prove if we give additional vitamin D, will it prevent a heart attack?" Michos says.

Says Jeffrey Blumberg, professor of nutrition science and policy at Tufts University in Boston: "This is an interesting report that confirms and extends previous work."

But the study has limitations, he says. For instance, it cannot answer why there was an increase in death linked to low D levels: "This issue certainly warrants further study."