

What is Spirometry?

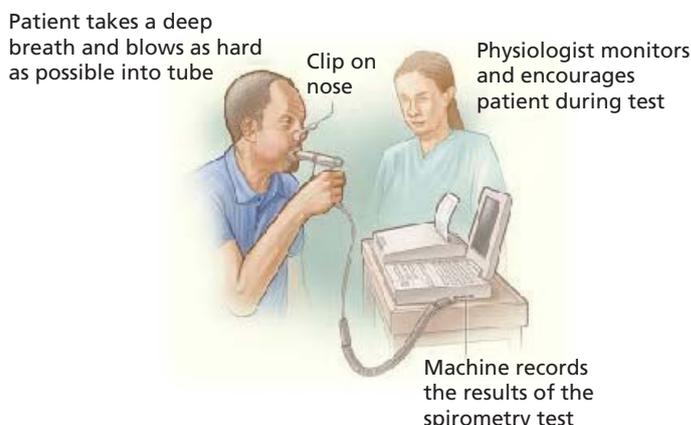
Respiratory

Introduction

This leaflet has been written to provide information about Spirometry. We hope it answers some of the questions or concerns you may have. It is not intended to replace talking to a healthcare professional.

What is Spirometry and what does it measure?

Spirometry is a basic breathing test that measures the size of your lungs in litres. It also measures how quickly air flows in and out of your lungs. The test involves you blowing into a medical device. The image below shows someone blowing into a spirometer.



The results of the spirometry test can be used to help diagnose respiratory illness or monitor disease progression, or how your lungs respond to treatment such as inhalers.

What are the benefits of having a Spirometry test?

Your doctor will use the results to help them diagnose problems with your breathing or monitor an existing breathing problem.

How is Spirometry done?

Your height and weight will be measured first. You will be asked to take a seat in the testing room. We will ask a couple of questions about your medical history and which medication you are taking. Whilst seated you will then be asked to take a deep breath in, and then to blow out into the

The prevention of infection is a major priority in all healthcare and everyone has a part to play.

- Please decontaminate your hands frequently for 20 seconds using soap and water or alcohol gel if available
- If you have symptoms of diarrhoea and/or vomiting, cough or other respiratory symptoms, a temperature or any loss of taste or smell please do not visit the hospital or any other care facility and seek advice from 111
- Keep the environment clean and tidy
- Let's work together to keep infections out of our hospitals and care homes.

spirometer as hard and as fast as you can until your lungs are completely empty. This routine will be repeated at least 2 more times. This is to ensure the results are accurate.

Depending on the referral information from your doctor and also the results of your initial test, you may then be given an inhaler or bronchodilator and have the test repeated 15-20 minutes later. A bronchodilator is an inhaler or medication that relaxes the muscles found within the lining of the airways allowing them to open up when constricted or narrowed (for example in patients with Asthma). This is to see if there is any improvement in your results. This does not automatically mean you are going to be prescribed an inhaler if you currently do not use one.

The inhaler we will give you will contain a drug called Salbutamol, which is a very commonly used inhaler designed to open up your airways. The inhaler lasts approximately 4 hours and you will either be shown how to use the inhaler or the physiologist will administer it for you.

Will I feel any pain or discomfort?

Spirometry is classed as a low risk test. In most cases the main risks are perhaps some dizziness following blowing out hard and fast. In very rare occasions sometimes patients can feel faint after performing the measurement. It is painless but does require you to blow out as hard and as fast as you can with maximum effort.

How long will the test take to complete?

You should allow 10-30 minutes for this test.

What are the risks?

The test is performed in large numbers at this hospital and is a low risk test.

When is the test not suitable?

There are some medical problems that will prevent us from testing patients, these are listed below.

- Recent heart attack-within 1 week
- Severe blood pressure problems
- Heart arrhythmias or an abnormal heart rhythm
- Heart failure
- Pulmonary embolism or a blood clot on the lungs
- Cerebral aneurysm or a weakening of the wall of a brain artery or blood vessel causing a blister like swelling
- Recent brain surgery-within 4 weeks
- Recent concussion
- Recent eye surgery-within 1 week
- Pneumothorax or a collapsed lung
- Thoracic (chest area) or abdominal surgery (below the chest area) - within 4 weeks
- Late term pregnancy
- Active or transmissible infection, including TB
- Haemoptysis (coughing up blood)
- Oral lesions or bleeding or significant secretions for example, due to an ulcer, swelling or sore that occurs on the lining of the mouth.

You should contact the Respiratory Centre or tell the physiologist undertaking your test if have any of the above conditions. We may have to postpone or cancel your test.

How should I prepare for my Spirometry test?

Please bring all of your inhalers with you to your appointment. Please also temporarily stop taking your inhalers (if prescribed) for the length of time outlined in the table below. However if you feel breathless and have to take your inhalers then please inform the physiologist during your appointment.

Time to withhold	Inhaler
4-6 hours	Salbutamol (Ventolin / Salamol / Airomir / Asmasal / Salbulin)
12 hours	Symbicort, Seretide, Atrovent
12 hours	Spiriva (Tiotropium) / Eklira / Genuair / Seebri / Breezhaler
12 hours	Revlar Fostair Flutiform
24 hours	Anoro / Ellipta Ultibro / Breezhaler Duaklir / Genuair Spiolto / Respimat

Do continue to take all of your other medications as normal.

- Please do not smoke in the 24hrs before the test
- Please do not drink alcohol on the day of the test
- Please avoid eating a large meal two hours prior to your test
- Please wear non-restrictive comfortable clothing.

If on the date of your test you have a chest infection for which you are taking antibiotics, please ring the Respiratory Centre on 01902 695061 to change your appointment. A chest infection will affect the test results and give your doctor invalid results.

What can I expect after the test and when can I resume normal activities?

After the Spirometry test is over, you can go home and resume your normal daily activities. You should continue taking all of your inhalers as normal.

What happens to my results?

Once the test is completed your results will be interpreted and a report generated. A copy of this report will be sent back to the referrer which may be your GP or consultant. An electronic copy of the report will also be sent onto your electronic patient case notes.

When do I get my results?

The results will not be available on the day of your test. The results will be discussed with you at your next clinic appointment with your consultant or GP.

What will the test results mean?

Firstly your results will be compared against a normal range calculated for someone of your age, sex, height and ethnic origin.

There are four possible findings:

- The Spirometry result is found to be within normal limits
- The Spirometry shows an obstructive airflow pattern. In simple terms this means it takes you longer to blow all of the air out of your lungs. This is commonly seen in respiratory diseases such as Asthma and COPD (typically smokers)
- The Spirometry shows a restrictive lung pattern. In simple terms this means the volume of

your lungs is less than we expect, such as small lungs or a loss of lung volume. This pattern is commonly seen in obesity, heart problems, diseases of the lung tissue, respiratory muscle weakness and chest wall or rib cage deformities

- The Spirometry shows a mixed obstructive and restrictive pattern, in simple terms this means both a reduction in airflow out of the lungs but also the lung volume is smaller than expected.

GP Direct Access Spirometry Clinics

The Respiratory Physiology team from Royal Wolverhampton NHS Trust hold GP Direct Access Spirometry Clinics in both the Respiratory Centre at New Cross Hospital, Wolverhampton and the Lung Function department at Cannock Chase Hospital, Cannock. You will be offered an appointment at whichever hospital is deemed closest to you.

What should I do if I no longer wish to have the Spirometry test?

Please contact the department as soon as possible so that the appointment slot can be allocated to another patient.

If you have any questions or require further information please contact:

The Respiratory Centre (B1)
New Cross Hospital
Wolverhampton Road
Wolverhampton
WV10 0QP

01902 695061

Monday to Friday 9:00 - 5:00.

English

If you need information in another way like easy read or a different language please let us know.

If you need an interpreter or assistance please let us know.

Lithuanian

Jeigu norėtumėte, kad informacija jums būtų pateikta kitu būdu, pavyzdžiui, supaprastinta forma ar kita kalba, prašome mums apie tai pranešti.

Jeigu jums reikia vertėjo ar kitos pagalbos, prašome mums apie tai pranešti.

Polish

Jeżeli chcieliby Państwo otrzymać te informacje w innej postaci, na przykład w wersji łatwej do czytania lub w innym języku, prosimy powiedzieć nam o tym.

Prosimy poinformować nas również, jeżeli potrzebowaliby Państwo usługi tłumaczenia ustnego lub innej pomocy.

Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਰੂਪ ਵਿਚ, ਜਿਵੇਂ ਪੜ੍ਹਨ ਵਿਚ ਆਸਾਨ ਰੂਪ ਜਾਂ ਕਿਸੇ ਦੂਜੀ ਭਾਸ਼ਾ ਵਿਚ, ਚਾਹੀਦੀ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

ਜੇ ਤੁਹਾਨੂੰ ਦੁਭਾਸ਼ੀਏ ਦੀ ਜਾਂ ਸਹਾਇਤਾ ਦੀ ਲੋੜ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

Romanian

Dacă aveți nevoie de informații în alt format, ca de exemplu caractere ușor de citit sau altă limbă, vă rugăm să ne informați.

Dacă aveți nevoie de un interpret sau de asistență, vă rugăm să ne informați.

Traditional Chinese

如果您需要以其他方式了解信息，如易读或其他语种，请告诉我们。

如果您需要口译人员或帮助，请告诉我们。