

Breathlessness

Category: 2 Symptom

What is breathlessness?

Breathlessness describes feeling winded or short of breath. It may feel as though you can't take a deep breath or get enough air. Your chest could feel tight and you may even feel as though you're gasping for air at times.

These sensations can occur when you're exerting yourself or when you're not doing anything.

It is common for people with Long COVID to feel breathless. However, in most cases, the actual amount of oxygen in the blood is normal.

What to discuss with a doctor

When you talk to a doctor about your breathing, try to describe what you experience using as much detail as possible and what you were doing just before you felt breathless. This will help the doctor better determine what to do to treat this symptom.

Here are some examples of questions the doctor may ask you and some examples of answers you can provide them.

- Doctor's question: What causes the shortness of breath to come on?
 - Sample answers you can give: When I'm eating. When I feel stressed. When I'm walking. When I go up the stairs.
- Doctor's question: What helps the shortness of breath to go away?
 - Sample answers: When I rest. When I take deep breaths.
- Doctor's question: Do you have any other symptoms that occur at the same time as with your shortness of breath?
 - Sample answers: Pain in my chest. Coughing. Wheezing.

Why you may feel breathless

With Long COVID, there are several factors that may contribute to your sensations of breathlessness. Three of these include:

1. **Physical changes to your lungs:** For some people, there may be changes to their lungs after a COVID infection. There is not always a cure for this, but it can improve over time. Most people with Long COVID show no detectable abnormalities on lung tests but still experience breathlessness.
2. **Changes to your autonomic nervous system:** Breathing is vital to survival, and so when you have difficulty breathing, it can activate your natural 'fight or flight' response. Many people with Long COVID have an overactive sympathetic (fight or flight) branch of the autonomic nervous system. This means you might feel breathless more easily, which can make you breathe faster or hyperventilate and can make you feel panicky.
3. **How your chest moves when you breathe:** Many people with Long COVID have been found to breathe primarily into just the upper chest and to breathe too quickly. This is sometimes called 'breathing pattern disorder' or 'dysfunctional breathing.' This way of breathing uses more energy than breathing with a more normal pattern. This way of breathing can also contribute to worse feelings of breathlessness over time.

Test to rule out other conditions if you have breathlessness

There are many different causes for breathlessness. You should ask a doctor if they think that you need further tests for your breathing to diagnose (or rule out) other causes that may require monitoring and treatment.

Here are some tests that a doctor may order if you have breathlessness. Depending on your specific case, your healthcare provider may request multiple tests at the same time, or wait for the results of one or more tests before ordering others. The content below is in line with the Canadian Guidelines for Post COVID-19 Condition (CAN-PCC), which are based on a rigorous review of scientific evidence available to date (as of Spring 2025). For individual recommendations for each test, please see 'Where to next?' at the end of this topic.

Imaging tests for the lungs and heart

- A [chest x-ray](#) takes a picture of your lungs and heart. If you are experiencing heart and/or lung symptoms, it is recommended that a chest x-ray be done to help diagnose or rule out important heart and lung conditions, such as pneumonia, fibrosis/lung scarring, or heart failure.
- A chest CT scan ([for people who are at high risk of pulmonary complications](#), [for people who are at low risk of pulmonary complications](#)) also takes a picture of your lungs and heart but with greater detail than an x-ray. It is recommended that a CT scan be completed for people with Long COVID who have respiratory symptoms and abnormalities detected on chest X-ray or chest CT before, or people who were hospitalized during their COVID-19 illness.

Other tests for the lungs

- [Pulmonary function tests \(PFTs\)](#) are a series of tests that help assess how well you move air in and out of your lungs. They are typically done at a hospital laboratory where you are asked to breathe into and out of special machines. PFTs can help diagnose (and rule out) some lung conditions like asthma and chronic obstructive pulmonary disease (COPD).
- [A 6 minute walk test with oximetry](#) involves walking back and forth for 6 minutes while wearing a portable device on your finger that measures the amount of oxygen in the blood. This test is recommended for people with Long COVID experiencing heart or respiratory symptoms to help diagnose (or rule out) lung conditions, such as interstitial lung disease. Sometimes, tests like this can worsen symptoms for people with Long COVID who experience post-exertional malaise. If you are concerned about this, ask your doctor about other test options.

Blood tests for the heart

- [BNP \(B-type natriuretic peptide\) tests or NT-proBNP \(N-terminal pro b-type natriuretic peptide\) tests](#) help to screen for serious heart conditions, such as heart failure. This test is recommended to help diagnose (or rule out) heart conditions in people with Long COVID who are experiencing heart and/or respiratory symptoms. If you have an abnormal BNP or NT-proBNP test, a doctor may order additional tests (such as an echocardiogram) to help identify if you have a heart condition.
- [Troponin tests](#) are recommended to help diagnose (or rule out) heart conditions in people with Long COVID who are experiencing heart or respiratory symptoms. If you have an abnormal troponin test, a doctor may order additional tests (such as an electrocardiogram or stress test) to help identify if you have a heart problem.

Other tests for the heart

- [An electrocardiogram \(also called EKG or ECG\)](#) takes a 'snapshot' of your heart's electrical pattern. If you have heart and/or lung symptoms, this test is recommended to help detect (or rule out) heart conditions, such as abnormal heart rhythm or inflammation of the heart.
- [A 24-hour Holter monitor](#) is a device that you wear that keeps track of your heart's electrical pattern for 24 hours. Holter monitoring is usually done after an ECG/EKG, if a recent ECG is not already available. It is recommended for people with Long COVID experiencing certain heart or respiratory symptoms, like chest pain, heart palpitations, increased (or decreased) heart rate, or shortness of breath. This test may help detect (or rule out) heart conditions, such as an abnormal heart rhythm.
- [Echocardiograms](#) are ultrasounds that look at the valves and chambers of your heart. It can help detect any disorders in the heart function, heart muscle, or valves. This test may detect (or rule out) heart conditions, such as heart failure, inflammation of the heart muscle, and pulmonary hypertension (high blood pressure affecting the arteries in the lungs). It is a recommended test in people with Long COVID experiencing heart and/or respiratory symptoms.

- **Stress tests** evaluate how your heart responds to stress in a monitored environment. This may involve monitoring your heart while you walk or run on a treadmill or after injection of a medication. Sometimes, stress tests involving physical exercise can worsen symptoms for people with Long COVID (especially if they suffer from post-exertional malaise). If you are concerned about this, ask your doctor about other test options.

What you can do over the long-term

Right now, there is not always a cure for any physical changes that may have happened in your lungs, but some changes may improve over time.

To help with your feelings of breathlessness, you can practice a basic breath work exercise. It can:

1. Help calm your autonomic nervous system by decreasing your heart rate and breathing rate and allowing your muscles to relax
2. Retrain your breathing pattern to make it more efficient and decrease other effects on your body

We recommend that you do the basic breath work exercise at least 3 to 4 times per day for 3 to 4 minutes at a time.

It's easiest to start by practicing in a comfortable resting position, either sitting or lying down.

Try adding breath work to the regular 'true rest' breaks that are also recommended to help you with energy conservation. Remember, all of your symptoms, including breathlessness, will get worse with overexertion. Therefore, pacing and energy conservation strategies are extremely important for reducing your feelings of breathlessness.

Recovery strategies to help regain control over your breathing when you are experiencing breathlessness

1. Find your recovery position.

Try getting into a resting position that makes it feel easier to breathe (leaning forward helps). Then, consciously try to relax any muscles you don't need to breathe (such as your hands, arms, and neck). A good way to remember is to 'Flop, drop, and lean forward.'

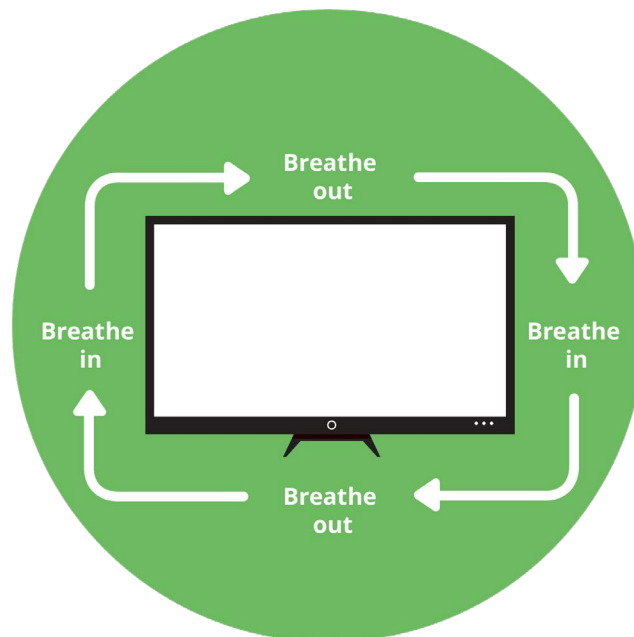
2. Breathe through pursed lips.

Try creating a slight resistance with your lips when you breathe. Purse your lips, as if you're whistling or blowing out birthday candles, and breathe in and out through your mouth. When you regain control over

your breathing, start breathing in (inhaling) through your nose and keep breathing out (exhaling) through your pursed lips.

3. Try rectangle breathing.

When your breathing is under control, find an object in your space that is rectangle shaped – such as a TV, a window, or a doorway. It should have shorter sides and longer sides. With your eyes, follow the longer side of the rectangle as you breathe out and follow the shorter side as you breathe in. This will help you to breathe out for longer, which helps to stimulate your parasympathetic (rest and digest) nervous system and bring you a sense of calm.



Where to next?

- Read the recommendations by Canadian Guidelines for Post COVID-19 Condition on
 - [Chest x-ray](#)
 - Chest CT scan
 - [for people who are at high risk of pulmonary complications](#)
 - [for people who are at low risk of pulmonary complications](#)
 - [Pulmonary function tests \(PFTs\)](#)
 - [6-minute walk test with oximetry](#)
 - [BNP tests](#)
 - [Troponin tests](#)

- [Electrocardiogram](#)
- [24-hour Holter monitor](#)
- [Echocardiogram](#)
- Watch [videos](#) by healthexperiences.ca in which individuals with Long COVID describe different symptoms they experience.