

Calcium intake and colorectal cancer

October 19 2017, by Leigh Macmillan

Calcium plays key roles in cellular signaling, proliferation and death. Previous studies exploring the relationship between dietary calcium intake and colorectal cancer have had contradictory results, perhaps due to no consideration of variation in calcium reabsorption by the kidney.

Qi Dai, M.D., Ph.D., and colleagues examined how variation in genes involved in calcium reabsorption related to the risk of colorectal adenoma (pre-cancer lesion) in patients enrolled in the Tennessee Colorectal Polyp Study. They found that variants in a sodium-calcium exchanger protein interacted with [calcium intake](#) in colorectal adenoma risk.

They further found that carriers of variants in two of three calcium reabsorption genes with calcium intake above 1000 mg/day were up to 57 percent less likely to have adenomas compared to those with lower calcium intake.

The findings, reported in the October issue of *Molecular Carcinogenesis*, suggest a protective effect of calcium intake in individuals with certain gene variants and may provide a new approach for personalized prevention of colorectal adenoma and cancer.

More information: Jing Zhao et al. Interactions between calcium intake and polymorphisms in genes essential for calcium reabsorption and risk of colorectal neoplasia in a two-phase study, *Molecular Carcinogenesis* (2017). [DOI: 10.1002/mc.22678](https://doi.org/10.1002/mc.22678)

Provided by Vanderbilt University

Citation: Calcium intake and colorectal cancer (2017, October 19) retrieved 18 April 2024 from <https://medicalxpress.com/news/2017-10-calcium-intake-colorectal-cancer.html>

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