

Exercise Guidelines During Cardiac Rehabilitation

When you are recovering from a heart condition or surgery, it is important to have heart-healthy habits, including exercise routines. Discuss an appropriate exercise program with your heart specialist (*cardiologist*) and rehabilitation therapist.

The program should meet your specific abilities and needs. Walking, biking, jogging, and swimming are all good aerobic activities and take light to moderate effort. Aerobic activities cause your heart to beat faster. Adding some light resistance training is also good for you. Even simple lifestyle changes can help. These lifestyle changes may include parking farther from the store or taking the stairs instead of the elevator.

At first, you may begin exercising under supervision, such as at a hospital or clinic. Over time, you may begin exercising at home if your health care provider approves.

Types of exercise

Below are types of exercises that are an important part of cardiac rehabilitation. Follow your health care provider's instructions on what types of exercises are good for you and your heart.

Aerobic exercise



Aerobic exercise keeps joints and muscles moving and is important to keep your heart healthy. It involves large muscle groups and improves blood flow (*circulation*) and endurance. It is also rhythmic and must be done for a longer period of time. Examples of aerobic exercise include:

- Swimming.
- Walking.
- Hiking.
- Jogging.
- Cross-country skiing.
- Dancing.
- Biking.

Static exercise



Static exercise (*isometric exercise*) uses muscles at high intensities without moving the joints. Some examples of static exercise include pushing against a heavy couch that does not move, doing a wall sit, or holding a plank position.

Static exercise improves strength but also quickly increases blood pressure. Follow these guidelines:

- If you have circulation problems or high blood pressure, talk with your health care provider before starting any static exercise routines. **Do not** do static exercises if your health care provider tells you not to.
- **Do not** hold your breath while doing static exercises. Holding your breath during static exercises can raise your blood pressure to a dangerously high level.

Weight-resistance exercise



Weight-resistance exercises are another important part of rehabilitation. These exercises strengthen your muscles by making them work against resistance. Resistance exercises may help you return to activities of daily living sooner and improve your quality of life. They also help reduce cardiac risk factors. Examples of weight-resistance exercise include using:

- Free weights.
- Weight-lifting machines.
- Large, specially designed rubber bands.

You will usually do weight-resistance exercises 2 times a week, with a 2-day rest period between workouts.

Stretching



Stretching before you exercise warms up your muscles and prevents injury. Stretching also improves your flexibility, balance, coordination, and range of motion. Follow these guidelines:

- Stretch before and after exercising.
- **Do not** force a muscle or joint into a painful angle. Stretching should be a relaxing part of your exercise routine.
- When you feel resistance in your muscle, hold the stretch for a few seconds. Make sure you keep breathing while you hold the stretch.
- Go slowly when doing all stretches.

Setting a pace

- Choose a pace that is comfortable for you.
 - You should be able to talk while exercising. If you are short of breath or unable to speak while you exercise, slow down.
 - If you can sing while exercising, you are not exercising hard enough.
- Keep track of how hard you are working as you exercise (*exertion level*). Your rehabilitation therapist can teach you to use a mental scale to measure your level of exertion (*perceived exertion*). Using a mental scale, you will think about your exertion level and rate it in a range from 6 to 20.
 - A rating of 6 to 10. This means that you are doing very light exercise and are not exerting yourself

enough. For a healthy person, this may be walking at a slow pace.

- A rating of 11 to 15. This is exercise that is somewhat hard. For a healthy exercise session, you should aim for an exertion rate that is within this range.
- A rating of 16 to 18. This is considered very hard or strenuous. For a healthy person, exercise at this rating may start to feel heavy and difficult.
- A rating of 19 or 20. This means that you are working extremely hard. For most people, these numbers represent the hardest you have ever worked to exercise.
- Your health care provider or cardiac rehabilitation specialist may also recommend that you wear a heart rate monitor while you exercise. This will help keep track of your heart rate zones and how hard your heart is working.

Frequency

As you are recovering, it is important to start exercising slowly and to gradually work up to your goal. Work with your health care provider to set up an exercise routine that works for you. Generally, cardiac rehabilitation exercise should include:

- 40 minutes of aerobic activity 3–4 days a week.
- Stretching and strength exercises 2–3 days a week.

Contact a health care provider if:

- You have any of the following symptoms while exercising:
 - Pain, pressure, or burning in your chest, jaw, shoulder, or back (*angina*).
 - Feeling light-headed or dizzy.
 - Irregular or fast heartbeats (*palpitations*).
 - Shortness of breath.
- You are extremely tired after exercising.

Get help right away if you:

- Have angina that lasts for longer than 5 minutes and medicine does not help.
- Have severe chest discomfort, especially if the pain is crushing or pressure-like and spreads to your arms, back, neck, or jaw. **Do not** wait to see if the pain will go away.
- Have weakness or numbness in one or both legs.
- Are confused.
- Have trouble breathing or shortness of breath.
- Have excessive sweating that is not caused by exercise.
- Have any symptoms of a stroke. "**BE FAST**" is an easy way to remember the main warning signs of a stroke:
 - **B - Balance.** Signs are dizziness, sudden trouble walking, or loss of balance.
 - **E - Eyes.** Signs are trouble seeing or a sudden change in vision.
 - **F - Face.** Signs are sudden weakness or numbness of the face, or the face or eyelid drooping on one side.
 - **A - Arms.** Signs are weakness or numbness in an arm. This happens suddenly and usually on one side of the body.
 - **S - Speech.** Signs are sudden trouble speaking, slurred speech, or trouble understanding what people say.
 - **T - Time.** Time to call emergency services. Write down what time symptoms started.
- Have other signs of a stroke, such as:

- ◊ A sudden, severe headache with no known cause.
- ◊ Nausea or vomiting.
- ◊ Seizure.

These symptoms may represent a serious problem that is an emergency. Do not wait to see if the symptoms will go away. Get medical help right away. Call your local emergency services (911 in the U.S.). Do not drive yourself to the hospital.

Summary

- When you are recovering from a heart condition, it is important to have heart-healthy habits, including exercise routines.
- At first, you may begin exercising under supervision, such as at a hospital or clinic. Over time, you may begin exercising at home if your health care provider approves.
- Choose a pace that is comfortable for you. You should be able to talk while exercising.
- Aim for 40 minutes of aerobic exercises 3–4 days a week.
- Aim to do stretching and strength exercises 2–3 days a week.

This information is not intended to replace advice given to you by your health care provider. Make sure you discuss any questions you have with your health care provider.

Physical Activity With Heart Disease

Being active has many benefits, especially if you have heart disease. Physical activity can help you do more and feel healthier. Start slowly, and increase the amount of time you spend being active. You should aim for physical activity that:

- Makes you breathe harder and raises your heart rate (*aerobic activity*). Try to get at least 150 minutes of aerobic activity each week. This is about 30 minutes each day, 5 days a week.
- Helps build muscle strength (*strengthening activity*). Do this at least 2 times a week.
- A good rule of thumb is to work hard enough to breathe harder but still be able to carry on a conversation. If you can sing, you may not be working hard enough.
- You may also want to monitor your heart rate (*pulse*) and blood pressure. Ask your health care provider what kind of tools you will need to track these.

Always talk with your health care provider before starting any new activity program or if you have any changes in your condition.

What are the benefits of physical activity?

Physical activity can help improve your heart and blood vessel (*cardiovascular*) health. It can:

- Lower your blood pressure.
- Lower your cholesterol.
- Control your weight.
- Help control your blood sugar.
- Improve the function of your heart and lungs.
- Reduce your risk of developing blood clots.

Physical activity can help improve other aspects of your health. It can:

- Prevent bone loss.
- Improve your sleep.
- Improve your energy level.
- Reduce stress.

What are some types of physical activity I could try?

There are many ways to be active. Talk with your health care provider about what types and intensity of activity is right for you.

Aerobic activity



Aerobic (*cardiovascular*) activity can be moderate or vigorous intensity, depending on how hard you are working.

Moderate-intensity activity includes:

- Walking.
- Slow bicycling.
- Water aerobics.
- Dancing.
- Light gardening or house work.

Vigorous-intensity activity includes:

- Jogging or running.
- Stair climbing.
- Swimming laps.
- Hiking uphill.
- Heavy gardening, such as digging trenches.

Strengthening activity



Strengthening activities work your muscles to build strength. Some examples include:

- Doing push-ups, sit-ups, or pull-ups.
- Lifting small weights.
- Using resistance bands.
- Yoga.

Flexibility



Flexibility activities lengthen your muscles to keep them flexible and less tight and improve your balance. Some examples include:

- Stretching.
- Yoga.
- Tai chi.
- Ballet barre.

Follow these instructions at home:

How to get started

- Talk with your health care provider about:

- What types of activities are safe for you.
- If you should check your pulse or take other precautions during physical activity.
- Get a calendar. Write down a schedule and plan for your new routine.
- At the start of your workout, as well as at the end, remember to warm up and cool down to allow a gradual increase or decrease in heart rate and breathing.
- If you have not been active, begin with sessions that last 10–15 minutes. Gradually work up to sessions that last 20–30 minutes, 5 times a week. Follow all of your health care provider's recommendations.
- Take time to find out what works for you. Consider the following:
 - Join a community program, such as a biking group, yoga class, local gym, or swimming pool membership.
 - Be active on your own by downloading free workout applications on a smartphone or other devices, or by purchasing workout DVDs.
- Be patient with yourself. It takes time to build up strength and lung capacity.

Safety

- Exercise in an indoor, climate-controlled facility, as told by your health care provider. You may need to do this if
 - There are extreme outdoor conditions, such as heat, humidity, or cold.
 - There is an air pollution advisory. Your local news, board of health, or hospital can provide information on air quality.
- Take extra precautions as told by your health care provider. This may include:
 - Monitoring your heart rate.
 - Avoiding heavy lifting.
 - Understanding how your medicines can affect you during physical activity. Certain medicines may cause heat intolerance or changes in blood sugar.
 - Slowing down to rest when you need to.
 - Keeping nitroglycerin spray and tablets with you at all times if you have angina. Use them as told to prevent and treat symptoms.
- Drink plenty of water before, during, and after physical activity.
- Know what symptoms may be signs of a problem and stop physical activity right away if you have any of those symptoms.

Where to find more information

American Heart Association: www.heart.org

U.S. Department of Health and Human Services: www.health.gov

Get help right away if you have any of the following during exercise:

- Chest pain, shortness of breath, or feel very tired.
- Pain in the arm, shoulder, neck, or jaw.
- You feel weak, dizzy, or light-headed.
- An irregular heart rate, or your heart rate is greater than 100 beats per minute (bpm) before exercise.

These symptoms may represent a serious problem that is an emergency. Do not wait to see if the symptoms go away. Get medical help right away. Call your local emergency services (911 in the U.S.). Do not drive yourself to the hospital.

Summary

- Physical activity has many benefits, especially if you have heart disease.
- Before starting an activity program, talk with your health care provider about how often to be active and what type of activity is safe for you.
- Your physical activity plan may include moderate or vigorous aerobic activity, strengthening activities, and flexibility.
- Know what symptoms may be signs of a problem. Stop physical activity right away and call emergency services (911 in the U.S.) if you have any of those symptoms.

This information is not intended to replace advice given to you by your health care provider. Make sure you discuss any questions you have with your health care provider.

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Physical Activity Log

Staying physically active is important for your health. Your health care provider may recommend a physical activity plan that includes:

- Endurance (*aerobic*) exercise. Examples include running, swimming, or biking.
- Strength exercise. Examples include using weights or resistance bands.
- Balance and flexibility exercise. Examples include using a stability ball, doing yoga or tai chi, or stretching.

Contact your health care provider before you start any exercise routine. Ask your health care provider:

- What activities are safe for you.
- How many hours or minutes you should exercise each week.
- What can be done to stay safe when exercising.

Endurance exercise

My goal is to do _____ hours and _____ minutes of endurance exercise each week.

Date: _____

- Activity: _____
- Total hours or minutes: _____

Date: _____

- Activity: _____
- Total hours or minutes: _____

Date: _____

- Activity: _____
- Total hours or minutes: _____

Date: _____

- Activity: _____
- Total hours or minutes: _____

Date: _____

- Activity: _____
- Total hours or minutes: _____

Date: _____

- Activity: _____
- Total hours or minutes: _____

Date: _____

- Activity: _____
- Total hours or minutes: _____

Strength exercise

My goal is to do _____ hours and _____ minutes of strength exercise each week.

Date: _____

- Activity: _____
- Total hours or minutes: _____

Date: _____

- Activity: _____
- Total hours or minutes: _____

Date: _____

- Activity: _____
- Total hours or minutes: _____

Date: _____

- Activity: _____
- Total hours or minutes: _____

Date: _____

- Activity: _____
- Total hours or minutes: _____

Date: _____

- Activity: _____
- Total hours or minutes: _____

Date: _____

- Activity: _____
- Total hours or minutes: _____

Balance and flexibility exercise

My goal is to do _____ hours and _____ minutes of balance and flexibility exercise each week.

Date: _____

- Activity: _____
- Total hours or minutes: _____

Date: _____

- Activity: _____
- Total hours or minutes: _____

Date: _____

- Activity: _____
- Total hours or minutes: _____

Date: _____

- Activity: _____
- Total hours or minutes: _____

Date: _____

- Activity: _____
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