



Exercising with Cancer

Cancer is the second most common cause of death in the US. More than 500,000 people die of cancer each year. About 10 million Americans live with a history of cancer.

Cancer affects people of all ages but especially older adults. Seventy-six percent of all cancers are diagnosed in people aged 55 years and older. That means many also will have other chronic diseases such as high blood pressure, heart disease, and type 2 diabetes. This is common when people gain weight and/or become obese as a side effect of chemo, radiation, or hormone therapy. Exercise is critical for long-term health.

Strong evidence suggests that regular exercise can prevent colon, prostate, and breast cancer. Exercise also is safe during and after cancer treatment. Studies show that regular exercise during cancer therapy has many benefits. Those include less fatigue, less anxiety, and less severe side effects from therapy. Exercise also helps with body satisfaction, weight control, mood, and quality of life. For example, several studies show that even 10 minutes of exercise results in less fatigue for people with cancer. The same is true for people who exercise every other day. In other words, even after a cancer diagnosis, you should be active and exercise regularly. That is, as long as exercise does not worsen your symptoms or side effects.

Evidence does show that exercise is safe and effective for cancer survivors. But not enough research has been done to identify specific forms or amounts of exercise. We suggest following guidelines for otherwise healthy people, with modifications as needed.

During cancer treatment, the goal of exercise is to maintain strength, endurance, and function. After treatment, the goal is to return to your former levels of physical and psychological function. Aerobic exercise will help with fatigue. Muscle-strengthening or resistance exercise can help with muscle loss. That affects about 50 percent of people with cancer.

Getting Started

- Talk with your oncologist or surgeon about adding regular exercise to your treatment plan. Ask about any changes to your medications. Also, bring up concerns about becoming more active.
- Take all medicines prescribed by your physician.
- Start slowly. Over time, increase how hard and how long you exercise. In fact, consider increasing the time of your activity up to about 20 minutes or more. Then, start to push harder.
- Take frequent breaks as needed.
- There is no optimal exercise program for people with cancer. The goal is to preserve and possibly improve function. Be prepared to modify your activity as needed. Let your current condition and reactions to changes in treatment guide you.
- Ask your healthcare team to help you manage the side effects of treatment. Controlling nausea, vomiting, and pain will allow you to exercise more comfortably.
- Start by exercising on your own. Begin walking or another form of activity that you can add to your daily routine.
- Invite others to join you. Exercising together is more fun and increases the chance you will continue. Dogs make great walking partners!
- Look for programs available in your community. Consider contacting an appropriately credentialed exercise professional* to help you. All you really need, though, is a good pair of shoes to get started walking.
- Use a pedometer or other activity tracker to monitor your progress. Slowly work toward a goal, like maybe 10,000 steps per day.
- Use a journal to record your activity. Note the type, intensity, and time of your exercise. Then, write down any symptoms you experienced before or after. This will help you to plan for your next exercise session.

Aerobic Exercise Programs

The American College of Sports Medicine and the Centers for Disease Control and Prevention recommend at least 150 minutes per week of moderate-intensity aerobic activity, 75 minutes of vigorous aerobic activity, or an equivalent combination of both for adults. They also suggest muscle strengthening twice a week. Follow the FITT principle to design and implement a safe and effective program you will enjoy. F = frequency, I = intensity, T = time, and T = type.

- Frequency – Be active on most days of the week but at least three to five days. Adapt your routine based on acute symptoms and fatigue.
- Intensity – Exercise at a moderate level. Use the “talk test” to help you monitor. For example, even though you may notice a slight rise in your heart rate and breathing, you should be able to carry on a conversation while walking at a moderate pace. As you walk faster, you will begin to breathe faster and

have difficulty talking. At that point, you've achieved moderate intensity or "somewhat hard." Vigorous exercise causes a large rise in heart rate and breathing. At this intensity it would become difficult to talk. Most people would rate this as "hard to very hard."

- Time – Exercise 20 to 60 minutes per day. You can do it all at once or break it up into a few sessions of at least 10 minutes each. During active cancer treatment, a few short bouts of exercise are better than one long session.
- Type – Do rhythmic, weight-bearing exercises using the large muscle groups. Walking and cycling are good options. Choose activities you enjoy and will do regularly in your new, more active lifestyle. Add variety depending on the day or the season to keep your program more enjoyable.

Aerobic Exercise Cautions

- Rest is a key part of your exercise program. You should rest after each session as needed.
- If you have been inactive for a long time, start with shorter sessions (10 to 15 minutes). Add five minutes to each session, increasing every two to four weeks. Over time, build up to being active at least 30 minutes a day on most days of the week.
- Some medicines may affect your heart rate during exercise. Exercise at a level you feel is "somewhat hard." What feels "somewhat hard" may vary from one day to the next based on your fatigue or pain. Let your body guide you. The important thing is to be active on a regular basis.
- Put off exercise if you have a fever, a risk of bleeding, anemia, abnormal blood counts, extreme fatigue, or extreme pain.
- If you are having radiation therapy, sweat may irritate your skin due to skin breakdown. Choose workout clothes that will pull away moisture. Try to keep your skin dry to avoid irritation.

Resistance Exercise Programs

Moderate- to vigorous-intensity resistance training is necessary to improve or maintain muscle and bone. Resistance training also improves your ability to function and promotes good health. Follow the FITT principle when creating a resistance exercise program, too.

- Frequency – Do resistance training at least two to three days per week. Plan a day of rest between sessions.
- Intensity – Moderate (10 to 15 repetitions). Start out with a weight you can lift 10 to 15 times but lift it only 3 to 5 times. Gradually build up to 10 to 15 repetitions.
- Time – One to three sets using all major muscle groups.
- Type – At first, use machine weights. They will help with balance problems. As your strength and balance improve, add free weights. Don't belong to a gym or health club? No problem. You can do the same exercises at home using free weights or resistance bands. You also can use your body as the resistance with push-ups and sit-ups.

Resistance Exercise Cautions

- Some muscle stiffness and soreness is normal in the beginning.
- Avoid holding your breath when lifting. This can cause large changes in blood pressure. That change may increase the risk of passing out or developing abnormal heart rhythms. This is especially true if you also have high blood pressure.
- Surgery, therapy, or other treatments may limit your activity due to muscle weakness or pain. For example, women who have had a mastectomy or lumpectomy may have limited strength and range of motion in their chest, arms, and shoulders. Doing exercises at a full range of motion may reduce lymph edema. Lymph drainage techniques also can help.

Other Types of Exercise

Aerobic and resistance exercise are the primary forms of exercise. Other activities such as yoga, tai chi, and Pilates also help with balance, flexibility, and relaxation. Research has long shown the benefits of yoga for low back pain and high blood pressure. Emerging studies show that yoga also helps reduce swelling and improve immune system function during breast cancer treatment. Many types of programs are offered in addition to the ones above. Seek guidance from a trained professional in an accredited group before starting.

- Flexibility, either as part of yoga, tai chi, or Pilates or on its own, is important. Each day you exercise, take an extra 10 minutes to stretch the major muscle and tendon groups. Each stretch should last 10 to 30 seconds and be repeated 3 to 4 times.

Design your exercise program for the most benefit and the fewest risks to your health or physical condition. It is important to find an activity that is both enjoyable and sustainable. Start gently. Remember to rest and recover between sessions. Contact an appropriately credentialed exercise professional* to work with you and your doctor. They can help you establish realistic goals. And together, you can design a safe, effective, and enjoyable program to meet your needs and goals.

For more information, visit www.exerciseismedicine.org or e-mail eim@acsm.org.

Pescatello, L., Arena, R., Riebe, D., & Thompson, P. (2013). General Principles of Exercise Prescription. In ACSM's Guidelines for Exercise Testing and Prescription (9th ed., pp. 166-177). Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins.

*A listing of exercise professionals can be found at www.usreps.org and EIM Credentialed professionals can be found through the ACSM ProFinder (<http://bit.ly/1Mq6ldN>).

Referral Instructions