



VITAMIN D

VITAMIN D LINKED TO LOWER RISK OF COLORECTAL CANCER

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A higher circulation of vitamin D in the blood stream may significantly lower the risk of colorectal cancer, according to recent research published online in the *Journal of the National Cancer Institute*.

Commonly known for its role in maintaining bone health, researchers hypothesized that vitamin D may lower colorectal cancer risk through several pathways related to cell growth and regulation. However, past studies have reported inconsistent results for whether higher concentrations of circulating 25-hydroxyvitamin D are truly linked to a lower risk of colorectal cancer.

“To address inconsistencies in prior studies on vitamin D and to investigate associations in population subgroups, we analyzed participant-level data, collected before colorectal cancer diagnosis, from 17 prospective cohorts and used standardized criteria across the studies,” Stephanie Smith-Warner, PhD, an epidemiologist at the Harvard TH Chan School of Public Health and co-senior author said in a press release.

The research team analyzed over 5700 colorectal cancer cases and 7100 controls from the United States, Europe, and Asia. They used a single, assay and laboratory for new vitamin D measurements and calibration of existing vitamin D measurements.

“In the past, substantial differences between assays made it difficult to integrate vitamin D data from different studies,” Regina G Ziegler, PhD, an epidemiologist at the National Cancer Institute and co-senior author explained in the press release. “This calibration approach enabled us to systematically explore risk over the broad range of vitamin D levels seen internationally.”

According to the study findings, patients with deficient concentrations of vitamin D had a 31% higher risk of colorectal cancer during follow-up, which averaged 5.5 years (range: 1 - 25 years) compared with patients who had vitamin D concentrations considered sufficient for bone health. Further findings demonstrated a 22% lower risk for patients who had concentrations above bone health sufficiency—however, cancer risk did not continue to decline in the highest concentrations.

Among the subgroups that were examined, the researchers reported protective associations, but noted that the association was stronger in women than in men at concentrations above bone health sufficiency. According to the researchers, lifetime risk of colorectal cancer is 4.2% (1 in 24) in women and 4.5% (1 in 22) in men.

“Currently, health agencies do not recommend vitamin D for the prevention of colorectal cancer,” Marji L McCullough, ScD, an epidemiologist at the American Cancer Society and co-first author of the study explained. “This study adds new information that agencies can use when reviewing evidence for vitamin D guidance and suggests that the concentrations recommended for bone health may be lower than would be optimal for colorectal cancer prevention.”

—*Julie Gould*