



**United Lincolnshire
Teaching Hospitals**
NHS Trust

Information for patients attending for lung function tests

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OUTSTANDING CARE
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We would like to invite you to attend for breathing tests also known as lung function tests as requested by your consultant. This patient information will explain what lung function tests involve and answer some questions you may have. It will also explain why lung function tests are necessary and inform you of the risks that are involved with performing the tests.

What is a lung function test?

A lung function test will involve breathing into different pieces of equipment and following instructions from the healthcare professional to measure how well your lungs are working. This can involve breathing in and out as much as you can. There are a number of different tests your doctor can request which may include:

- **Spirometry**
This test involves breathing in as much as you can through a mouthpiece and blasting the breath out as hard and as fast as you can until your lungs feel empty. Once empty, you will be asked to once again breathe in as much as you can.
- **Spirometry with Bronchodilator Response Test (Reversibility)**
This test involves performing spirometry before and 15 minutes after taking an inhaled medication that opens your airways (Salbutamol).
- **Gas Transfer Measurement**
This test first involves breathing normally into a mouthpiece. You will be asked to breathe out as much as you can followed by a deep breath in to fill your lungs. Once full, you will be asked to hold your breath for approximately 9 seconds. You will then be asked to breathe out as much as you can.
- **Lung Volume Measurement (Body Plethysmography or Nitrogen Washout)**
This test most commonly involves sitting inside a closed cubicle (that is not locked and can be opened voluntarily at any point). You will be asked to breathe slightly quicker than normal into a mouthpiece. After around 60 seconds a shutter will be introduced to block the mouthpiece that you will continue breathing against for less than 5 seconds. Following this you will be asked to breathe in until you are completely full, then breathe back out to empty in a relaxed manner, followed by a final deep breath to fill your lungs.

- **Fractional Exhaled Nitric Oxide (FeNO)**

This test involves breathing in and out through a mouthpiece. The aim is to try to control the speed of the breath out to meet the speed required by the equipment; this is explained on the device.

- **Respiratory Muscle Assessment**

This test involves breathing in and out through a device as hard as you can against a resistance. This may be performed with your mouth (mouth pressure) or nose (sniff pressure). This may also involve performing spirometry in a sitting and a lying down position.

Why do I need these tests?

It will give your doctor useful information about how well your lungs are working and help them to make a personal plan of management for you. Some specific uses are:

- Helps to exclude or support a diagnosis of lung disorders e.g. Asthma, COPD (Chronic Obstructive Pulmonary Disease), Interstitial Lung Disease (ILD).
- To monitor disease progression of existing lung conditions.
- To assess the effect of treatment e.g. inhaled medication or review the need for treatment.
- For pre-operative assessments to check fitness for surgery.

How long will the tests take?

The length of the appointment will depend on which tests are requested. This can vary from 20 to 60 minutes.

Will the test cause any harm?

The breathing tests do require some effort and may be tiring. The routines are often repeated several times to obtain consistent results. You may feel lightheaded during the test but you will be given time to rest in between each attempt. Please inform the healthcare professional if you feel unwell at any point.

IMPORTANT

If you have any of the following 6 weeks prior to your appointment, please call the number on your appointment letter prior to the appointment to inform us as we may need to cancel and rearrange your appointment:

- Heart attack
- Pulmonary embolism (blood clot in the lung)
- Stroke
- Pneumothorax (collapsed lung)
- Brain, chest, abdominal, or eye surgery (including cataract operations)
- Chest infection
- Coughing up blood
- Unstable angina
- Aneurysm

How to prepare for the tests:

- Do not vape or smoke 1 hour before the tests
- Do not exercise excessively for 1 hour before the tests
- Do not eat a LARGE meal within 2 hours of the tests
- Do not consume alcohol the day of the tests
- Please wear comfortable clothing that is not restrictive
- If you are currently using a short acting bronchodilator inhaler (e.g. Ventolin (salbutamol), Bricanyl, Atrovent) - avoid using this for 4 hours before the tests if safe to do so.

If you are feeling breathless please take your inhaler as normal and let the healthcare professional know on arrival what time you used this. If you are unsure about what inhaled medication you are currently using or have any further questions, please do not hesitate to call us using the number on your appointment letter.

Please allow ample time to arrive for your appointment. Our aim is to see you as soon as possible but we will let you know if there are any delays. If you have any further questions or would like more information please do not hesitate to contact us on the telephone number provided on your appointment letter.

Additional sources of information:

[Tests to measure your breathing | Asthma + Lung UK \(asthmaandlung.org.uk\)](https://www.asthmaandlung.org.uk)

[Patient Information \(artp.org.uk\)](https://www.artp.org.uk)

[Spirometry - NHS \(www.nhs.uk\)](https://www.nhs.uk)

United Lincolnshire Hospitals NHS Trust has worked with AccessAble to create detailed Access Guides to facilities, wards and departments at our sites.

www.accessable.co.uk/united-lincolnshire-hospitals-nhs-trust

United Lincolnshire Hospitals NHS Trust endeavours to ensure that the information given here is accurate and impartial.

If you require this information in another language, large print, audio (CD or tape) or braille, please email the Patient Information team at patient.information@ulh.nhs.uk