

Resistance Training Guidelines

FOR PEOPLE WITH HEART CONDITIONS



**Being physically active every day
is one of the best things you can do
for your heart.**

**Strengthening your upper body
through resistance training will help
your heart become stronger.**

There are two ways to be physically active to improve heart health - by taking part in aerobic activity and by doing resistance training. Aerobic activity such as walking and biking is an important part of having a healthy life. For more information, please visit kp.org/fitness.

This brochure outlines resistance training, also known as weight or strength training, for people who have a heart condition. This may include having a recent heart attack, heart procedure (such as angioplasty or bypass surgery) or other heart condition. To find out if resistance training is appropriate and safe for your specific condition, please talk with your health care provider.

Resistance training can safely and effectively increase muscle strength and stamina in most people with heart disease. Strengthening your body through resistance training will help your heart become stronger. If you have had bypass surgery, taking your joints and muscles through their range of motion can help prevent scar tissue from developing. It will also help to improve muscle weakness so that you become stronger and more fit. Having a strong heart means that your heart does not have to work as hard when doing activities such as lifting or other upper and lower body movements.

How can I exercise safely?

- Please check with your health care provider before starting any exercise program.
- Use **Table I** to determine when it is typically safe to begin or resume resistance training.
- **Table II** describes how to get started once it is safe to do so.
- If you have a nitroglycerine prescription, keep the medicine with you while you exercise.
- Until you know how you are going to respond to the exercise, have someone nearby who can help you, if you need help.

How should I start?

- Do your usual aerobic workout (walking, biking, etc) before doing resistance training exercises.
- Spend the first couple of weeks learning the exercises then gradually add more repetitions.
- Do your resistance training 2-4 times a week for 20-45 minutes per session. Make sure there are at least 48 hours between training sessions.
- **Stop the exercise if you have signs or symptoms** such as dizziness, irregular heart beat, unusual shortness of breath, and/or chest pain or pressure. Discuss the symptoms with your health care provider.

What are some tips for resistance training?

- For safety, remember to breathe out when lifting and breathe in when lowering.
- Count to two when raising weights, and count to four when lowering weights.
- Remember; keep your knees and elbows slightly bent when lifting weights.
- It is best to exercise large muscle groups (legs, back, and chest), before smaller muscle groups (arms and shoulders).

Table I



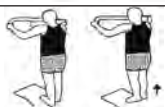




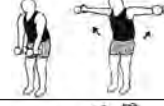




Event or Surgery	When to slowly begin or resume resistance training
Heart Attack	3-4 weeks
Bypass Surgery	3 months Avoid any exercise for 3 months that pulls on the breastbone. When doing resistance training, stop if at any time you have chest discomfort, or if a clicking sound or feeling develops.
Stent Placement	3 weeks
Pacemaker or ICD Placement	4 weeks Avoid any heavy arm movement for 4 weeks.

Table II

Resistance Training Schedule	Weight	Repetitions and Sets for each exercise
Weeks 1 through 3	1-3 lb barbells, wrist weights, or elastic bands	<ul style="list-style-type: none"> • 1-3 sets of each exercise • 10-12 repetitions each
Weeks 4 through 6	Use barbells or weight machines: <ul style="list-style-type: none"> • 2-5 lbs for arms • 5-10 lbs for legs 	<ul style="list-style-type: none"> • RPE 11-13 (see "RPE Scale") • 2 to 3 min rest between sets
Weeks 6 and beyond	Increase weight by 2-5 lbs a week for arms and 5-10 lbs a week for legs	If, after adding weight, you can only do 4-6 repetitions, you are using too much weight.

RPE Scale	
6	
7	very, very light
8	
9	very light
10	
11	fairly light
12	
13	somewhat hard
14	
15	hard
16	
17	very hard
18	
19	very, very hard

Sample Exercises

	Leg Extension
	Leg Curl
	Calf Raise
	Bent Row
	Pulldown
	Bench Press
	Fly
	Lateral Raise
	Shoulder Press
	Frontal Raise
	Arm Curl
	Tricep Kickback

- Best results are gained by doing one or two exercises for each of these muscle groups:
 - o Chest
 - o Shoulders
 - o Arms
 - o Back
 - o Stomach
 - o Legs
- Grip equipment firmly enough for safety. However, too strong a grip can raise your blood pressure.
- To protect your lower back, use good posture and don't twist while lifting.
- Some muscle soreness for a day or two after your workout is normal. Too much soreness might be a sign that you've trained too hard.
- "No pain, no gain" is not true. Avoid muscle and joint pain.
- How hard you exercise is less important than exercising on a regular basis.
- See the list of 'sample exercises' for ideas.
- Choose exercises that you enjoy, and try new exercises to keep your routine interesting.
- Exercise clothing should be comfortable, allow easy movement and help you stay cool.
- Remember, it is always better to do something than to do nothing, even if it is only for a few minutes.

