Asthma
& Lung Function Tests

A guide to breathing tests for asthma

FOR PATIENTS & CARERS

what are

Lung Function Tests?

If you have asthma, or are suspected to have it, you will need to have lung function (breathing) tests.

These tests check how well your lungs are working and how asthma affects your breathing. Two types of breathing tests are used for asthma – **spirometry** and **peak flow measurement**.

Spirometry breathing tests

Spirometry is the most accurate breathing test for asthma. It measures the amount of air you can breathe in and out of your lungs, and how hard and fast you can breathe out. In other words, it measures your overall lung function.

The machine used to do the test is called a spirometer. Doctors use a spirometer to:

- check whether the airways in your lungs are narrower than they should be
- confirm whether you have asthma
- work out how severe your asthma is
- see if your asthma is getting worse
- see if your asthma is getting better with treatment.

The test results help you and your doctor to decide whether you need any medicines, or to work out whether the type or dose of your current medicine needs to change. Most adults and children over 7 years of age can do the spirometry test correctly.

What will I have to do for a spirometry test?

The spirometry test is usually done at your doctor's clinic, or your doctor may refer you to a hospital laboratory that specialises in this test.

Before you do the test, the health professional conducting the spirometry will explain how to do it correctly. They will also strongly encourage you throughout the test to breathe out as hard and fast as you can.

You may also be asked to use a nose peg to make sure you are breathing out of your mouth, not your nose.

During a spirometry test you will be asked to:

1. Sit upright in a chair with your legs uncrossed and feet flat on the ground
2. Breathe in completely and rapidly
3. Pause for less than 1 second
4. Place the spirometer mouthpiece in your mouth and close your lips to form a tight seal
5. Breathe out as fast and as hard as possible, until your lungs are completely empty, or until you are unable to blow out any longer
6. Breathe in completely and rapidly again
7. Remove the mouthpiece

You will need to repeat the test at least three times to get the best result. Sometimes this may not be possible in one visit, because the test can be quite tiring.

The test is not painful – it just needs you to put in your best effort to breathe out as hard as you can!

Sometimes you may be asked to do the spirometry test again after having some puffs of a 'reliever' medicine (usually a blue- or grey-coloured puffer). The test will be done about 10 minutes after you've taken the reliever to check if the medicine helps your lungs to work better.

Your doctor should always explain your spirometry tests results to you.

For more information on what a spirometry test involves, go to our website to watch a video:

nationalasthma.org.au

Peak flow breathing tests

A peak flow test is done with a peak flow meter. It measures the maximum (or peak) speed at which you can blow air out. This gives an idea of how narrow your airways are. It also shows how much your airways are changing. However, a peak flow test cannot be used to confirm whether you have asthma — this is what a spirometer is used for *(see Spirometry breathing tests)*.

Your doctor may ask you to use a peak flow meter to check your asthma at home. Most children over the age of 7 years are able to use a peak flow meter correctly.

Peak flow tests are sometimes used as part of a Written Asthma Action Plan, which is developed with your doctor. A Written Asthma Action Plan will help you recognise whether your asthma is getting worse, and tell you what to do if it does.

If you are using a peak flow meter, you will need to find your 'best' test score. To do this, record your scores everyday for 1–2 weeks when your asthma is under control. Your 'best' score will then be used as a guide for you and your doctor to make changes to your asthma management.

For example, you will know if your asthma becomes worse because your score will be less than your recorded 'best' score. You can then make changes to your medicines as instructed in your Written Asthma Action Plan or by your doctor.

A peak flow meter is only one way for you to check your asthma. If you are feeling unwell despite good peak flow test results, follow the instructions on your Asthma Action Plan or see your doctor.

How to use a peak flow meter

Your doctor (or another health professional, such as a nurse, pharmacist or asthma educator) will show you how to use your peak flow meter correctly.

The main steps to using a peak flow meter are:

1. Stand up
2. Hold the peak flow meter level, so that the indicator faces upwards. Make sure the indicator is on zero or 'start'
3. Take in as deep a breath as possible
4. Place your lips tightly around the mouthpiece and blow as hard and fast as you can (for about 2 seconds)
5. Check your score on the meter
6. Repeat steps 1–5 two more times
7. Record the highest score out of the three scores.

If your airways are narrower than usual, the peak flow meter will have a lower score than your 'best'. When your airways are wide open, the score will be the same as or close to your 'best'.
(A person's 'best' score depends on their height, age and gender – so 'best' scores will be different for each person.)

Always use the **same** peak flow meter for each measurement, because the scores can vary between different meters. For this reason, it is a good idea to take your own peak flow meter with you when you visit your doctor.

Other times you may need to use a peak flow meter

A peak flow meter may be useful to monitor your asthma when you:

- leave hospital
- need to take your blue reliever puffer more often
- are getting a cold
- are not feeling as well as you usually do
- have been exposed to a known trigger (for example, pollen)
- have had any changes made to your medicines, including different doses or new medicines
- are waking up at night with asthma symptoms (a sign of poorly controlled asthma).

Further Information

- Talk to your doctor or pharmacist
- Visit the National Asthma Council Australia website at: **nationalasthma.org.au**
- Contact your local Asthma Foundation **1800 645 130 asthmaaustralia.org.au**

Information in this brochure does not replace professional medical advice. If you have any questions about your asthma, speak to your doctor.

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Note for health professionals:
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