Studying the Connection Between Exercise and Cancer Risk Reduction

Leslie Harris O'Hanlon

When Leslie Bernstein, Ph.D., submitted a paper that found when younger women exercised for 4 hours per week they lowered their breast cancer risk by 50%, the editor of the journal refused to publish it because he didn’t believe the findings. So Bernstein promptly resubmitted the findings to another journal, and the study was published in 1994. Since then, dozens of studies have associated exercise with reduced risk of breast cancer and many other cancers.

Christine Friedenreich, Ph.D.

“There are no guarantees because all cancers have multiple causes,” said Bernstein, professor and director of cancer etiology at the City of Hope Cancer Center in Duarte, Calif. “But I can say, looking at large groups of people, those who exercise tend to have a lower risk of developing some cancers than those who don’t.”

Nearly 20 years after Bernstein published her paper, researchers are trying to better understand why exercise curbs cancer risk. The association is strongest in breast and colon cancer, and evidence is mounting that exercise is associated with lower risk of endometrial, ovarian, prostate, and pancreatic cancer. Some studies suggest that exercise helps by lowering obesity, inflammation, and hormone levels and improving insulin resistance and immune system function—factors involved in cancer formation. Whatever the reasons, studying the effects of exercise on cancer risk is important because it may be one of the few things people can do to reduce their risk of cancer.

“There are so many risk factors that are not modifiable, such as genetics or exposure to external agents that you can’t control,” said Christine Friedenreich, Ph.D., a cancer epidemiologist with the Department of Population Health Research of Alberta (Canada) Health Services and an adjunct professor at the University of Calgary. “People can control how much they exercise, and that is what makes this such …

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