

# Low vitamin D status may lead to elevated colorectal cancer risk in black women

October 25 2021

---



Credit: Unsplash/CC0 Public Domain

A new study from the Slone Epidemiology Center and the Boston

University School of Medicine suggests that Black women with a low vitamin D status have an increased risk of developing colorectal cancer, in line with the findings of previous epidemiologic studies conducted in White populations.

"Our findings, taken together with established evidence that vitamin D levels are generally lower in the Black population than other groups, suggest that low vitamin D may contribute to disproportionately high [colorectal cancer](#) incidence among Blacks," said corresponding author Julie Palmer, ScD, director of BU's Slone Epidemiology Center and the Karin Grunebaum Professor in Cancer Research at Boston University School of Medicine.

Vitamin D plays a role in many [cellular processes](#) in the [human body](#) and has been shown to have anti-cancer properties. It is possible that having sufficient levels of vitamin D circulating through the body may reduce the risk of developing colorectal cancer, which is a disease that affects over 150,000 individuals each year. The Black population tends to have lower levels of vitamin D because the major source of vitamin D, aside from taking vitamin D supplements, is from sunlight. They also are disproportionately burdened by colorectal cancer, with the highest rates of both incidence and mortality.

In an effort to determine vitamin D levels prior to the [cancer diagnosis](#), the researchers developed a set of the best predictors for correctly classifying a study participant as to her rank on a scale of possible vitamin D levels from very low to very high. The prediction model derived by this process weighted variables by how strongly they were associated with actual blood levels. The researchers then applied that model to all participants in the Black Women's Health Study to get a predicted vitamin D score that would likely correspond well to their relative level.

They found that, among Black women, those whose predicted vitamin D levels were low (in the bottom 25 percent of all participants) were estimated to have a 40 percent higher risk of developing colorectal cancer compared with women whose predicted levels were in the top 25 percent.

The researchers believe it is important to determine if there is a relationship between vitamin D status and colorectal cancer risk in a Black population, so that individuals who are at an [increased risk](#) of colorectal cancer can implement strategies to increase the levels of [vitamin D](#) in their bodies.

These findings appear online in the journal *Cancer Epidemiology, Biomarkers & Prevention*.

**More information:** Lauren E. Barber et al, Predicted Vitamin D Status and Colorectal Cancer Incidence in the Black Women's Health Study, *Cancer Epidemiology Biomarkers & Prevention* (2021). [DOI: 10.1158/1055-9965.EPI-21-0675](#)

Provided by Boston University School of Medicine

Citation: Low vitamin D status may lead to elevated colorectal cancer risk in black women (2021, October 25) retrieved 11 May 2024 from <https://medicalxpress.com/news/2021-10-vitamin-d-status-elevated-colorectal.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--