

Department of
Respiratory & Critical Care Medicine

Exercise Training with Chronic Lung Disease



An Introduction to Chronic Lung Disease

What is Chronic Lung Disease?

It is a type of disease that affects your lungs and other parts of your respiratory system (organs and tissues that help you to breathe).

With chronic lung disease, you may develop a lower exercise tolerance, which means you will only be able to endure a shorter time during exercise before feeling breathless and tired.

If left unaddressed, it may lead to a decreased ability to perform activities of daily living (e.g. dressing, showering) with ease, and may also cause you to feel breathless at rest.

Benefits of Exercise in Chronic Lung Disease

By exercising, you will have:

- Better control of breathlessness (difficulty breathing)
- Increased muscle mass and strength
- Higher exercise tolerance
- More confidence in your own abilities
- Improved quality of life (higher standards of health, comfort and happiness)



Recognising Your Symptoms

Normal Symptoms You May Experience During Exercise:

- Light to moderate shortness of breath (based on the Modified Borg Scale 3-4, on page 11 of this booklet)
- Sweating
- Tiredness
- Light muscle aches

Abnormal Symptoms You Should Take Note Of During Exercise:



- Chest pain
- Intense joint pain
- Dizziness or vertigo
- Heart beating abnormally fast/pounding feeling
- Severe or prolonged breathing difficulties
- Headaches

If you experience any of the above abnormal symptoms, please stop your exercise immediately. Please contact your physiotherapist or physician if the symptoms continue even after resting.





Relieving Your Breathlessness

If You Are Feeling Breathless,

Step 1	Stop and find a comfortable position while sitting or standing.	
Step 2	Go into a forward leaning position (sitting or standing).	
Step 3	Use one or both of the following breathing techniques: <ul style="list-style-type: none">• Pursed Lip Breathing• Breathing Control (Refer to page 6 and 7 for instructions)	<p><i>Your Physiotherapist will advise you on which technique to use based on your condition.</i></p>

Relieving Your Breathlessness

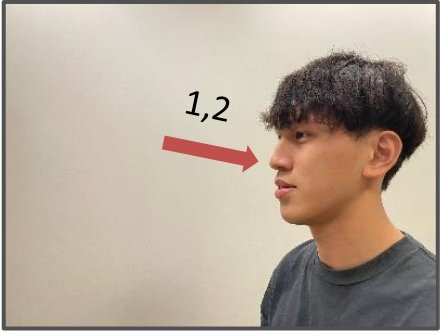
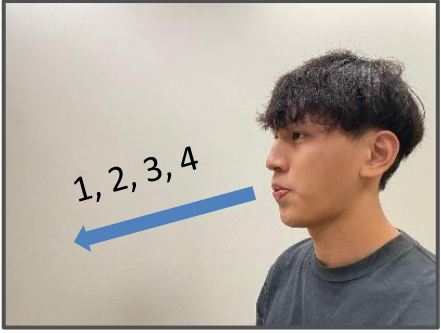
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<p>Step 4</p>	<p>Use a hand-held fan while performing pursed lip breathing to help you feel more comfortable.</p> <p>a) Hold the fan approximately 15cm away from your face</p> <p>b) Aim the air towards the center of your face</p>	 A man in a dark grey t-shirt and black shorts is sitting on a black office chair at a light-colored desk. He is holding a small, black, handheld fan in his right hand, directing it towards his face. He is looking slightly to the left of the camera.
<p>Step 5</p>	<p>Take short acting inhalers (if required).</p>	 A woman with dark hair tied back, wearing a dark blue polo shirt, is sitting in a black office chair. She is holding a small blue and white inhaler to her mouth with her right hand and appears to be using it.

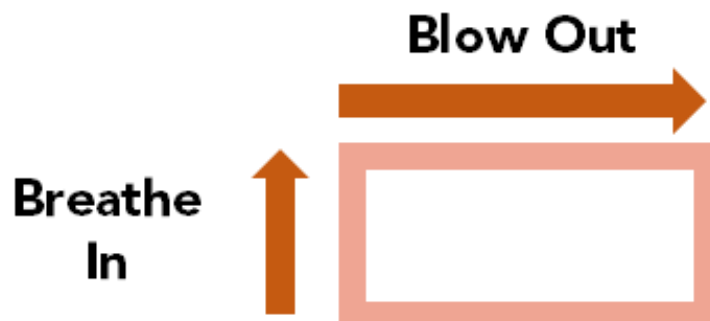
(End of steps)

Breathing Techniques

1. Pursed Lip Breathing

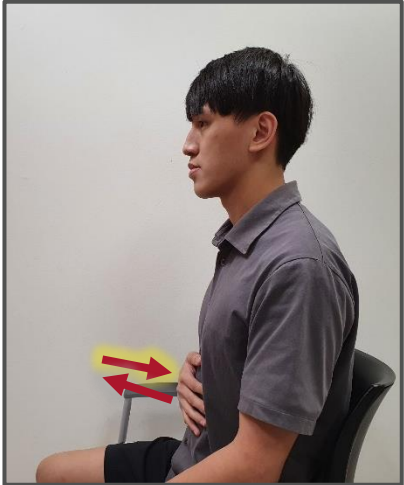
Step 1	Breathe in through your nose for two counts.	
Step 2	Breathe out slowly through a small hole between your lips for four counts. Try to blow out longer.	

You can also imagine a rectangle and try to breathe around the rectangle. This will help you to visualise taking longer breaths when blowing out.



Breathing Techniques

2. Breathing Control

Step 1	Place your hand on top of your stomach.	
Step 2	Relax your upper chest, shoulders and arms.	
Step 3	Breathe in through your nose and breathe out slowly through your mouth.	
Step 4	Feel your stomach move in and out as you breathe.	

Getting Ready for Exercise

Before Exercise:

- Ensure that you have taken your prescribed medications as instructed by your doctor
- Carry your rescue inhaler with you at all times when exercising, if applicable
- Wear comfortable clothes and proper footwear
- Perform warm up exercises before you start

During Exercise:

- Pace yourself throughout the exercise session
- Increase the intensity and duration of your exercises over time, and focus more on duration
- Ensure the use of oxygen during exercise, if prescribed by your healthcare professional

After Exercise:

- Perform cool down exercises after you are done

An example of an exercise session will look like this:



Different Types of Exercises

You Are Recommended to Do:

Endurance Training



- 3 to 5 times per week
 - 30 minutes per session, accumulating to 150 minutes per week
 - Do **moderate intensity** exercises where you are still able to talk, but not sing during the exercise
 - Examples include walking and cycling
-

Strength Training



- 2 to 3 times per week
 - Start with 1 to 3 sets of 10 to 15 repetitions
 - Gradually progress to use heavier weights, completing 1 to 3 sets of 8 to 10 repetitions
 - Examples include exercises targeting the upper body, stomach and lower body
-

Flexibility



- Daily
- Hold stretches for 30 seconds and repeat each stretch 3 times
- Examples include stretches for the body, upper limbs and lower limbs
- Usually done as warm up and cool down

Goal Setting

Setting exercise goals for yourself will help motivate you to complete your exercise programme.

When setting exercise goals, ask yourself these questions:

1. **What** are you going to do?
2. **How long** are you going to do it for?
3. **How much** are you going to do it?
4. **How many days a week** are you going to do it for?

Example:

This week, I will walk (**what**) for 30 minutes (**how long**) at moderate intensity (**how much**) three times (**how many**).

Using an exercise log (refer to pages 11 and 12) will also make it easier for you to stick to your exercise programme.

You may use this template to log your exercise sessions:

- **Duration:** ___ minutes
- **Vital Signs:** Oxygen levels/breathlessness
- **Comments:** Weather/other symptoms, etc.

Your Physiotherapist will provide you with a list of exercises that you will need to perform.

Week	Type of Training	MON	TUE	WEDS	THUR	FRI	SAT	SUN
1	Endurance							
	Strengthening							
2	Endurance							
	Strengthening							
3	Endurance							
	Strengthening							
4	Endurance							
	Strengthening							

Week	Type of Training	MON	TUE	WEDS	THUR	FRI	SAT	SUN
5	Endurance							
	Strengthening							
6	Endurance							
	Strengthening							
7	Endurance							
	Strengthening							
8	Endurance							
	Strengthening							

How to Monitor the Intensity of Your Exercise?

1. Use the Talk Test

- Low intensity: you can sing while exercising
- Moderate intensity (target): you can talk but cannot sing while exercising

2. Use the Modified Borg Dyspnea Scale

Rating	Modified Borg Dyspnea Scale (Level of Exertion)
0	Nothing at all
0.5	Very, very slight (just noticeable)
1	Very slight
2	Slight
3	Moderate
4	Somewhat severe
5	Severe
6	
7	Very severe
8	
9	Very, very severe
10	Maximal

A bracket on the right side of the table groups ratings 3 and 4. A box labeled "Target Level of Exertion" points to this bracketed area.

3. Measure Your Oxygen Levels

- Your oxygen levels should be more than ***90%** when measuring with a pulse oximeter
(*Unless stated otherwise by your physician)

Clinic 4A
TTSH Medical Centre, Level 4
Contact:
6357 7000 (Central Hotline)



Scan the QR Code with your smart phone to
access the information online or visit
<http://bit.ly/TTSHHealth-Library>

Was this information helpful?
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any feedback regarding what you have
just read at
patienteducation@ttsh.com.sg



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