Phase I Cardiac Rehab: Open Heart Surgery

After heart surgery using a sternal approach

This handout explains the activity precautions and exercise program you must follow as you recover from your heart surgery and prepare for Phase II cardiac rehab.

Activity Precautions

Your surgery was on: ____________________________________________

Follow precautions until after: ________________________________

Phase II Cardiac Rehab Referral

You have been referred for phase II cardiac rehab at:

__________________________________________________________

Precautions

Follow these precautions to help your incision heal:

- For [ ] 6 weeks [ ] 12 weeks after surgery:
  - Do not lift, push, pull, or carry anything that weighs more than 10 pounds. This includes lifting pets, children, garbage, laundry, and groceries (1 gallon of milk weighs 8 pounds), unscrewing a tight lid, or opening a heavy door.
  - Do not use your arms to push up from a chair or to pull yourself out of a car.
  - Do not reach above shoulder level with just one arm. Use both arms together when you reach for items on a shelf or in a closet.
  - Do not reach behind you, as it will stretch the incision. This means you may not lean back on your arms. Do not reach back to wipe after using the restroom. Always reach from the front.

Your physical therapist will prescribe a walking program for you to follow.
- Do **not** garden, rake, or mow the lawn.
- Do **not** drive a car or truck. Your reaction time is slower and you are at higher risk for injuring your sternum (breastbone).

• For **3 months** after surgery:
  - Do **not** run, walk, or bike vigorously
  - Do **not** play sports like tennis, golf, softball, swimming or bowling, or any other sport that could cause injury to your sternum.

**Your Exercise Program**

**While You Are in the Hospital**

Your therapist will prescribe an exercise, breathing, and walking program for you to start while you are in the hospital. It is important that you walk with staff 3 to 4 times every day. Activity will help:

• Your digestive, respiratory (breathing), and circulatory (blood vessel) systems recover from your procedure. This will help you:
  - Stabilize your blood pressure and reduce dizziness
  - Stop using extra oxygen
  - Improve your strength, balance, and energy
  - Improve your mood and help you sleep better at night
  - Ease constipation and nausea

**When You Go Home**

When you leave the hospital:

• Keep doing the exercise, breathing, and walking program that your therapists taught you.

• Your goal is to **be walking at least 30 to 40 minutes every day** by 6 weeks after your procedure.

To get the best results from your walking program:

• **Warm up before you walk and cool down afterward.** Stretch or do gentle exercises for at least 5 minutes before and after you walk. This allows your heart and breathing rates to increase slowly before you walk and decrease slowly afterward. This helps your heart and muscles get the right amount of oxygen.

• Take many short walks every day, throughout the day. Slowly increase the amount of time you spend walking each day. To do this:
  - **When you first get home after your procedure, walk at least 3 times a day for 5 minutes each time.** This is about the same amount of time that you walked while you were in the hospital.
- **Each week, increase the total time you exercise by about 3 minutes** (add 1 minute to each of your 3 daily walks), until you are walking for a total of 30 to 40 minutes every day. Here is a sample walking program:

### Sample Walking Program

<table>
<thead>
<tr>
<th>Week #</th>
<th>Warm-up Exercises</th>
<th>Warm-up Time</th>
<th>Walk</th>
<th>Cool-down Exercises</th>
<th>Cool-down Time</th>
<th>Total Exercise Time</th>
<th>Goal Met?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5 min.</td>
<td></td>
<td>3 x 5 min.</td>
<td>5 min.</td>
<td></td>
<td>25 min.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td>3 x 6 min.</td>
<td></td>
<td></td>
<td>28 min.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td>3 x 7 min.</td>
<td></td>
<td></td>
<td>31 min.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td>3 x 8 min.</td>
<td></td>
<td></td>
<td>34 min.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td>3 x 9 min.</td>
<td></td>
<td></td>
<td>37 min.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td>3 x 10 min.</td>
<td></td>
<td></td>
<td>40 min.</td>
<td></td>
</tr>
</tbody>
</table>

### Monitor Your Body

**For 6 weeks after your procedure, be active at a low to moderate level.** Pace yourself. Slow down or rest if you are breathless, dizzy, cannot talk, or are perspiring.

Your physical therapist will teach you different ways to monitor how hard your body is working. These include:

- **Taking your pulse.** Your pulse will tell you how hard your heart is working. For the first 2 weeks after your procedure, make sure your pulse does not increase more than **20 to 30 beats per minute** above your resting heart rate.

  Check your pulse at rest before you start, during, and after exercise:

  - Use your index and middle fingers (not your thumb) to find your pulse on the inner part of your wrist, just above your thumb. If you can’t find your wrist pulse, gently find the pulse on one side of your neck. Do not press hard or you could reduce blood flow to your head, which can make you feel dizzy or faint.

  - Count the beats for 1 minute.

  - Subtract your normal resting heart rate from your pulse taken during and after exercise to see how much your heart rate has increased.

- **Rating your perceived exertion (RPE) on a scale of 0 to 10.** with 0 being lowest exertion and 10 being highest exertion. When you are active, think about how hard you are working, or how much effort it takes for you to keep doing the activity you are doing.
If you are working **between levels 2 and 4 on a scale of 0 to 10**, you are exercising at a low to moderate level. This is between 11 to 13 on the Borg RPE scale of 6 to 20. (See table on page 6, “Borg Rating of Perceived Exertion.”)

- **Talking to someone while you exercise.** Use your rate of breathing to guide how hard you are exercising. When exercising or walking, you should not be so out of breath that you cannot talk with someone.

- **Paying attention to your body.** Reduce your activity during exercises and daily tasks (including dressing, bathing, grooming, and household activities) if:
  - Your heart rate (pulse) increases more than 20 to 30 beats above your resting heart rate
  - Your RPE is greater than 4 during the activity
  - You keep having a high heart rate (pulse) for 10 minutes after you have stopped exercising
  - You are breathless for longer than 10 minutes after you stop exercising
  - You have fatigue (feel very tired) for 24 hours after you exercise
  - You notice increased swelling in your legs or feet up to 24 hours after you exercise
  - You have pain or cramping in your leg muscles
  - You have pain in your joints, heels, or shins

  **Tip:** To help save your energy, you may need to sit when you shower, get dressed, or do other activities you used to stand to do.

**Stop exercising** and talk with your doctor before starting again if you:

- Have an abnormal heart rhythm: irregular pulse, palpitations, sudden very slow pulse, or sudden burst of rapid heartbeats
- Have new or ongoing pain or pressure in your chest, back, arms, or throat
- Feel dizzy, light-headed, have cold sweats, or faint
- Lose coordination, have changes in your vision, or become confused

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**When at home, if you need medical care right away, call 911.**
**Phase II Cardiac Rehab**

Use these same guidelines for your exercise program when you leave the hospital. Most people who have had open heart surgery start phase II cardiac rehab 4 to 6 weeks after discharge. Remember that you cannot drive for 6 weeks after surgery.

The staff at your cardiac rehab facility will teach you how to safely increase the intensity and duration of your exercises. Your goal is to be able to do your exercise program on your own.

Keep doing your walking program on the days you do not go to cardiac rehab.

**American Heart Association Resources**

The American Heart Association website has ideas and inspiration for staying active and healthy after your procedure. Visit [www.heart.org/HEARTORG](http://www.heart.org/HEARTORG), click on “Healthy Living” and then “Physical Activity” in the menu bar.

**Your Questions Are Important**

While you are in the hospital, your physical therapist will answer your questions about exercise. If you have questions or concerns about exercise after you leave the hospital, talk with your outpatient cardiac rehab provider, home health physical therapist, outpatient physical therapist, or main care team.

**Questions and Notes**

Use this space to write down questions you want to remember to ask your care providers, and for notes taken during your visit.
**Exercise Intensity Guidelines**

For 6 weeks after your procedure, it is important that you work at a low to moderate level to help your heart recover. To judge the correct level of exertion (effort), rate your effort on a scale of 0 to 10, with 0 being lowest exertion and 10 being highest exertion.

You are exercising at a low to moderate level if you are working between levels 2 and 4 on a scale of 0 to 10 (between levels 11 to 13 on the Borg RPE scale of 6 to 20).

The table below shows the Borg RPE scale and how it relates to your level of exertion. The highlighted area halfway down the table is your goal Training Zone.

**Borg Rating of Perceived Exertion (RPE)**

<table>
<thead>
<tr>
<th>Borg CR10 (Category Ratio) Scale: 1 to 10</th>
<th>Zone</th>
<th>Borg RPE Scale: 6 to 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Nothing at All</td>
<td>6</td>
</tr>
<tr>
<td>1</td>
<td>Very, Very Easy</td>
<td>7</td>
</tr>
<tr>
<td>1</td>
<td>Very Easy</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>Easy</td>
<td>9</td>
</tr>
<tr>
<td>3</td>
<td>Moderate</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>Somewhat hard</td>
<td>11</td>
</tr>
<tr>
<td>5</td>
<td>Hard</td>
<td>12</td>
</tr>
<tr>
<td>6</td>
<td>Strenuous Exercise Zone</td>
<td>13</td>
</tr>
<tr>
<td>7</td>
<td>Very Hard</td>
<td>14</td>
</tr>
<tr>
<td>8</td>
<td>(this zone is too hard – slow down!)</td>
<td>15</td>
</tr>
<tr>
<td>9</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Maximal Exertion</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td></td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>Extremely Hard</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>Maximal Exertion</td>
</tr>
</tbody>
</table>


**Questions?**

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.