Cancer Survivors and Physical Activity: What's New?

More movement and fewer periods of uninterrupted sitting are emerging as valuable tools for people after a diagnosis of cancer.

June 25, 2021 By Karen Collins and American Institute for Cancer Research

---

Research is now providing stronger evidence on physical activity and its multiple benefits to cancer survivors. But practical advice for individuals during and after cancer treatment is far from one-size-fits-all. And even the simple question of how much time is spent being sedentary may be important.

Exercise, Sitting Time, and Quality of Life After Colorectal Cancer

A new study that followed 396 people with stage I-III colorectal cancer up to two years after treatment offers valuable insights. This study, funded in part by the World Cancer Research Fund (AICR's international affiliate), evaluated how sedentary time and physical activity were linked with fatigue and other aspects of quality of life. Health-related quality of life is represented in studies like this with scores summarizing how people rated their ability to perform everyday activities and their sense of physical, psychological and social well-being.

- In following individuals over time, and in comparing different individuals, people who increased time being sedentary between six weeks and two years after treatment reported decreased physical function and increased fatigue.
- Even after adjusting for sedentary behavior, people with more time in moderate to vigorous activity reported better health-related quality of life and less fatigue.
- Analysis of data suggests a synergy of less sitting and more activity. The combination was especially associated with better quality of life, including ability to function as desired and less fatigue.

Although sitting less and moving more seem to amplify the benefits of each other, results of this study are also noteworthy for colorectal cancer survivors who aren't willing or able to participate in moderate to vigorous activity.

- Moderate physical activity is equivalent to a brisk walking pace. For some cancer survivors, activity at that level or beyond may seem out of reach due to age or other health problems… or simply a hard habit to adopt after a lifetime with little exercise.
- Colorectal cancer survivors in this study with little or no moderate to vigorous physical activity who kept sedentary time low reported significantly better overall quality of life and less fatigue than those with extensive sitting time. The researchers suggest that for those survivors, replacing sedentary behavior with light physical activity, such as home activities and slower-paced walking, could be especially helpful.

Big Picture of Activity and Quality of Life After Cancer

Research like the study above that followed colorectal cancer survivors over time provides stronger evidence than studies that are simply a snapshot in time. But even studies that observe people over time can't prove that more exercise or less sedentary time caused the better quality of life among those who were more active.

That's why clinical trials are so important. Randomized controlled trials compare people who participate in a program to increase physical activity with other people similar in important characteristics who don't participate in such a program. Many clinical trials bringing cancer survivors into gym-type settings for supervised exercise programs have shown positive effects. In recent years, clinical trials have increasingly used home-based exercise programs, with a focus on behavior change to build physical activity as a long-term lifestyle habit. For example:

- Colorectal cancer and prostate cancer survivors in the OncoActive trial received computer-tailored programs based on their physical activity levels at different points. By three months, increased physical activity led to less fatigue and better self-rated physical function. Even two months after the end of the program, physical activity continued to increase, and fatigue and physical function continued to improve more than in the control group that didn't participate in the program.
- In the COURAGE trial, stage I-III colon cancer survivors were assigned to a home-based program with "low dose" goals of 150 minutes of aerobic exercise (like brisk walking) per week, a program with "high dose" goals of 300 minutes per week, or a control group put on a wait list for the program told to maintain their current activity level. At six months, both groups that increased aerobic exercise reported improved physical function and sleep quality. Those in the

higher-dose exercise group improved most, and also reported reduced fatigue.

Benefits in Other Cancers, Too
There's more research on physical activity in people diagnosed with colorectal, breast, and prostate cancers, since these cancers are among the most common. But this is an active area of research, and scientists are learning more all the time.

Health-related quality of life, including fatigue, anxiety, and physical function improve with combined moderate-intensity aerobic and resistance exercise two to three times per week for at least 12 weeks both during and after treatment. That was the conclusion of a roundtable of experts on physical activity and cancer convened by the American College of Sports Medicine (ACSM), based on clinical trials involving different kinds of cancer.

Broader Health Benefits
Including physical activity as a regular part of your lifestyle reduces risk of at least three cancers, according to the AICR Continuous Update Project: colon, breast, and endometrial cancers. What about benefits after a diagnosis of cancer?

Individualization is Vital
Although there's more time in physical activity and less time sitting can bring improved health and better quality of life after a cancer diagnosis, it's vital that individual differences are considered in setting goals and developing plans.

- Heart health and the presence of diabetes or other medical conditions can influence the types and intensity of exercise that are safe.
- Cancer-related changes in bone fragility, peripheral nerve damage and effects on ability to walk steadily, and muscle aches triggered by some treatments don't rule out physical activity. But they can be important in types of exercise that are safe and comfortable.
- Breast cancer survivors treated with surgery or radiation affecting lymph nodes should have supervision by a fitness professional certified to work with cancer survivors when doing resistance (strength) training. According to the ACSM expert roundtable, risk of lymphedema is reduced when resistance exercise follows the principle of "start low, progress slow".
- Personal environment, family support and access to facilities for activity are key factors in planning.

Perspective and Resources
With the many potential benefits to health and quality of life by moving more and sitting less, it's challenging to find the right balance of not discouraging people from exercise after a diagnosis of

cancer, but also wanting to promote their safety. The ACSM roundtable experts and the National Comprehensive Cancer Network (NCCN) Survivorship Guidelines recommend:

- Cancer survivors who don't have any other medical conditions are safe following general exercise recommendations, without needing to consult their healthcare provider before gradually increasing physical activity.
- Cancer survivors with peripheral neuropathy, lymphedema, poor bone health, arthritis or other muscle/bone issues should get evaluation and guidance from their healthcare provider before beginning an exercise program.
- People with heart or lung disease; those who've had lung or abdominal surgery or an ostomy; and those with extreme fatigue, weakness, poor balance, bone metastases, severe problems with adequate nutrition, or other significant health concerns should definitely get medical evaluation and clearance for exercise from their doctor and referral to trained exercise rehabilitation health professionals.

More movement and fewer periods of uninterrupted sitting are emerging as valuable tools for people after a diagnosis of cancer. For tips on eating well and staying active that may help cope with treatments, combat side effects, and improve quality of life – before, during and after cancer treatment – check the AICR website here.

This article was originally published on June 15, 2021, by the American Institute for Cancer Research. It is republished with permission.

© 2026 Smart + Strong All Rights Reserved.
http://beta.docker.cancerhealth.com/article/cancer-survivors-physical-activity-new