

#### 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 already exercise.

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.

- Cardiovascular (KAR-dee-oh-VAS-kyoo-ler) activities that make you breathe harder.
- Strength training exercises that make your muscles stronger.

This table shows examples of each type of exercise.

Cardiovascular activities	Strength training exercises
<ul> <li>Brisk walking, such as power walking or speed walking</li> <li>Running</li> <li>Dancing</li> <li>Swimming</li> <li>Playing basketball</li> </ul>	<ul> <li>Push-ups</li> <li>Sit-ups</li> <li>Squats and lunges</li> <li>Lifting weights</li> <li>Using resistance bands</li> </ul>

#### 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.

#### Aerobic exercise

Aerobic exercise raises your heart rate and energy levels. Examples include:

- Walking outside or on a treadmill.
- Light jogging.
- Swimming.
- Riding a bike.

#### 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-intensity. Usually, when you're doing lightintensity exercises:
- You're not out of breath.
- You do not break out into a sweat.
- You can talk and sing without stopping for a breath.
- Moderate-intensity. 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.
- Vigorous-intensity. 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.

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.

This table gives examples of light, moderate, and vigorousintensity exercises you can do.

- Relaxed biking (slower than 5 miles per hour on flat ground without hills)
- Slow walking (slower than 3 miles per hour)
- Light housework
- Tai Chi (an exercise that uses slow movements and deep breathing)
- Playing catch
   (throwing a ball,
   beanbag, or
   frisbee back and
   forth with a
   partner)
- Bowling

- Biking (slower than 10 miles per hour on flat ground without hills)
- Brisk walking (3 to 4.5 miles per hour)
- Gardening and yard work
- Yoga
- Doubles tennis

   (you and a
   partner play
   against a team
   of 2 players)
- Water aerobics

- Biking (faster than 10 miles per hour on flat ground that may include hills)
- Race walking (faster than 5 miles per hour), jogging, or running
- Step aerobics or fast dancing
- High-intensity yoga or Pilates
- Singles tennis
   (you play against another player)
- Swimming (fast pace or laps)

# Suggested exercise

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.

The American College of Sports Medicine (ACSM) and the American Cancer Society (ACS) suggest aerobic exercise every week. Follow these recommendations for the type of exercise you're doing.

- Moderate-intensity exercise: Try to get at least 150 minutes (2 ½ hours) of aerobic exercise every week. You can do this by getting 30 minutes of exercise a day, 5 days a week. See the table in the "Exercise intensity levels" section for examples.
- Vigorous-intensity exercise: Try to get 75 to 150 minutes (1 hour 15 minutes to 2 ½ hours) of aerobic exercise every week. You can do this by getting 15 to 30 minutes of exercise a day, 5 days a week. See the table in the "Exercise Intensity Levels" section for examples.
- Strength training: Aim for 2 to 3 sessions a week. These sessions should focus on your major muscle groups, including your chest, shoulders, arms, back, abdomen (belly), and legs.
- Stretching: Stretch your major muscle groups most days

of the week.

# How to increase 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 that's changing or getting worse, such as lymphedema.
- 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 exercise time to your weekly routine. Make a goal of adding 5 to 15 minutes of exercise to your routine each week.
- Instead of doing only moderate-intensity exercises, replace some of it with vigorous-intensity exercises.
   Doing this will make your heart beat even faster. 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.

Try doing 3 days of moderate-intensity exercise for 30 minutes each day. Then, do 2 days of vigorous-intensity exercise for 15 minutes each day.

• If you want stronger muscles, try to increase 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:
  - Short-term goal: Run 1 mile a day, 3 days a week.
  - Long-term goal: Work your way up to running 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. 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.
- 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 exercise that uses large muscle groups, such as your thighs, abdomen, chest, and back.
- Start each exercise session with 2 to 3 minutes of warmup 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 tips based on ow much exercise experience you have, and which cancer treatment you got or are getting. Talk with your healthcare provider before starting any exercise program.

- This site provides resources from the Exercise Oncology Service at Memorial Sloan Kettering (MSK). Exercise, Nutrition, and Cancer (www.mskcc.org/researchareas/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/pe/general-exercise-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. Can I exercise during cancer treatment? (www.mskcc.org/videos/canexercise-during-cancer-treatment)
   Learn the benefits of exercise during cancer treatment (www.mskcc.org/videos/learn-benefits-exerciseduring-cancer-treatment)
- This video explains how exercise helped an MSK patient during their cancer treatment. Cancer Survivor Explains Why She Exercised During Cancer Treatment

(www.mskcc.org/videos/cancer-survivor-explains-exercise-during-treatment)

• 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=GuOyjJwnrzY Breathing: www.youtube.com/watch? app=desktop&v=3ZCD\_jNaY6g&list=PLME9VJQhEhuAv4Haot7pMkG2-tnOulFi&index=2&t=2s Stick Workout: www.youtube.com/watch? app=desktop&v=B\_DK-pAcTfg&list=PLME9VJQhEhuAv4Haot7pMkG2-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-ozMZAqOk Post-Workout Stretching: www.youtube.com/watch? app=desktop&v=5DhoFwMjyT4&list=PLME9VJQhEhuAv4Haot7pMkG2-tnOulFi&index=7

 This video encourages exercise after cancer treatment and shows simple exercises that you can do. Watch: Donna Wilson On Importance of Fitness for Cancer Survivors (www.mskcc.org/videos/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. Benefits of Exercise for Cancer Survivors (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. Exercise Safety Issues for Cancer Survivors (www.mskcc.org/videos/exercisesafety-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

# Exercise programs at MSK

 Integrative Medicine at Home Membership Program: Integrative Medicine at Home Membership Program (www.mskcc.org/cancer-care/diagnosistreatment/symptom-management/integrative-

### medicine/membership)

- MSK Healthy Living Program for people with breast cancer: Healthy Living for People with Breast Cancer | Memorial Sloan Kettering Cancer Center
- Exercise Oncology Research Program: Exercise Oncology Program (www.mskcc.org/research-areas/researchteams/exercise-oncology-program)

# Charts to track your activity

Day	Activity and intensity	Minutes of exercise
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Sunday		
Total minutes:		

## Strength exercise log

Day	Activity
Monday	

Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	
Total days:	

If you have questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, call 212-639-2000.

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

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