

Exercise Linked to Healthier Gut Microbiome

Physical activity was associated with greater gut bacteria diversity and reduced inflammation in people with colon cancer.

January 24, 2023 By [Sukanya Charuchandra](#)

Regular moderate exercise is associated with greater diversity of the gut microbiome and reduced inflammation in people with [colorectal cancer](#), including those with obesity, who typically have a less healthy microbiome, according to a study published in the [American Journal of Cancer Research](#).

“A patient who is active has a more diverse microbiome and lower abundances of colorectal cancer-promoting bacteria and higher amounts of bacteria that protect against colorectal cancer,” Caroline Himbert, PhD, of the Huntsman Cancer Center at the University of Utah, said in a [press release](#). “Our study suggests that nobody needs to be an athlete to get the benefits. It can be easy activities. Just staying active is very beneficial.”

Obesity is a known risk factor for colorectal cancer, and studies have shown that [physical activity](#) appears to both reduce the risk of developing this cancer and extend survival.

A growing body of evidence shows that the gut microbiome—the ecosystem of bacteria and other microorganisms in the intestines—[plays a role in cancer and its treatment](#). Himbert and colleagues studied the potential links between exercise, body mass index (BMI) and gut microbiome diversity in people with colorectal cancer.

The included 179 people with different stages of colon cancer. The researchers collected and analyzed stool samples collected before the participants underwent surgery. Using a questionnaire, they assessed the patients’ physical activity levels during the year before cancer diagnosis. On the basis of these data, participants were considered active or inactive.

People classified as inactive had lower gut microbial diversity than those who were active. Similarly, people with obesity had less microbial diversity compared with those classified as having a normal weight. When the researchers looked at a combination of physical activity and BMI, those participants with obesity or overweight and low levels of physical activity had less microbiome diversity than those with normal weight and higher physical activity levels. What’s more, certain types of bacteria were “differentially abundant” across physical activity and BMI groups, the study

authors reported.

“Our results indicate that physical activity may offset gut microbiome dysbiosis due to obesity,” the researchers wrote. “Alterations in gut microbiota may contribute mechanistically to the energy balance-colorectal cancer link and impact clinical outcomes.”

As a potential explanation for the link, the authors noted that a healthy gut microbiome can lower disease-driving inflammation.

“Inflammation is a key process that drives colorectal cancer. We know a high BMI causes inflammation around the body. Obesity is on the verge of becoming the number one cause of cancer in the United States, surpassing smoking,” said senior study author Cornelia Ulrich, PhD. “It’s important we understand that moderate exercise can help colorectal cancer patients reduce inflammation, improve their gut health and live longer—even if they are overweight or obese.”

Click here to read the study in the [American Journal of Cancer Research](#).

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