

Exercise and Rehabilitation as a Part of Cancer Treatment

By Sharon Leslie, PT, DPT

Exercise and rehabilitation play an integral role in helping patients return to work and regular activities after cancer treatment. In May 2018, the Clinical Oncology Society of Australia (COSA) issued formal guidelines recommending exercise as an integral part of cancer treatment. They join organizations such as the Academy of Oncology Physical Therapy, the Academy College of Sports Medicine (ACSM), the National Comprehensive Cancer Network (NCCN), and the American Society of Clinical Oncology (ASCO) in further recognizing the need and benefit for exercise and rehabilitation to be a comprehensive and integral part of cancer treatment.

COSA calls for:

- Exercise to be embedded as part of standard practice in cancer care and to be viewed as an adjunct therapy that helps counteract the adverse effects of cancer and its treatment.
- All members of the multidisciplinary cancer team to promote physical activity and recommend that people with cancer adhere to exercise guidelines.
- Best-practice cancer care to include referral to an accredited exercise physiologist and/or physiotherapist with experience in cancer care.¹

The lead author of the statement and Chair of the COSA Exercise and Cancer Care Group said the evidence to support exercise as an integral part of cancer care was “overwhelming.” She went on to say,

“If we could turn the benefits of exercise into a pill, it would be demanded by patients, prescribed by every cancer specialist and subsidized by government. It would be seen as a major breakthrough in cancer treatment.”²

Evidence on Benefits of Exercise During and After Cancer Treatment

There is strong evidence that supervised exercise is a safe and effective intervention to help counteract many of the adverse physiological side effects of cancer and its treatment. To date, we know that exercise shows the greatest benefits in quality of life, physical function, reducing cancer-related fatigue, and maintaining muscle strength and endurance during treatment.^{3,4} There is emerging research to show that exercise can also help with chemotherapy-induced peripheral neuropathy and can decrease the risk of recurrence.^{5,6}

Patients often wonder if exercise makes a difference. The answer is yes! If you are looking for motivation to exercise following cancer treatment, Michelle Holmes and her colleagues studied almost 3,000 women with early-stage breast cancer. They found that survival rates improved by 26 to 40 percent in those who walked 3-5 hours per week at 2-2.9 mph as compared to less active breast cancer survivors. The authors found that the benefits of exercise were independent of the participants’ prior activity level.⁵ Participants ranged from athletes to completely sedentary individuals before treatment, and they all were able to impact their survival rates simply by walking several times per week.

Recommendations

COSA’s recommendations for exercise closely mirror the ACSM Exercise Guidelines for Cancer Patients and Survivors and recommendations for the general population.⁷ They recommend that all cancer patients should avoid inactivity and return to physical activity as soon as it is safe to do so with the *goal* of:

- At least 150 minutes of moderate-intensity or 75 minutes of vigorous-intensity aerobic exercise (e.g., walking, jogging, cycling, swimming) each week.
- Two to three resistance exercise (e.g. lifting weights) sessions each week involving moderate-intensity exercises targeting the major muscle groups.¹

It doesn’t come as a surprise that the authors of this statement found that only 20 to 30 percent of people surveyed met the aerobic exercise guidelines and only 10 to 20 percent met the guidelines for strength training.¹

It would be naive to think that there should be a one-size-fits-all approach for patients. As with any other therapy or intervention, exercise should be personalized for a person’s physical and psychological needs. COSA agrees that exercise recommendations should be tailored to the individual’s abilities depending on health status, treatment-related adverse effects, age, and level of impairment. These guidelines can be used as an “ideal” in designing and implementing exercise programs for patients and a goal for patients to use when beginning to return to exercise.

¹ Clinical Oncology Society of Australia. COSA Position Statement on Exercise in Cancer Care. April 2018.

² <https://www.cosa.org.au/media/332487/media-release-exercise-prescription-for-all-cancer-patients-final.pdf>

³ Cancer Treat Rev. 2017 Jan;52:91-104.

⁴ The effect of exercise on cancer-related fatigue in cancer survivors: a systematic review and meta-analysis. *Neuropsychiatr Dis Treat.* 2018;14:479-494.

⁵ JAMA. 2005 May 25;293(20):2479-86.

⁶ Critical Reviews in Oncology/Hematology Volume 121, January 2018, Pages 90-100.

⁷ J Support Oncol. 2012 Sep-Oct; 10(5): 171-177.

Cancer Rehabilitation and Its Role in Cancer Treatment

It is often confusing for patients to determine how to regain function and strength during and after treatment, and some are reluctant to ask their medical team for advice. Even when medical professionals tell patients to “get back to exercise” or “get back to your normal life,” it often feels impossible with side effects such as fatigue, pain, swelling, decreased endurance, and limitations of movement that might be present. Several studies have found that patients have a series of unmet needs when it comes to exercise and rehabilitation. Thorsen et al. evaluated survivors across different cancer diagnoses and found that 63% reported the need for at least one rehabilitation service. They also reported that patients were often not referred for services, with 40 percent reporting unmet rehabilitation needs.⁸ Cheville et al. studied over 150 women with metastatic breast cancer and found that 92 percent of them had at least one physical impairment that warranted rehabilitation services. Despite the need, fewer than 30 percent received care.⁹ In short, we are not meeting the needs of patients for exercise and rehabilitation during and after treatment. People need advice and support from professionals to be able to move forward in a safe and effective manner. This is where cancer rehabilitation comes in.

It is important to distinguish between exercise and cancer rehabilitation. Cancer rehab will likely include therapeutic exercise as part of a holistic treatment plan, but is far more involved. Cancer rehabilitation addresses physical, psychological, and cognitive impairments in an effort to maintain or restore function, minimize the side effects of treatment, maximize independence, and improve quality of life. Cancer rehab can address a litany of short- and long-term side effects from cancer and its treatment including, but not limited to: weakness, pain, balance

issues, neuropathy, swelling, fatigue, lymphedema, sexual dysfunction, range of motion and flexibility issues, decreased endurance, and difficulty performing activities of daily living.

Evidence supports using a proactive approach to prevent and mitigate many of the above concerns.¹⁰ We know that cancer treatment causes late and long-term side effects for patients and we know that the side effects can result in lost productivity at work and decreased ability to perform activities of daily living at home.^{11 12} Ideally, patients can be seen early in the process in order to enable early detection of and intervention for physical impairments known to be associated with cancer treatment.⁷ Incorporating cancer rehab into your cancer treatment at an early stage can be vital to return to a pain-free and active lifestyle.

What does this mean for you as a survivor? Be an advocate for your health and for your body. By recognizing early symptoms of impairments and bringing them to the attention of your medical team, they can more readily intervene and refer you to someone who can help.

Finding Ways to Incorporate Exercise During Cancer

If you are still in treatment and cleared for exercise, be patient with yourself. Exercise science in oncology supports the idea that doing something is far better than doing nothing. Start with short bouts of exercise and pay attention to how exercise impacts your body. I recommend that patients have several different plans, depending on stage of treatment. Factors such as blood counts, fatigue, pain, and neuropathy can all determine how much you feel you can do on any given day—you might limit yourself to short walks around the house on tougher days and save more ambitious plans for days when your

blood counts are stabilized and your fatigue is slightly better.

If you are ready to return to exercise but need support, there are lots of options out in the community. Among them, Bay Area Cancer Connections offers several classes that are free of charge including Pilates Matwork, Healthy Steps, and Yoga for Healing & Recovery. Living Strong Living Well is a free, 12-week, small-group strength and fitness training program designed for adult cancer survivors that has locations at YMCAs throughout the Bay Area. Pink Ribbon at the PJCC in Foster City provides personal training specifically designed to enhance recovery for breast cancer patients. There are many more options out there to help support your return to exercise.

If you love to dance, hike, do yoga, or garden, then find a way to make these activities a priority. It is more important to find something that you will stick with than to try to adhere to something you really don't like to do.

Conclusion

It is clear that exercise is one of the keys to returning to a healthy, pain-free, and active lifestyle. Be proactive and seek out professionals in your community who are trained to help. When you are ready to transition to community-based programs or to independent exercise, find a friend or a partner to do it with you. You are much more likely to take a walk or go to the gym if you know someone is there waiting for you. Even in the best of times, it is easy to let exercise fall off the list of priorities. Remember that exercise is one of the keys to getting back control of your health. You can do it and you do not have to do it alone.

Healthy Steps

Wednesdays, 8:45–9:45 a.m.

Pilates Matwork

Fridays, 12:00–12:45 p.m.

Yoga for Healing & Recovery

Mondays, 8:45–9:45 a.m.

⁸ Cancer patients' needs for rehabilitation services. *Acta Oncol.* 2011;50:212-222.

⁹ Prevalence and treatment patterns of physical impairments in patients with metastatic breast cancer. *J Clin Oncol.* 2008;26:2621-2629.

¹⁰ A Prospective Surveillance Model for Rehabilitation for Women With Breast Cancer 2012;118:(8 Suppl)2191-200.

¹¹ Employment and work-related issues in cancer survivors. *Crit Rev Oncol Hematol.* 2011;77:109-130.

¹² Work Disability Associated with Cancer Survivorship and Other Chronic Conditions. *Psycho-oncology.* 2008;17(1):91-97.

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