

Pulmonary Hypertension: Getting Active and Staying Active (Seated Exercises)

People with pulmonary hypertension (PH) should stay as active as possible at home. Because the severity of PH and other health conditions vary from patient to patient, recommendations for exercise may be different for everyone. Always talk to your PH specialist or PH care team before starting a new activity program.

Why is daily activity important?

Regular exercise can improve exercise capacity, muscle function and quality of life for people with pulmonary hypertension (PH)

What are the benefits of regular physical activity?

Exercise may make you feel better, allow you to accomplish more, and make routine daily activities easier to do.

You don't have to do all your exercise at one time. Exercising in shorter sessions a few times a day may work better for you. For example: you can exercise in three, 10-minute blocks to reach 30-minutes.

Tips for exercising safely

1. Plan to exercise when you have the most energy.
2. Find an exercise partner to be active with.
3. **Do not** hold your breath while exercising.
4. Include a warmup and cool-down into your exercise routine.
5. Start slowly and gradually build up in intensity, frequency, and duration.
6. If any movement is painful, make the movement smaller or stop doing that exercise.

7. **Do not** exercise if you experience chest pain or tightness, dizziness or lightheadedness, worsening shortness of breath or a fast or irregular heartbeat.
8. Ask your PH provider if it is safe to do resistance training and lift more than 10 pounds.

Exercise Session Step One: Sitting Exercises

This section contains descriptions and pictures of each exercise you may consider during your exercise session at home. These exercises are not intended to be a difficult workout for your body. These exercises may prevent pain from developing in your shoulders and trunk. They may also help you with your breathing.

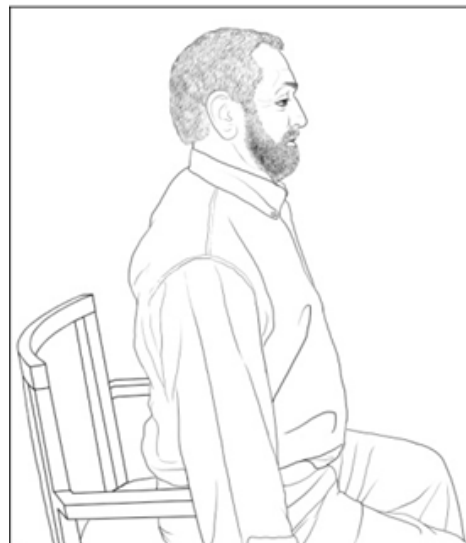
How often should I perform these exercises?

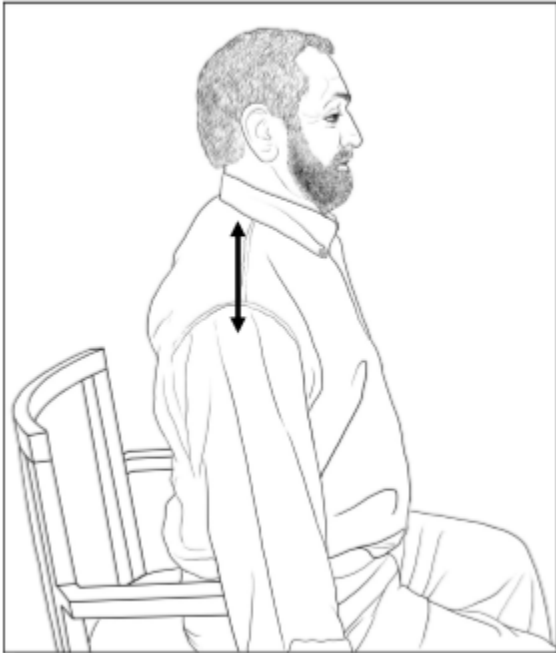
Perform these exercises 1 or more times a day. Repeat each exercise 10 times.

Posture Tips

- Sit upright looking straight ahead with your chin tucked and shoulders pulled back.
- Make sure that you are relaxed and rested before starting.
- **Use this posture with all exercises below.**

Upright Posture:





1. Shoulder Shrugs -

Bring your shoulders up to your ears while breathing in, then relax your shoulders down while breathing out. Repeat.



2. Shoulder Circles -

- Sitting upright, roll your shoulders in a smooth motion up, back, and down in a circle.
- Repeat then reverse direction.

3. Trunk Twists -

- Slowly rotate your trunk to the right, looking over your shoulder. Hold and stretch.
- Then rotate your trunk to the left, hold and stretch. Repeat sequence.



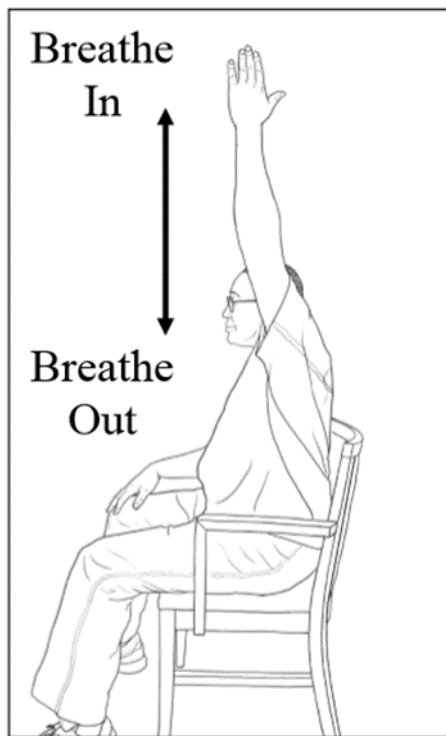
4. Trunk Side bending -

- Hold your arms relaxed at your sides and maintain your trunk upright.
- Lean to your right side slowly. Hold and stretch.
- Then lean to your left side, hold and stretch. Repeat sequence.



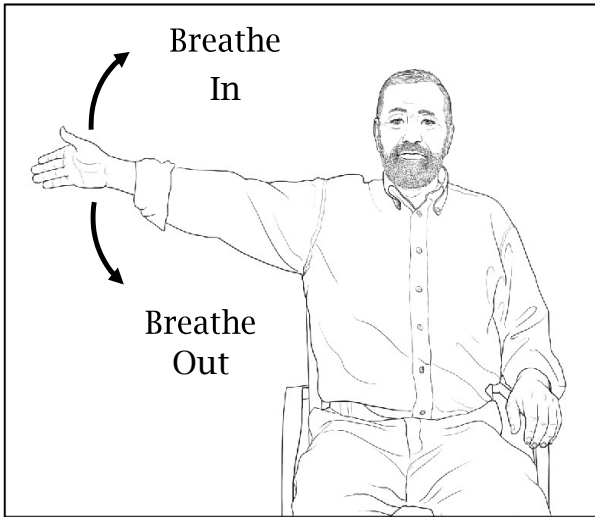
5. Chest Stretch-

- Place your hands behind your head while sitting upright.
- Move your elbows back breathing in until you feel a stretch, hold.
- Relax elbows forward breathing out to rest, then repeat.



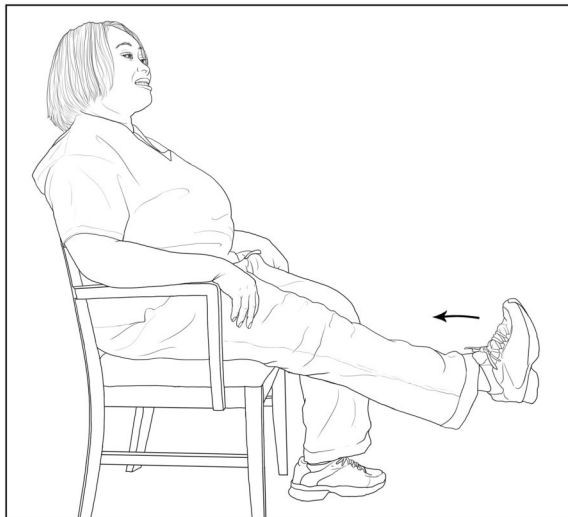
6. Forward Arm Raise -

- Sitting with upright posture, straighten your arm with your thumb facing up.
- Raise your arm up to the front over your head. Your elbow should be next to your ear.
- Repeat with your other arm.



7. Out, Up and Over -

- Hold your arm straight out to your side with your thumb up.
- Raise your arm up to the side over your head, hold and stretch.
- Repeat with your other arm.

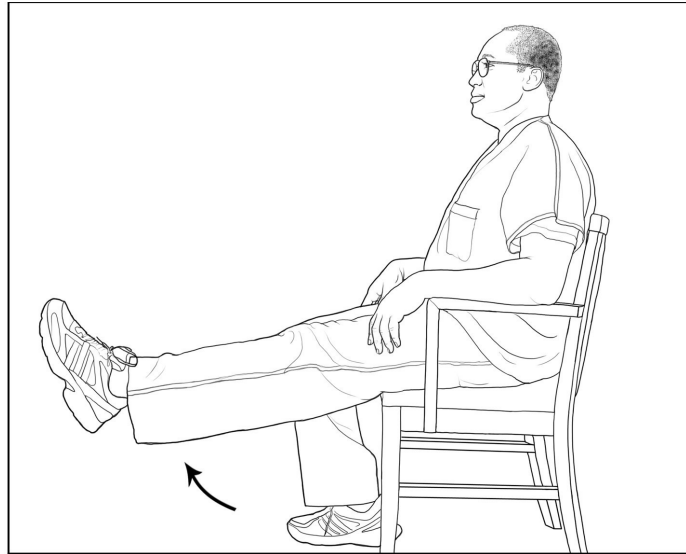


8. Ankle Pumps -

- Move your ankle up and down (like pressing and releasing a gas pedal).
- You may perform this exercise sitting or lying down.

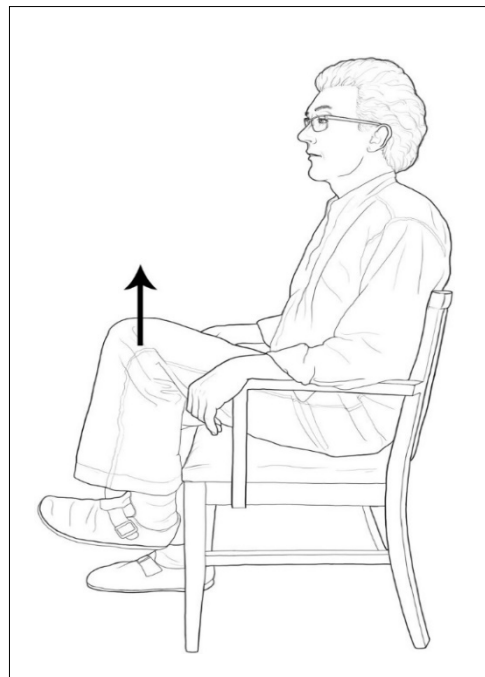
9. Leg kicks -

- Sitting with upright posture in a chair or in the bed, kick your leg out straight and slowly.
- Hold for 3 seconds, then repeat with the other leg.



10. Seated marching -

- Sitting with upright posture in a chair, lift your knee up towards the ceiling without leaning backwards.
- Repeat with the other leg.



Activity Session Step 2: Cool Down

Like the warm-up phase, your cool down should last up to 5 minutes. This will help your body recover from activity. The best way to cool down is to decrease the intensity of the activity you are doing.

How will I rate my activity intensity?

During aerobic activity, you will rate your effort. This means that your care team wants you to estimate how hard the activity is for you. This is called **exertion** or effort. Use the table below while you are doing an activity. It ranges from 6 to 20. **6 means "no exertion at all" and 20 means "maximal exertion."**

How will I use the perceived exertion scale?

During activity, take a moment to sense how you are feeling. Now relate that feeling to one of the numbers on the **rate of perceived exertion (RPE)** scale below. For example, sitting in a chair you might feel like you are exerting yourself at a 6. This means it is “no exertion” (or very low effort) on the perceived exertion scale. Walking at a moderate pace, you might perceive to be a 11 “fairly light” or 13 “somewhat hard” effort. It is advised that you **do not** exercise at “very hard” or “very, very hard” effort.

Identify the level of exertion you are feeling:		Activity zone instructions
6	No exertion	
7	very very light exertion	
8		
9	very light exertion	
10		
11	fairly light exertion	This is your exercise goal: a rating of 11-13 is ideal
12		
13	somewhat hard	
14		Slow down your movements to get back to the green zone
15	Hard	
16		
17	very hard	Stop and rest
18		
19	very very hard	
20		

What are the signs and symptoms of overexertion?

During exercise, it is normal to feel short of breath, sweat and have a faster heartbeat than normal. If exercise puts too much strain on your body, you may experience signs of overexertion. The following signs are things to watch for:

- Significant shortness of breath
- Chest pain or tightness
- Dizziness or lightheadedness
- Unusual or extreme fatigue
- Fast or irregular heartbeat

Steps to take if you have any of these symptoms while you are active:

1. Slow down
2. Rest while standing
3. Rest while sitting
4. **Stop** the activity if your symptoms do not get better with the first 3 steps.
5. **Call 9-1-1** if your chest pain or other symptoms do not go away.



**Never stop exercising suddenly.
This may cause you to feel dizzy or lightheaded.
Always do a cool down routine.**

Additional resources for exercise:

- Pulmonary Hypertension Association Website
Includes "Introduction to Exercise Video Series" and questions to ask your PH care team before you start exercising: <https://tinyurl.com/4wcbcr42>
- Introduction to Yoga for Pulmonary Hypertension Patients

Includes seated and standing yoga, developed by Dr. Rana Adwish,
Pulmonary Hypertension Program at Henry Ford Health System.

<https://tinyurl.com/5bwnrkwn>

- Michigan Medicine Pulmonary Hypertension: Getting Active and Staying Active (Standing Exercises): <https://michmed.org/Jy4AY>

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