

# Exercise Program for Individuals with Heart Disease

## General Information

These are general exercise guidelines for people with heart disease. Individualized exercise prescriptions are recommended.

Because people have different heart conditions, those with heart disease should undergo a complete medical evaluation before beginning an exercise program. This may include a health history, physical exam and a monitored stress test. This information is used to see if exercise is safe and to develop an exercise prescription.

## Exercise Prescription

Four components make up an exercise prescription. These four components are identified as the F.I.T.T. principle.

<b>F</b>	<b>I</b>	<b>T</b>	<b>T</b>
Frequency	Intensity	Time	Type

## Frequency

You should exercise or engage in physical activity on most, preferably all, days of the week. The lowest frequency is three nonconsecutive days per week (every other day).

## Intensity

You can gauge how hard you work in 3 ways:

- Rating of Perceived Exertion (RPE)
- The “Talk Test”
- Target Heart Rate (THR) and METS

## Monitoring Your Exercise Using the RPE

6		<b>WARM UP AND COOL DOWN RANGE</b>	The RPE is a number scale from 6 to 20 which is used to evaluate how much physical effort your exercise is. The recommended level of exertion for most heart patients is “fairly light to somewhat hard” (11-13). You should decrease the intensity of your exercise if it feels greater than 13.
7	very, very light		
8			
9	Very light	<b>EXERCISING RANGE</b>	
10			
11	fairly light		
12			
13	Somewhat hard	<b>OVERDOING IT RANGE: slow down</b>	
14			
15	Hard		
16			
17	Very hard		
18			
19	Extremely hard		
20	Maximal exertion		

table continues ➡

# Exercise Program for Individuals with Heart Disease *(cont)*

<b>Alternative 10-Grade RPE Scale</b>			
0	Nothing at all	<b>WARM UP AND COOL DOWN RANGE</b>	This is an alternative 10-Grade RPE Scale where 0 represents no exertion and 10 represents the greatest amount of exertion performed.
0.5	very, very light		
1	Very light		
2	Light	<b>EXERCISING RANGE</b>	
3	Moderate		
4			
5	Heavy (strong)	<b>OVERDOING IT RANGE: slow down</b>	
6			
7	Very heavy		
8			
9			
10	Very, very heavy		

## **Monitoring Your Exercise Using the “Talk Test”**

Another method to tell how hard you are working is the “talk test”.

You should be able to talk while you exercise. If you can’t talk, the exercise is too difficult.

If you are able to sing, the exercise may be too easy.

## **Target Heart Rate (THR) and METS\***

If you have had a recent stress test, your health care provider may use the test to provide you with a Target Heart Rate (THR) or MET level. Your heart rate should increase as each workload increases on the stress test. A MET is a measure of work level. One MET is the amount of energy your body uses at rest. Any exercise or activity level can be described in METS. Most exercise equipment (treadmills, exercise bikes) will report METS as a measure of work.

The intensity of exercise for people with heart disease will vary. In general, a lower intensity of exercise is recommended for high-risk people, especially if outside a supervised program where continuous monitoring is available. Your exercise intensity should be discussed with your health care provider and re-evaluated from time to time.

\*1 MET = 3.5 ml/O<sub>2</sub>/Kg/min

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# Exercise Program for Individuals with Heart Disease *(cont)*

<b>Ranges of Physical Activity Intensity Levels</b>	
<b>Light-Intensity Activities (less than 3.0 METs)</b>	
<ul style="list-style-type: none"> <li>• Walking slowly (2 mph)</li> <li>• Golfing, powered cart</li> <li>• Swimming, slow treading</li> <li>• Gardening or pruning</li> </ul>	<ul style="list-style-type: none"> <li>• Bicycling, very light effort</li> <li>• Dusting or vacuuming</li> <li>• Conditioning exercise, light stretching, or warm-up</li> </ul>
<b>Moderate-Intensity Activities (3.0 - 6.0 METs)</b>	
<ul style="list-style-type: none"> <li>• Walking, briskly (3 to 4.5 mph)</li> <li>• Golfing, pulling or carrying clubs</li> <li>• Swimming, recreational</li> <li>• Mowing lawn, power motor</li> <li>• Playing tennis, doubles</li> </ul>	<ul style="list-style-type: none"> <li>• Bicycling 5 to 9 mph, level terrain, or with a few hills</li> <li>• Scrubbing floors or washing windows</li> <li>• Weight lifting, Nautilus machines or free weights</li> </ul>
<b>Vigorous-Intensity Activities (greater than 6.0 METs)</b>	
<ul style="list-style-type: none"> <li>• Racewalking, jogging, or running (5 mph or faster)</li> <li>• Swimming laps</li> <li>• Mowing lawn, hand mower</li> <li>• Playing tennis, singles</li> </ul>	<ul style="list-style-type: none"> <li>• Bicycling more than 10 mph, or on steep uphill terrain</li> <li>• Moving or pushing furniture</li> <li>• Circuit training</li> </ul>
<b>Time</b>	
<p>Warm up and cool down periods of 5-10 minutes including stretching and flexibility exercises should precede and follow 20-40 minutes of aerobic or cardiovascular exercise (sustained or continuous exercise using large muscle groups). Any exercise program for patients with heart disease should involve an initial slow, gradual progression of exercise duration and intensity.</p>	
<b>Type</b>	
<p>Cardiovascular or aerobic exercise is sustained continuous exercise which results in a moderate increase in heart rate above rest. Examples include: walking, biking, jogging, swimming, or cross country skiing.</p>	
<b>Cardiac Rehabilitation</b>	
<p>Cardiac Rehabilitation programs provide supervised, individual and group exercise for people with heart disease. Benefits include longer lives and fewer complications from heart disease. Most insurance companies cover cardiac rehabilitation for a time period after a heart attack, coronary intervention (stent) or surgery. Please discuss a cardiac rehabilitation program with your health care provider.</p>	

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# Exercise Program for Individuals with Heart Disease *(cont)*

## Risks and Complications

While exercise does have risks, the benefit of exercise far outweighs the risks for most people. Exercise has also been shown to be safe for most patients with heart disease. Signs and symptoms that you may not be tolerating exercise include:

- Chest pain (angina)
- Unusual shortness of breath
- Feeling lightheaded or dizzy
- Feeling very tired
- Excessive sweating
- Irregular heart beats (palpitations)
- An abnormal blood pressure response (rapid increase or drop in systolic BP)
- An abnormal heart rate (HR) (drop in HR or excessive increase)

If you have any of the above signs or symptoms, slow down or stop exercising. Report these to your health care provider.

American College of Sports Medicine Position Stand Exercise for Patients with Coronary Artery Disease. *Medicine, Science, Sports, and Exercise* 1994;26:3.

Guidelines for Cardiac Rehabilitation and Secondary Prevention Programs. American Association of Cardiovascular and Pulmonary Rehabilitation. Champaign, Ill: Human Kinetics;2004.

2008 Physical Activity Guidelines for Americans. Available at <http://www.health.gov/paguidelines> Accessed Jun. 7, 2009.