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Physical Activity and the Person with Cancer

Research shows that for most people exercise is safe and helpful before, during, and after cancer treatment. It can help improve your quality of life as well as the energy you have to do the things you like. Physical activity may also help you cope with side effects of treatment and possibly decrease your risk of new cancers in the future.

Too much time spent resting or sitting can cause loss of body function, muscle weakness, and reduced range of motion. Many cancer care teams are urging their patients to be as physically active as possible before, during and after cancer treatment.

How regular exercise may help you before, during, and after cancer treatment

- Help your body and brain work better
- Reduce feeling tired (fatigue)
- Help lessen depression and anxiety
- Might help you sleep better
- Keep or improve your physical ability to get things done
- Improve your muscle strength, bone health and range of motion
- Strengthen your immune system
- Increase your appetite
- Help you get to and maintain a healthy weight
- May help with [breast cancer-related lymphedema](#)¹ (and does not increase risk)
- Decrease the chance that some types of cancer will come back
- Improve your quality of life
- Reduce treatment side effects

General physical activity recommendations for cancer survivors

ACS support the physical activity recommendations from the American College of Sports Medicine:

- Avoid inactivity and return to normal daily activities as soon as possible after diagnosis and treatment.
- Take part in regular physical activity.
- Start slowly and build up the amount of physical activity over time.
- Build up to at least 150 minutes of moderate or 75 minutes of vigorous intensity activity each week.
- Exercise several times a week for at least 10 minutes at a time.
- Include resistance training exercise at least 2 days per week.
- Do stretching exercises at least 2 days each week.

These are general guidelines. You can find more information, including how much to exercise for specific cancer-related side effects, on the American College of Sports Medicine [Moving through Cancer](#)² website.

Goals of an exercise program

Before treatment

Becoming more active or staying at your current level of physical activity before treatment may help you handle and recover from your treatment more easily. Research shows that being as active as possible may reduce complications from [surgery](#)³ and may help you handle treatment better. Also, physical activity may help you deal with [distress](#)⁴ and [anxiety](#)⁵, have more energy, and sleep better as you begin treatment.

Many people find that as they start treatment, the ability to be active may be harder. So, starting out in better physical shape means you can tolerate more activity during and after treatment.

During treatment

Certain things affect your ability to exercise during treatment, such as:

- The type and stage of cancer you have
- Your cancer treatment
- Your stamina, strength, and fitness level before and during treatment

If you exercised before treatment, you might need to exercise less or at a lower intensity during treatment. The goal is to stay as active as you can. People who were very sedentary (inactive) before cancer treatment may need to start with short, low-intensity activity, such as short slow walks.

Recovering from treatment

Most people are able to slowly increase exercise time and intensity as their side effects lessen. What may be a low- or moderate-intensity activity for a healthy person may seem like a high-intensity activity for some cancer survivors. Take your time and be patient with yourself as you gradually increase your activity. Remember – the most important thing is to move as much as you can.

When you are living disease-free or with stable disease

During this time, physical activity is important to your overall health and quality of life. Research shows that getting to and staying at a healthy weight, eating right, and being physically active may help reduce the risk of other serious chronic diseases, as well as the risk of a second cancer.

A healthy lifestyle might also decrease the risk of some cancers coming back. A growing number of studies have looked at the impact of physical activity on [cancer recurrence](#)⁶ and long-term survival. (Cancer recurrence is cancer that comes back after treatment.) Exercise has been shown to improve cardiovascular fitness, muscle strength, body composition, fatigue, anxiety, depression, self-esteem, happiness, and several quality of life factors in cancer survivors. Studies of people with [breast](#)⁷, [colorectal](#)⁸, and [prostate](#)⁹ cancers suggest that physically active cancer survivors have a lower risk of cancer recurrence and improved survival compared with those who are inactive.

Living with advanced cancer

Physical activity may also help people whose cancer has spread or has become advanced and cannot be cured. Exercise may improve physical function, decrease fatigue, and improve quality of life. Whether you can tolerate more physical activity will depend on your type and stage of cancer, side effects you might have, your current

physical ability, and any other health problems. Before starting new activities and being more active, check with your cancer care team about whether it is safe for you to do so.

Planning to be more active

Always check with your health care team before starting any exercise program, especially if you have any of the following:

- Heart or lung disease
- [Ostomy](#)¹⁰
- [Severe fatigue](#)¹¹
- [Unsteadiness on your feet or balance problems](#)¹²
- Weak bones or [bone metastases](#)¹³ (cancer that has spread to the bones)

Also ask whether any of the medicines you take might affect how physically active you can be.

Some people can safely begin or maintain their own exercise program, but many will have better results with the help of an exercise specialist, physical therapist, or exercise physiologist. Be sure to get your doctor's OK first and be sure that the person working with you knows about your cancer diagnosis and any limitations you have. Specially trained professionals can help you find the type of exercise that's right and safe for you. They can also help you figure out how often and how long you should exercise.

Whether you're just starting to exercise or continuing to do so, be sure to talk with your health care team about what you can and can't do. Keep your cancer team informed on how you're doing in regard to your activity level and exercise throughout and after your treatment.

When starting to get active or becoming more active, there are some important things to think about.

- Stay away from uneven surfaces that could make you fall
- If you plan to exercise outside, find someplace safe and well-lit
- If you are more at risk for infection, you may need to stay away from public gyms and crowds until your risk returns to normal.
- If you want to swim while getting radiation therapy, check with your radiation therapy team. If you don't have any skin irritation or sores, you should be able to swim. Be sure to rinse off after getting out of a pool to lower the chance of skin irritation.

- Take someone with you when you exercise or make sure someone knows where you are in case you have trouble. It can also help to carry a mobile phone.

Start slowly

- Even if you can only be active for a few minutes a day it will help you. Increase slowly how often and how long you exercise. Your muscles will tell you when you need to slow down and rest or can do more.
- Exercise as you are able. Don't push yourself while you are in treatment. Listen to your body and rest when you need to. If you feel very tired you can try doing 10 minutes of light exercises each day and build up.
- Do not exercise if you feel dizzy or are unsteady on your feet.
- Try short periods of exercise with frequent rest breaks. For example, walk briskly for a few minutes, slow down, and walk briskly again, until you have done 30 minutes of brisk activity. You can also divide your activity into three 10-minute sessions. You'll still get the benefit of the exercise.
- Do not exercise above a moderate level of exertion without talking with your doctor. Moderate exertion is about as much effort as a brisk walk.
- Avoid any activity that puts you at risk for falls or injury. If you notice swelling, pain, dizziness, or blurred vision, call your doctor right away.
- If you have numbness in your feet or problems with balance, you are at higher risk for falls. Ask about devices that might help you.

Try more than one kind of exercise

- Try to include physical activity that uses large muscle groups such as your thighs, abdomen (belly), chest, and back. Strength, stretching, and aerobic fitness are all important parts of a good exercise program.
- Try to include some exercises that will help you keep lean muscle mass and bone strength, like exercising with a resistance band or light weights.
- You might want to include exercises that will increase your flexibility and keep the range of motion in your joints.
- Always start with warm-up exercises for 2 to 3 minutes. Examples of warm-up exercises are shoulder shrugs, lifting arms overhead, toe tapping, marching, and knee lifts.
- End your exercise session with stretching or flexibility exercises. Hold a stretch for

about 15 to 30 seconds and relax. Examples of stretching are reaching overhead, deep breathing, and bending over to touch your toes so that you relax all the muscle groups.

Special issues

- Drink plenty of fluids unless you've been told not to.
- If you have a catheter or feeding tube, avoid pool, lake, or ocean water and other exposures that may cause [infections](#)¹⁴. Don't play contact sports. Also, do not do resistance training that uses muscles in the area of the catheter to keep it from dislodging. Talk with your cancer team about what's safe for you.
- Do not use heavy weights or do exercises that puts too much stress on your bones if you have osteoporosis, cancer that has spread to the bone, arthritis, nerve damage, poor vision, poor balance, or weakness. You may be more likely to hurt yourself or break a bone.

Keep exercise easy and fun

How much you should exercise is different for each person. We don't know the best level of exercise for someone with cancer. The goal is to have your exercise program help you keep up your muscle strength and keep you able to do the things you want and need to do. The more active you are, the better you'll be able to exercise and function. But even if planned exercise stops, it's good to keep being active by doing your normal activities as much as you can. The key to staying active is to keep your exercise program simple and fun. Exercise and [relaxation techniques](#)¹⁵ are great ways to relieve stress. Reducing stress is an important part of getting well and staying well.

Tips to help you stick to your exercise program

- Set short-term and long-term goals.
- Focus on having fun.
- Do something different to keep it fresh. Try yoga, dancing, or tai chi.
- Ask for support from others, or get friends, family, and co-workers to exercise with you.
- Use charts or a fitness tracker to record your exercise progress.
- Recognize and reward your achievements.

Starting an exercise program can be a big task, even for a healthy person. It may be even harder if you have a chronic illness, especially if you weren't used to exercising before your diagnosis. Start slowly and build up as you are able. If you were exercising regularly before you were diagnosed with cancer, you may need to reduce the intensity and length of your exercise sessions for a while. But you can build back up when you feel up to it.

Add physical activity to your daily routine

There are ways to add physical activity to the things you do every day. Remember, only do what you feel up to doing.

- Take a walk after dinner
- Ride your bike
- Mow the grass or rake the leaves instead of using a blower
- Scrub your bathroom
- Wash and wax your car
- Play active games with kids, like freeze tag, jump rope, and other games you played when you were a kid
- Walk a dog (one that can be controlled so that you don't trip or get pulled off balance)
- Weed your garden
- Bust a move (dance) in your living room
- Use an exercise bike or treadmill, or do arm curls, squats, lunges, and crunches while watching TV
- Walk to lunch
- Park your car in the farthest parking space at work and walk to the building
- Use the stairs instead of the elevator or escalator
- Get off the bus several stops early and walk the rest of the way
- Make appointments for yourself in your daily planner for 10-minute walking breaks
- Form a walking club of co-workers to help you stay motivated to walk during the workday
- Use a fitness tracker to try to increase your daily steps

Cancer survivors may need to exercise less intensely and increase their workout at a slower rate than people who haven't had cancer. Remember, the goal is to be as active as possible. Keep it safe, keep it fun, and make it work for you.

Hyperlinks

1. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/lymphedema/for-people-at-risk-of-lymphedema.html
2. www.exerciseismedicine.org/support_page.php/moving-through-cancer/
3. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/surgery/recovering-from-cancer-surgery.html
4. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/emotional-mood-changes/distress.html
5. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/emotional-mood-changes/anxiety.html
6. www.cancer.org/treatment/survivorship-during-and-after-treatment/understanding-recurrence.html
7. www.cancer.org/cancer/breast-cancer.html
8. www.cancer.org/cancer/colon-rectal-cancer.html
9. www.cancer.org/cancer/prostate-cancer.html
10. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/surgery/ostomies.html
11. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/fatigue.html
12. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/falls.html
13. www.cancer.org/treatment/understanding-your-diagnosis/advanced-cancer/what-is.html
14. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/low-blood-counts/infections.html
15. www.cancer.org/treatment/survivorship-during-and-after-treatment/coping/practice-mindfulness-and-relaxation.html

References

American Society of Clinical Oncology. Exercise During Cancer Treatment. Cancer.net. Last updated April 2019. Accessed from <https://www.cancer.net/survivorship/healthy-living/exercise-during-cancer-treatment> on April 13, 2021.

Berthold S & Fisher MI. Prehabilitation and rehabilitation. In Haylock PJ & Curtiss CP, eds. Cancer Survivorship: Interprofessional, Patient-Centered Approaches to the

Seasons of Survival. Pittsburgh, PA: Oncology Nursing Society; 2019: 115-135.

Campbell KL, Winters-Stone KM, Wiskemann J, May AM et al. Exercise guidelines for cancer survivors: Consensus statement from international multidisciplinary roundtable. *Med Sci Sports Exerc.* 2019; 51(11):2375-2390.

Christensen JF, Simonsen C, Hojman P. Exercise training in cancer control and treatment. *Compr Physiol.* 2018; 9(1):165-205.

Dittus KL, Gramling RE, Ades PA. Exercise interventions for individuals with advanced cancer: A systematic review. *Prev Med.* 2017 Nov;104:124-132.

Heywood R, McCarthy AL, Skinner TL. Safety and feasibility of exercise interventions in patients with advanced cancer: a systematic review. *Support Care Cancer.* 2017; 25(10):3031-3050.

Morishita S, Hamaue Y, Fukushima T, Tanaka T, et al. Effect of exercise on mortality and recurrence in patients with cancer: A systematic review and meta-analysis. *Integr Cancer Ther.* 2020. 19: 1534735420917462.

National Comprehensive Cancer Network. Survivorship v1.2021. nccn.org. Published February 24, 2021.
https://www.nccn.org/professionals/physician_gls/pdf/survivorship.pdf. Accessed April 7, 2021.

Santa Mina D, van Rooijen SJ, Minnella EM, Alibhai SMH et al. Multiphasic prehabilitation across the cancer continuum: A narrative review and conceptual framework. *Front Oncol.* 2021; 10:598425.

Sebio Garcia R, Yáñez Brage MI, Giménez Moolhuyzen E, Granger CL, Denehy L. Functional and postoperative outcomes after preoperative exercise training in patients with lung cancer: a systematic review and meta-analysis. *Interact Cardiovasc Thorac Surg.* 2016;23(3):486-97.

Silver JK. Cancer prehabilitation and its role in improving health outcomes and reducing health care costs. *Semin Oncol Nurs.* 2015; 31(1):13-30.

Stout NL, Baima J, Swisher AK, Winters-Stone KM, Welsh J. A systematic review of exercise systematic reviews in the cancer literature (2005-2017). *PM R.* 2017; 9(9S2):S347-S384.

Witlox L, Hiensch AE, Velthuis MJ, Steins Bisschop CN et al. Four-year effects of

exercise on fatigue and physical activity in patients with cancer. BMC Med. 2018; 16(1):86.

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