



Royal Papworth Hospital
NHS Foundation Trust

Respiratory Physiology

Lung function tests

A patient's guide

Lung function tests are performed within the Respiratory Physiology Department which provides a service for patients across the hospital and local community. The department performs various tests that help in the diagnosis and treatment of patients with breathing problems. Your doctor has requested these tests to give them information about the size of your lungs and how well they are working.

What do I need to do to prepare for the tests?

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 department. We will also check with you on the day of your appointment before we perform the tests.

What do I need to do to prepare for the tests?

The tests will take up to 45 minutes to complete and will be carried out by a Respiratory Physiologist who will explain the tests to you in detail and answer any questions you may have. As part of your lung function assessment up to three tests may be carried out. They all involve breathing for short periods of time through a filtered mouthpiece with your nose pegged. The tests will be repeated a few times to obtain your best results, however, you will be given time to rest between attempts. The tests are as follows:

Spirometry

This test assesses how well air flows in and out of your lungs. You will be asked to take a deep breath in and blast out air as hard and as fast as you can for as long as you can. As part of this test, a nebuliser may be used to administer a

bronchodilator medication to evaluate its benefit to you.

Gas transfer

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

Lung volume

This test will involve sitting inside a glass booth to assess the size of your lungs. It involves breathing in and out against a small shutter for two seconds before breathing all the way out and in again. If you are claustrophobic or unable to sit in the booth, an alternative test involving breathing in and out of a machine for up to ten minutes may be carried out instead.

What are the possible risks of performing lung function tests?

These breathing tests are not painful to perform but can be uncomfortable and can sometimes lead to feeling light-headed or dizzy. Other possible side effects include coughing

and tiredness. These feelings, however, are short-lived and you will be given time to rest and recover between tests.

When will I be told the results of the test?

Your results will be sent to the doctor who requested the test. That doctor will be able to tell you the result of the test and what it means for you.

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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