

# Exercise associated with benefit to patients with advanced colorectal cancer

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Dr. Meyerhardt is the clinical director of the Gastrointestinal Cancer Center at Dana-Farber Cancer Institute and the senior author of the study. Credit: Dana-Farber Cancer Institute

Patients with metastatic colorectal cancer who engaged in moderate exercise while undergoing chemotherapy tended to have delayed progression of their disease and fewer severe side effects from

treatment, according to the results of a new study.

Even low-intensity [exercise](#), such as walking four or more hours a week, was associated with a nearly 20 percent reduction in [cancer](#) progression or death over the course of the six-year study, said researchers from Dana-Farber Cancer Institute and Brigham and Women's Hospital, reporting in the *Journal of Clinical Oncology*. The analysis hinted at a possible lengthening of survival in patients who reported greater physical activity, but the data were not statistically significant.

"What we found was that people who engaged in some type of physical activity had a statistically significant improvement in [progression-free survival](#) (PFS)," said Jeffrey A. Meyerhardt, MD, MPH, of Dana-Farber, senior author of the study. "While there may also be an impact on [overall survival](#), it was not statistically significant—and should be studied further."

"Physically active patients in our study also appeared to tolerate chemotherapy better," said Brendan Guercio, MD, first author of the study which was conducted while he was working as a hospitalist at Brigham and Women's. "Total physical activity equivalent to 30 or more minutes of moderate daily activity was associated with a 27 percent reduction in severe treatment-related toxicities."

Previous studies have found that regular exercise can reduce the risk of disease recurrence and death from colon cancer that has not metastasized to other parts of the body. Researchers say this is the first study to examine associations of physical activity with survival in advanced, [metastatic colorectal cancer](#). Patients participated in a phase 3 study of chemotherapy for advanced colorectal cancer conducted by the Alliance for Clinical Trials in Oncology and sponsored by the National Cancer Institute. Within a month after beginning treatment, patients were invited to complete a questionnaire about their average physical activity

over the previous two months. The final number of participants included 1,218 patients. While the data are significant, further research with a randomized prospective trial will help validate the results, the researchers said.

Based on the patients' descriptions, researchers quantified their physical activity in terms of metabolic equivalent task (MET)-hours per week—a standard measure used in research studies of exercise. Vigorous activity was defined as any activity requiring six or more METs, such as running, biking, tennis, skiing, or lap swimming. Non-vigorous activities included walking, climbing stairs, or yoga.

Analysis of the data revealed a statistically [significant difference](#) in PFS—the length of time after the patient completed the questionnaire before the cancer progressed or the person died. The difference in PFS was almost 20 percent in favor of those who exercised more.

Meyerhardt added that the findings "help justify encouraging patients to exercise and referring patients to physical therapists or programs like the YMCA LIVESTRONG program that does small group training for patients with cancer."

The analysis also found that patients who engaged in 18 or more MET-hours per week of activity had a 15 percent improvement in overall survival (death from any cause) than patients who engaged in less than three MET-hours per week of activity. However, that difference was not statistically significant, meaning it could have resulted from chance.

**More information:** Brendan J. Guercio et al, Associations of Physical Activity With Survival and Progression in Metastatic Colorectal Cancer: Results From Cancer and Leukemia Group B (Alliance)/SWOG 80405, *Journal of Clinical Oncology* (2019). [DOI: 10.1200/JCO.19.01019](https://doi.org/10.1200/JCO.19.01019)

Provided by Dana-Farber Cancer Institute

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