Memorial Sloan Kettering Cancer Center

PATIENT & CAREGIVER EDUCATION

Exercise During and After Cancer Treatment: Level 2

This information explains how you can get enough exercise during and after your cancer treatment. This resource is for people who are already exercising.

Talk with your healthcare provider before you start exercising more. Depending on your cancer treatment plan, you may need to avoid or change some exercises or activities. If you had surgery, ask your surgeon if it's safe for you to start exercising more.

Physical Activity and Exercise

Physical activity is any movement of the body that uses energy. Some of your daily life activities are examples of physical activity. This can be doing active chores around your home, doing yard work, or walking your dog.

Exercise is a type of physical activity. When you exercise, you do body movements that are planned, controlled, and repeated (done over and over). This helps to improve or maintain your physical fitness level. Try to add these physical activities into your daily life. They will help you get many of the health benefits of exercise.

- Activities that make you breathe harder, such as:
  - Brisk walking (such as power walking or speed walking)
  - Running
  - Dancing
  - Swimming

    - Playing basketball
- Strength training exercises that make your muscles stronger, such as:
    - Push-ups
    - Sit-ups
    - Squats and lunges
    - Lifting weights
    - Using resistance bands

Benefits of Exercise

Exercise may help:

- Lower your risk of getting some types of cancers, such as breast and colon cancer.
- Lower your risk of cancer recurrence (the cancer coming back). This is most important for people who have had breast or colorectal cancer in the past.
- Improve your cardiovascular (heart) health.
- Control your weight and improve your body image. Body image is how you see yourself and how you feel about the way you look.
- Improve your quality of life and mental health.
- Keep your bones, muscles, and joints healthy.
- Improve your ability to do activities of daily living (ADLs). Examples of ADLs are eating, bathing, using the bathroom, and grooming (such as brushing your teeth and combing your hair).
- Keep you from falling.

Suggested Amount of Exercise

Experts from the American College of Sports Medicine (ACSM) and the American Cancer Society (ACS) suggest the following:

- If you're exercising at a moderate level of intensity, try to get at least 150 to 300 minutes of exercise every week. You can do this by exercising for 30 minutes a day, 5 days a week. The table in the "Exercise Intensity Levels" section gives examples of exercises of moderate intensity.
- If you're exercising at a vigorous level of intensity, try to get at least 75 to 150 minutes of exercise every week. You can do this by exercising for 15 minutes a day, 5 days a week. The table in the "Exercise Intensity Levels" section gives examples of exercises of vigorous intensity.
- Aim for 2 to 3 strength training sessions a week. These sessions should focus on your major muscle groups: your chest, shoulders, arms, back, abdomen (belly), and legs. Examples of strength training exercises are push-ups and sit-ups, using resistance bands, and lifting weights.
- Stretch your major muscle groups at least 2 to 3 times a week.

As part of a healthy lifestyle, you should do some type of physical activity every day. You should also avoid long periods of not moving, such as sitting for hours at a time.

Exercise Intensity Levels

Exercise intensity is how hard your body is working when you're exercising. It's a measure for how hard a physical activity feels to you while you're doing it. There are 3 exercise intensity levels: light, moderate, and vigorous.

When you started exercising, you did light-intensity exercises first and worked your way up to doing moderate-intensity exercises. When your healthcare provider says its safe for you to start exercising more, try doing vigorous-intensity exercises, which are more challenging.

Usually, when you're doing moderate-intensity exercises:

- You breathe faster, but you’re not out of breath.
- You break out into a light sweat.
- You can talk but not sing.

Usually, when you’re doing vigorous-intensity exercises:

- Your breathing is deep and quick.
- You break out into a sweat after only a few minutes of activity.
- You cannot say more than a few words without stopping for a breath.

This table gives examples of light, moderate, and vigorous-intensity exercises you can do.

Light-intensity Exercises	Moderate-intensity Exercises	Vigorous-intensity Exercises
Relaxed biking (slower than 5 miles per hour on flat ground without hills)	Biking (slower than 10 miles per hour on flat ground without hills)	Biking (faster than 10 miles per hour on flat ground that may include hills)
Slow walking (slower than 3 miles per hour)	Brisk walking (3 to 4.5 miles per hour)	Race walking (faster than 5 miles per hour), jogging, or running
Light housework	Gardening and yard work	Step aerobics or fast dancing
Tai Chi (an exercise that uses slow movements and deep breathing)	Yoga	High-intensity yoga or Pilates
Playing catch (throwing a ball, beanbag, or frisbee back and forth with a partner)	Doubles tennis (you and a partner play against a team of 2 players)	Singles tennis (you play against another player)
Bowling	Water aerobics	Swimming (fast pace or laps)

Increasing Your Exercise Intensity Level

- Talk with your healthcare provider before you increase your exercise intensity level. It’s important to do this if you have a health problem, such as lymphedema, that’s changing or getting worse.
- If you’re meeting your weekly exercise goals, you’re already gaining many health benefits. You can gain even more benefits by slowly adding more time to your weekly routine. Make a goal of doubling your exercise time to 5 hours a week.
- Instead of doing only moderate-intensity exercises, replace some of it with vigorous-intensity exercises, which will make your heart beat even faster. Try 3 days of moderate-intensity exercise for 30 minutes each day. Then do 2 days of vigorous-intensity exercise for 15 minutes each day.
    - Adding vigorous-intensity exercise into your weekly routine gives you health benefits in less activity time. In general, 15 minutes of vigorous-intensity exercise has the same benefits as 30 minutes of moderate-intensity exercise.
- If you want stronger muscles, try increasing your strength training sessions from 2 days a week to 3.

Tips for Success

- Find an activity you enjoy and that fits into your lifestyle. Focus on having fun.
- Set short-term and long-term goals. For example:
    - Your short-term goal could be to run 1 mile a day, 3 days a week.
    - Your long-term goal could be to work your way up to 3 miles a day, 3 days a week.
- Set reminders on your phone to remind yourself to stand up and move throughout the day.
- Wear a pedometer (a device that tracks your steps) or use a fitness

tracker, such as a Fitbit®, every day. Using these devices can help encourage you to increase your daily steps. You can also download health and fitness apps to your phone that track your steps and physical activity, such as:

  - Apple HealthKit: This app is included on Apple iPhones. It collects health and fitness information from different apps you use and have synced to this app. The Apple HealthKit helps you see all your progress in one place.
  - Fitbit: This app is free to download. You can create an account even if you do not own a Fitbit. With a free account, you can track your weight, activity levels, sleep patterns, and nutrition. To help you stay motivated, you can compete against friends and family in different fitness challenges, such as walking challenges. If you want more features, you can pay for a premium membership.
  - My FitnessPal™: This app is free to download. With a free account, you can track your food and calories, activity levels, and weight. If you want more features, you can pay for a premium membership.
  - Noom: This app encourages users to build new habits to help them lose weight and keep a healthy lifestyle. It is free to download. With a free account, you can track your food and calories, weight, and exercise habits. If you want more features, you can pay for a premium membership.

- Track your time and progress on a chart. You can use the charts in the print version of this resource. You can also try an app on your phone or tablet to keep track of your progress.
- Plan your activity for the week. Experts from the ACSM and ACS suggest spreading aerobic activity out over 3 days a week or more. Aerobic exercises increase your heart rate and energy level. Examples are:
  - Running outside or on a treadmill.
  - Swimming.
  - Riding a bike.
- Join a fitness group.

- Talk with your healthcare provider about good activities to try.
- Try activities you have not done before.
- Slowly add more time, intensity, and effort to your exercise sessions.
- Do exercises that uses large muscle groups, such as your thighs, abdomen, chest, and back.
- Start each exercise session with 2 to 3 minutes of warm-up exercises. For example, you can do shoulder shrugs, march in place, or knee lifts. End each exercise session with light stretching.
- Reward your successes. For example, if you reach your exercise goal, reward yourself by buying new exercise clothing or a new book.
- Stay safe and avoid injuries. Choose activities that are right for your fitness level. Be sure to use the right safety gear and sports equipment.

Resources

These resources show how you can add exercise and physical activity to your daily life. They offer exercise tips based on the status of your cancer treatment. Talk with your healthcare provider before starting any exercise program.

- This site provides resources from the Exercise Oncology Service at Memorial Sloan Kettering (MSK).
  www.mskcc.org/research-areas/topics/exercise-oncology
- These resources describe a Level 1 and Level 2 general exercise program for people with cancer.
  General Exercise Program: Level 1 (www.mskcc.org/cancer-care/patient-education/general-exercise-level-1)
  General Exercise Program: Level 2
  (www.mskcc.org/pe/general_exercise_2)
- This podcast features MSK experts and an MSK patient who talk about how exercise can help prevent and treat cancer.
  www.mskcc.org/videos/making-every-step-count-role-exercise-and

- These 2 videos explain why it's important for people with cancer to exercise during treatment.
  www.mskcc.org/videos/can-exercise-during-cancer-treatment
  www.mskcc.org/videos/learn-benefits-exercise-during-cancer-treatment
- This video explains how exercise helped an MSK patient during their cancer treatment.
  www.mskcc.org/videos/learn-benefits-exercise-during-cancer-treatment-01
- This *Exercise with MSK* video series encourages exercise during and after cancer treatment. Each video shows safe movements and exercises that you can do.
  Introduction: www.youtube.com/watch?app=desktop&v=Gu0yjJwnrzY
  Breathing: www.youtube.com/watch?app=desktop&v=3ZCD_jNaY6g&list=PLME9VJQhE-huAv4Haot7pMkG2-tnOulFi&index=2&t=2s
  Stick Workout: www.youtube.com/watch?app=desktop&v=B_DK-pAcTfg&list=PLME9VJQhE-huAv4Haot7pMkG2-tnOulFi&index=4
  Simple Aerobics: www.youtube.com/watch?app=desktop&v=ze_eV9DyEkw
  Core Strength: www.youtube.com/watch?app=desktop&v=0Q4XhcLl8xc
  Weight Training: www.youtube.com/watch?app=desktop&v=bQ-ozMZAq0k
  Post-Workout Stretching: www.youtube.com/watch?app=desktop&v=5DhoFwMjyT4&list=PLME9VJQhE-huAv4Haot7pMkG2-tnOulFi&index=7
- This video encourages exercise after cancer treatment and shows simple exercises that you can do.
  www.mskcc.org/cancer-care/survivorship/videos-survivors/exercise-survivors
- This video explains the importance of exercise after cancer treatment. It offers suggestions about how to exercise safely and stick with a routine.
  www.mskcc.org/videos/benefits-exercise-survivors

- This video explains exercise safety issues to think about before you start exercising. This is helpful if you have lymphedema, cancer that spread to your bone, osteoporosis, brain tumors, loss of feeling in your arms or legs, or low blood cell counts.
  www.mskcc.org/multimedia/exercise-safety-issues-survivors
- This article from the American Cancer Society explains how you can stay active during and after cancer treatment.
  www.cancer.org/treatment/survivorship-during-and-after-treatment/be-healthy-after-treatment/physical-activity-and-the-cancer-patient.html

Charts to Track Your Activity

Day	Activity and Intensity	Minutes of Exercise
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Sunday		
Total minutes:		

Strengthening exercise

Day	Activity
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	
Total days:	

If you have any questions, contact a member of your care team directly. If you're a patient at MSK and you need to reach a provider after 5 p.m., during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

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