Physical Activity and the Cancer Patient

In the past, people being treated for a chronic illness (an illness a person may live with for a long time, like cancer or diabetes) were often told by their doctor to rest and reduce their physical activity. This is good advice if movement causes pain, rapid heart rate, or shortness of breath. But newer research has shown that exercise is not only safe and possible during cancer treatment, but it can improve how well you function physically and your quality of life.

Too much rest can lead to loss of body function, muscle weakness, and reduced range of motion. So today, many cancer care teams are urging their patients to be as physically active as possible during cancer treatment. Many people are learning about the advantages of being physically active after treatment, too.

Ways regular exercise may help you during cancer treatment

- Keep or improve your physical abilities (how well you can use your body to do things)
- Improve balance, lower risk of falls and broken bones
- Keep muscles from wasting due to inactivity
- Lower the risk of heart disease
- Lessen the risk of osteoporosis (weak bones that are more likely to break)
- Improve blood flow to your legs and lower the risk of blood clots
- Make you less dependent on others for help with normal activities of daily living
- Improve your self-esteem
- Lower the risk of being anxious and depressed
- Lessen nausea
- Improve your ability to keep social contacts
- Lessen symptoms of tiredness (fatigue)
• Help you control your weight
• Improve your quality of life

We still don’t know a lot about how exercise and physical activity affect your recovery from cancer, or their effects on the immune system. But regular moderate exercise has been found to have health benefits for the person with cancer.

Goals of an exercise program

During treatment

There are many reasons for being physically active during cancer treatment, but each person’s exercise program should be based on what’s safe and what works best for them. It should also be something you like doing. Your exercise plan should take into account any exercise program you already follow, what you can do now, and any physical problems or limits you have.

Certain things affect your ability to exercise, for instance:

• The type and stage of cancer you have
• Your cancer treatment
• Your stamina (endurance), strength, and fitness level

If you exercised before treatment, you might need to exercise less than usual or at a lower intensity during treatment. The goal is to stay as active and fit as possible. People who were very sedentary (inactive) before cancer treatment may need to start with short, low-intensity activity, such as short slow walks. For older people, those with cancer that has spread to the bones or osteoporosis (bone thinning), or problems like arthritis or peripheral neuropathy (numbness in hands or feet), safety and balance are important to reduce the risk of falls and injuries. They may need a caregiver or health professional with them during exercise.

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. These 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 exercise or continuing it, your doctor should have input on tailoring an exercise program to meet your interests and needs. Keep your cancer team
informed on how you’re doing in regards to your activity level and exercise throughout your treatment.

**After treatment**

**When you are recovering from treatment**

Many side effects get better within a few weeks after cancer treatment ends, but some can last much longer or even emerge later. Most people are able to slowly increase exercise time and intensity. What may be a low- or moderate-intensity activity for a healthy person may seem like a high-intensity activity for some cancer survivors. Keep in mind that moderate exercise is defined as activity that takes as much effort as a brisk walk.

**When you are living disease-free or with stable disease**

During this phase, physical activity is important to your overall health and quality of life. It may even help some people live longer. There’s some evidence that getting to and staying at a healthy weight, eating right, and being physically active may help reduce the risk of a second cancer as well as other serious chronic diseases. More research is needed to be sure about these possible benefits.

The American Cancer Society recommends that cancer survivors take these actions:

- Take part in regular physical activity.
- Avoid inactivity and return to normal daily activities as soon as possible after diagnosis.
- Aim to exercise at least 150 minutes per week.
- Include strength training exercises at least 2 days per week.

A growing number of studies have looked at the impact of physical activity on cancer recurrence 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. At least 20 studies of people with breast, colorectal, prostate, and ovarian cancer have suggested that physically active cancer survivors have a lower risk of cancer recurrence and improved survival compared with those who are inactive. Randomized clinical trials are still needed to better define the impact of exercise on such outcomes.

Those who are overweight or obese after treatment should limit high-calorie foods and
drinks, and increase physical activity to promote weight loss. Those who have been treated for digestive or lung cancers may be underweight. They may need to increase their body weight to a healthier range, but exercise and nutrition are still important. Both groups should emphasize vegetables, fruits, and whole grains. It’s well known that obesity is linked with a higher risk of developing some cancers. It’s also linked with breast cancer recurrence, and it might be related to the recurrence of other types of cancer, too. Exercise can help you get to and stay at a healthy weight.

Living with advanced cancer

Some level of physical activity can improve quality of life for people with certain types of cancer, even if the disease is advanced (has spread to many places and/or is no longer responding to treatment). But this varies by cancer type, physical ability, health problems related to the cancer or cancer treatment, and other illnesses. The situation can also change quickly for a person with advanced cancer, and physical activity should be based on the person’s goals, abilities, and preferences.

Precautions for cancer survivors who want to exercise

During and shortly after cancer treatment

Always check with your doctor before starting any exercise program. This is especially important if your treatments can affect your lungs (such as the chemo drug bleomycin or radiation to the chest), your heart (such as the chemo drugs doxorubicin or epirubicin), or if you are at risk for lung or heart disease. Be sure you understand what you can and can’t do.

- Your cancer care team will check your blood counts during your treatment. Ask them about your results, and if it’s OK for you to exercise.
- Do not exercise if you have a low red blood cell count (anemia).
- If you have low white blood cell counts or if you take medicines that make you less able to fight infection, stay away from public gyms and other public places until your counts are at safe levels.
- Do not exercise if the level of minerals in your blood, such as sodium and potassium, are not normal. This can happen if you have had a lot of vomiting or diarrhea.
- If it’s OK with your doctor, drink plenty of fluids.
- Do not exercise if you have unrelieved pain, nausea/vomiting, or any other symptom that causes you concern. Call your doctor.
- Do not exercise above a moderate level of exertion without talking with your doctor first. Remember, moderate exertion is about as much effort as a brisk walk.
- If you have a catheter or feeding tube, avoid pool, lake, or ocean water and other exposures that may cause infections. Also, do not do resistance training that uses muscles in the area of the catheter to keep from dislodging it. Talk with your cancer team about what's safe for you.
- To avoid skin irritation, people getting radiation should not expose skin in the treatment area to the chlorine in swimming pools.
- If you feel very tired and don’t feel up to exercising you can try doing 10 minutes of light exercises every day. (Later we will discuss fatigue and exercise in more detail.)
- Stay away from uneven surfaces or any weight-bearing exercises that could cause you to fall and hurt yourself.
- Do not use heavy weights or do exercise 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.
- If you have numbness in your feet or problems with balance, you are at higher risk for falls. You might do better with a stationary reclining bicycle, for example, than a treadmill.
- Watch for swollen ankles, unexplained weight gain, or shortness of breath while at rest or with a small amount of activity. Let your doctor know if you have any of these problems.
- Watch for bleeding, especially if you are taking blood thinners. 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.

Things to think about when planning an exercise program

- Talk to your doctor before you start any type of exercise.
- Start slowly. Even if you can only do an activity for a few minutes a day it will help you. How often and how long you do a simple activity like walking can be increased slowly. Your muscles will tell you when you need to slow down and rest.
- 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 divide the activity into three 10-minute sessions, if you need to. You’ll still get the benefit of the exercise.
- Try to include physical activity that uses large muscle groups such as your thighs, abdomen (belly), chest, and back. Strength, flexibility, 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 about 2 to 3 minutes. Examples of warm-up exercises are shoulder shrugs, lifting arms overhead, toe tapping, marching, and knee lifts. End your session with stretching or flexibility exercises. Hold a stretch for about 15 to 30 seconds and relax. Remember to breathe when you stretch. Examples of stretching are reaching overhead, deep breathing, and bending over to touch your toes so that you relax all the muscle groups.
- Exercise as you are able. Don’t push yourself while you are in treatment. Listen to your body and rest when you need to.

Cancer and fatigue: When you feel too tired to exercise

Most people with cancer notice that they have a lot less energy. During chemotherapy and radiation, most patients have fatigue. Fatigue is when your body and brain feel tired. This tiredness does not get better with rest. For many, fatigue is severe and limits their activity. But inactivity leads to muscle wasting and loss of function.

An aerobic training program can help break this cycle. In research studies, regular exercise has been linked to reduced fatigue. It’s also linked to being able to do normal daily activities without major problems. An aerobic exercise program can be prescribed as treatment for fatigue in cancer patients. Talk with your doctor about this.

Tips to reduce fatigue:

- Set up a daily routine that lets you be active when you feel your best.
- Get regular, light-to-moderate intensity exercise.
- Get fresh air.
- Unless you are told otherwise, eat a balanced diet that includes protein (meat, milk, eggs, and legumes such as peas or beans).
- Drink about 8 to 10 glasses of water a day unless your doctor tells you not to. Even more fluids are needed to prevent dehydration if you’re exercising intensely,
sweating, or in a hot environment.
- Control your symptoms, like pain, nausea, or depression.
- Keep things you use often within easy reach to save energy.
- Enjoy your hobbies and other activities that give you pleasure.
- Use relaxation and visualization techniques to reduce stress.
- Balance activity with rest that does not interfere with nighttime sleep.
- Ask for help when you need it.

Effective exercise

To make your exercise effort most effective (give you the best results), it’s important that you work your heart. Notice your heart rate, your breathing, and how tired your muscles get. If you get short of breath or very tired, rest for a few seconds, and start exercising again as you are able. When you first start, the goal is to exercise for at least 10 minutes at a time. Go slow at first, and over the next few weeks, increase the length of time you exercise. Be careful if you’re taking blood pressure medicine that controls your heart rate. Your heart rate will not go up, but your blood pressure can get high. Ask your doctor, nurse, or pharmacist about this if you’re not sure about your medicines.

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 you exercise, 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.

Keep exercise easy and fun

The key is to keep your exercise program simple and fun. Exercise and relaxation techniques 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 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 for you 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.

Let exercise provide you with its benefits. Remember, exercise helps:

• Prevent muscle wasting
• Reduce treatment side effects
• Improve your fitness
• Improve your quality of life

Add physical activity to your daily routine

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

• Walk around your neighborhood 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 the 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.
• Take a friend dancing, or dance in your own 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 to work.
• 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
• Wear a pedometer every day and 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 keep up as much activity as possible. Keep it safe, keep it fun, and make it work for you.

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