

Respiratory Function Testing

How will lung function tests help me?

Respiratory (or lung) function tests assess how well your lungs work.

They are important investigations which:

- Help diagnose suspected lung disease
- Help in planning treatments and to decide whether treatments should be continued, changed or are no longer needed

What does testing involve?

Lung function tests aren't complicated to perform but they can be hard work.

You will be asked to breathe through a mouthpiece that is connected to the lung function test equipment. All the tests are repeated several times to confirm the accuracy of the results. During testing you may be required to take big breaths in and out, blow out as hard and fast as possible or hold your breath for a few seconds. While this is not usually uncomfortable, you may exert yourself, become tired and or feel a bit puffed out.

Is there anything I need to do before a lung function test?

You may be asked to not use your inhalers or puffers for a specific time prior to the testing.

If you think you cannot stop taking your puffers for the stated time, you should take them as normal.

The scientist conducting your test will ask you about this.

If you have any further questions about what to do before a test please contact the Respiratory Function Unit using the numbers listed on the next page.

When will I find out the results of the tests?

The results of breathing tests should always be provided and explained to you by a doctor.

Usually you will find out your test results at your next appointment.

What tests might I be asked to complete?

You may be asked to perform a single test or a combination of tests. The single test most asked for by doctors is spirometry. The most common combination of test requested by doctors includes spirometry (before and after puffers), gas transfer and lung volumes.

Spirometry (time: 30 minutes)

Spirometry measures the volume and pace of air you can forcefully exhale from your lungs after a maximal breath in. This is measured with a device called a spirometer.

In this test you will be asked to inhale as much air as possible and then blow the air out as fast as you can until no more air can be exhaled.

This test is usually performed before and after a bronchodilator, or puffer, (normally Ventolin™ or Bricanyl™) to assess the effect of these medications on your lung function.

Gas transfer (10 minutes)

This test measures how well you can move, or 'transfer' gases from the lungs to the bloodstream.

In this test you will be asked to take a deep breath in of a harmless gas mix and hold your breath for around 10 seconds. While you are holding your breath some of the gas moves from your lungs to your blood. A computer works out how much gas has moved or transferred.

If you are a current smoker, you should avoid smoking for 6 hours before the test as this can affect the result.

Lung Volumes (10 minutes)

Although it may feel like it, your lungs are never completely empty even when you have blown out as far as you can in the spirometry test. So to work out your total lung volume (or total lung capacity) we use a test that measures the air you can't breathe out as well as the air you can.

This test requires you to sit inside a see-through chamber. Sensitive equipment measures very small pressure changes occurring inside the chamber as you are breathing; these pressure changes are used to calculate your total lung volume or capacity.

In special circumstances, the test can be performed by breathing in a small amount of special gas mixture over a few minutes. The amount of gas diluted by the air in your lungs is used to work out your total lung capacity.

While many patients prefer this way to test lung volumes, it is less accurate.

Arterial Blood Gases (15 minutes)

The main aim of your lungs is to get oxygen into your blood and remove carbon dioxide.

If your lungs are not working properly the amount of oxygen in your blood may be lower than normal and the amount of carbon dioxide may be higher.

This test requires a small sample of blood to be collected from an artery in your arm or wrist to measure these 'blood gases',

It is important to tell the person doing the test if you are taking any blood-thinning tablets like Aspirin™ beforehand.

Six Minute Walk Tests and Home Oxygen Assessments

In this test you will be asked to walk as far as you can in six minutes and your oxygen saturations will be recorded. You will also be asked questions about your breathlessness and tiredness.

If you are being assessed for the need for oxygen at home or when you exercise, you may be required to complete the walk breathing oxygen from a portable bottle.

If possible wear comfortable clothing including walking or running shoes.

You should continue all your puffers and medications as normal.

This information sheet is intended as a general guide only.

Please consult your family doctor, specialist respiratory doctor, or the Respiratory Function Unit staff if you have any further questions about the information provided here.

For more information

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This document has been reviewed and endorsed by consumers



Interpreter



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