

Gut microbes may be a risk factor for colorectal cancer

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In one of the largest epidemiological studies of human gut bacteria and colorectal cancer ever conducted, a team of researchers at NYU Langone Medical Center has found a clear association between gut bacteria and colorectal cancer. The study, published today in the *Journal of the National Cancer Institute*, discovered that colorectal cancer patients had fewer beneficial bacteria and more harmful bacteria than people without the disease.

"Our findings are important because identification of these microbes may open the door for [colorectal cancer](#) prevention and treatment," says Jiyoung Ahn, PhD, assistant professor of population health, and a member of NYU Cancer Institute, who led the study.

The human gut hosts thousands of bacteria, which play an important role in regulating food digestion and inflammation. Mounting evidence links gut microbes to colorectal cancer, a condition diagnosed in 143,000 people in the U.S. each year. The disease kills an estimated 51,000 Americans, second only to lung cancer. However, it is not well understood why colorectal cancer develops.

The researchers compared the DNA composition of intestinal microbes in the stool samples of 141 colorectal cancer patients and healthy volunteers. They found that samples from colorectal-cancer patients had larger populations of *Fusobacteria* than healthy volunteers. *Fusobacteria* commonly found in the mouth and gastrointestinal track, are associated with [gut inflammation](#).

Moreover, case samples were more likely than the controls to be depleted of Clostridia, a class of beneficial gut bacteria that help digest dietary fiber and carbohydrates.

"Our next step is to study how diet and lifestyle factors modulate these [gut bacteria](#) associated with colorectal cancer. This may lead to ways to prevent this disease" says Dr. Ahn.

More information: Paper: DOI:10.1093/jnci/djt300

Provided by New York University School of Medicine

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