

Respiratory physiology lung function tests

Patient information sheet

The respiratory physiology department performs various tests that help with the diagnosis and treatment of patients with breathing problems. Your doctor has requested lung function tests to provide information about the size of your lungs and to assess how well they are working.

Preparing for your visit

We recommend that you arrive at least 10 minutes before your appointment time to ensure that you are well rested. If you are prescribed oxygen for use outside the home, please bring this and any accessories with you. A list of your current medication would also be useful but not essential.

Please also note the following recommendations:

- Continue with any inhalers or medication as prescribed unless instructed not to do so by your doctor or in the enclosed appointment letter.
- Avoid smoking on the day of your tests.
- Avoid vigorous exercise for at least 30 minutes prior to your tests.
- Avoid eating a heavy meal for two hours before the test. A light meal is acceptable.
- Do not consume alcohol for at least four hours before the test.
- Do not wear tight fitting clothing which restricts your ability to breathe freely.
- If you take any inhalers or GTN medication please bring them with you.

There are some conditions where it may not be appropriate to perform the tests. If you have experienced any of the following within the previous six weeks, please contact the department:

- Heart attack
- Stroke
- Surgery (chest, abdominal, eyes)
- Pneumothorax (collapsed lung)
- Diarrhoea and vomiting within 48 hours of the appointment
- Coughing up blood within 24 hours

If you are unsure, please contact the respiratory physiology department. We will also check with you on the day of your appointment before we perform the tests.

What do lung function tests involve?

The tests may take up to 45 minutes to complete. The results will help your doctor to decide the best course of treatment for you.

Depending on your doctor's referral you may be asked to perform the following tests, described below:

- Spirometry
- Gas transfer
- Body plethysmography

Your tests will be carried out by a clinical physiologist. Please do not worry about performing the tests as you will be shown what to do. You will be asked to repeat the measurements several times; however, you are able to rest between attempts.

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Large print copies and alternative language versions of this leaflet can be made available on request.

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Spirometry:

This test assesses how well air flows in and out of your lungs. You will be sitting in front of a device with a mouthpiece. Whilst wearing nose clips you will be asked to perform a simple breathing test which involves sealing your lips around the mouthpiece and breathing normally in and out. After a few breaths you will be asked to breathe in fully and then blow out as hard and as fast and as long as you can. As part of this test, you may be given bronchodilator medication through an inhaler to assess its benefit to you.

Gas transfer:

This test assesses how well gases such as oxygen move from your lungs into the blood. On the mouthpiece you will be asked to breathe normally. You will then be instructed to take a deep breath in as much as you can and hold your breath for a few seconds before breathing out again.

Body plethysmography:

This test assesses the size of your lungs. To perform this test, you will be required to sit inside a glass cubicle. You will be asked to breathe on a mouthpiece. A small shutter will block this mouthpiece for two seconds, but you will need to continue to breathe in and out against this before blowing all the way out and back in again. If you have previously experienced claustrophobia, please inform the clinical physiologist.

Risks

The tests are not painful but can feel a little uncomfortable especially if you feel short of breath. To get the very best results the tests require a lot of effort. Some patients experience coughing and report feeling light-headed, dizzy and tired, however please be reassured that you will be given time to rest and recover in between tests.

Any questions

If you have any questions about these tests or the department, please do not hesitate to telephone respiratory physiology on 01223 638207.

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