

Exercise and PH

Panelists: Janet Pinson, NP

Ivan Robbins, MD.

Moderator: Ronald Oudiz, MD

Questionnaire, Year 2000 : 19 PAH specialists

Question	Answer	
	YES	NO
1. Is exercise good for PH patients?	18	1
2. Do you actively tell PH patients to exercise ?	17	2
3. If you DO NOT tell patients to exercise, do you allow them to exercise if they ask?	2	-
4. If you DO tell patients to exercise, what do you tell them in terms of limiting the amount of exercise?	Common comments:	
	<ul style="list-style-type: none"> • Until you are a little short of breath. • Until you start sweating a little. • Until your legs are a little tired. 	
5. If you allow patients to exercise, what types of exercise are best for the PH patient? <u>Chose all that apply:</u>	Common comments:	
	<ul style="list-style-type: none"> • Light resistance training as tolerated • Light aerobic training as tolerated 	
	One-time comments:	<ul style="list-style-type: none"> • 6/10 dyspnea (shortness of breath) • O2 sat >85% • before dizzy (2) • to tolerance • listen to your body (3) • use HR at end of 6MW • chest pain, nausea • start 10' → 20', incr pace • monitor if high risk (your provider will know) • if very debilitated, start them exercising in a rehab program
		<ul style="list-style-type: none"> • 6/10 dyspnea (shortness of breath) • O2 sat >85% • upper limb exercise (2) one at a time • no isometrics (heavy weight lifting, straining) • walking (3), swimming (2) biking (2), slow jog • don't know

Question	Answer	Question
	YES	NO
6. Can regular exercise do any permanent harm to the heart?	3	5
7. If YES, or POSSIBLY to #5, do you think that the benefits of exercise usually outweigh the risks?	11	0
8. Do you have a formal cardiac or pulmonary rehabilitation program for PH patients?	7	12
9. If you DO have a formal cardiac or pulmonary rehabilitation program, what criteria would you consider contraindications to this rehabilitation program?	Parameter	# saying yes
	a. NYHA III	0
	b. NYHA IV	11
	c. Any history of syncope	1
	d. History of syncope (passing out) with exercise	11
e. Other (specify):	edema, signs of heart failure	
11. If you DO NOT have a formal cardiac or pulmonary rehabilitation program, would you like to have a rehabilitation program for your PH patients?	10	3
<p>a. if patients are too motivated by the observer, patients may do too much!</p> <p>b. I have a rehab program but I prefer that my PH patients walk at home</p> <p>c. would add a nutritional program</p> <p>d. we need a study proving rehab works so that we can bill for it</p>		

POINTERS ON EXERCISE REHABILITATION:

- * discuss exercise with your PH provider before starting an exercise program.
- * pulmonary rehab is always a good way to start an exercise program. You will be closely monitored and given exercise guidelines. Most insurance companies cover pulmonary rehab (including Medicare), and will also cover it under "heart failure"
- * start slow and slowly build up your endurance. Deconditioning adds to the burden of movement, makes it harder to do anything, and likely puts more strain on the heart. "Listen to your body"
- .
- * limit exercising to your symptoms. Never try to "push through" increased shortness of breath, chest pain, or dizziness.
- * exercise comes in many forms, from stretching, to chair exercises, to walking, bike riding, or swimming (if you don't have a pump).
- * even housework and gardening can be forms of exercise.
- * if you wear oxygen, you must wear it while exercising or doing any other physical activity.
- * you may need to increase the oxygen 1-2 liters when exercising. Check O2 saturations either during a 6 minute walk or at your rehab center when starting a program.
- * reasons to exercise: increase strength, better sleep, improves depression, feel good about yourself, weight control, sense of accomplishment.
- * use your 6 minute walk as a guide to how much you can do and your oxygen setting.
- * if you use iloprost (Ventavis), plan to exercise within the first 2 hours after your treatment.
- * Be careful about dehydration, especially in the hot weather. Water, or a little Gatorade/Powerade MAY be ok, but they have a lot of salt; avoid soda, tea, coffee, and DO NOT OVERDO IT!! Too much fluids can be harmful as well. Consult your PH specialist about fluids and salty drinks before starting your exercise program.

THERE IS NOT MUCH RESEARCH IN THIS AREA...YET.

FOR NOW, ASK YOUR PROVIDER ABOUT EXERCISE

PHA Consensus statement on exercise:

(<http://www.phassociation.org/Learn/Consensus-Statements/display.asp?id=7>)

The information below is for general information only. These guidelines may not apply to your individual situation. You should rely on the information and instructions given specifically to you by your PH specialist and/or the nurses at your PH Center. This information is general in nature and may not apply to your specific situation. It is not intended as legal, medical or other professional advice, and should not be relied upon as a substitute for consultations with qualified professionals who are familiar with your individual needs.

There are no published data in the medical literature regarding routine exercise in patients with PAH. However, there are considerable data available from studies evaluating the effects of exercise in patients with left heart failure that suggest physical activity and a regular exercise program are helpful in maintaining muscle tone, physical (and mental) well-being, and in some cases, improving long-term survival. There is also some data suggesting that physical inactivity may be detrimental to patients with left heart failure. Because right heart failure in PAH leads to effects on the body similar to that seen with left heart failure, exercise in PAH patients may have similar benefits. However, the actual benefit of exercise in patients with PAH has not been well studied. In general, several important points can be made about exercise in PAH:

1. Many PAH specialists agree that some form of exercise is not harmful for PAH patients and may be helpful.
2. Patients with PAH should speak with their provider before beginning any exercise program.
3. Patients with PAH should not over-exercise at any time. In other words, do not exercise to the point where symptoms such as light-headedness, chest pain, or severe shortness of breath develop. To determine how much exercise is reasonable, each patient should talk with his/her PH specialist to develop an individualized exercise plan.
4. Exercise such as light resistance training of small muscle groups (no heavy lifting), and light to moderate aerobic activity (walking, swimming, etc.) are the recommended forms of exercise for PAH patients.
5. Except in those PAH patients with minimal or no symptoms, it is inadvisable to exercise upper and lower limbs at the same time (for example as with a Nordic track machine).
6. In general, patients with severe limitation of activity, and/or a history of dizziness and/or fainting during exercise should not continue with, or plan to begin, a regular exercise program.
7. A clinic or hospital-based exercise facility to perform regular exercise should be considered when starting an exercise program, but is not required.
8. Outdoor exercise should be avoided during hot or humid weather.

In summary, a regular exercise program is likely to be helpful for patients with PAH, and probably not harmful, provided patients discuss the type of activity with their PH specialist prior to starting any exercise program.