



Spirometry

Your Lung Function Test explained

What is a Spirometry test?

A Spirometry test is a way of assessing how your lungs are working. This test measures the volumes and speed of the air you can blow out from your lungs and will give the doctor an indication of how clear the airways are in your lungs. For example the airways may be narrower in conditions such as COPD (Chronic Obstructive Pulmonary Disease) or Asthma.

A spirometer is a machine that measures the amount of air you can breathe out in one breath and the amount of air you can blow out in 1 second.

You will be asked to take a deep breath in and blow out as hard as you can into the tube which leads to the machine. You will be asked to do this at least three times.

The test should take approximately 20 minutes.

What does the spirometer measure?

Spirometry measures the amount (volume) and/or speed (flow) of air that can be inhaled and exhaled. The most common spirometry measurements used are:

- Forced expiratory volume in one second (FEV1). This is the amount of air you can blow out within one second. With normal lungs and airways you can normally blow out most of the air from your lungs within one second.
- Forced vital capacity (FVC). The total amount of air that you blow out in one breath.
- FEV1 divided by FVC (FEV1/FVC). Of the total amount of air that you can blow out in one breath, this is the proportion that you can blow out in one second.

What to do before your Spirometry test:

- Do not consume alcohol or smoke any tobacco for at least 4 hours prior to the test.
- Avoid vigorous exercise for at least 30 minutes prior to the test.
- Do not wear clothing that will substantially restrict full chest and abdominal expansion.
- Do not eat a substantial meal for at least 2 hrs prior to test
- If you use inhalers, try not to take any of your inhalers on the day of your spirometry test, though if you have felt it necessary to use one or some of your inhalers, please let the nurse or doctor know so this can be taken into account.

Please note

A spirometry test cannot be done if you are currently taking antibiotics.

A spirometry test can be carried out 4-6 weeks after finishing antibiotics.

Spirometry Checklist

Although most people have no problem with lung-function (spirometry) testing, certain people should not undertake spirometry.

Please read the checklist below and let the Technician know if any of the following apply to you before you undertake your spirometry.

Have you suffered from a recent pneumothorax, pulmonary embolism?

Have you recently had chest pains, angina, myocardial Infarction (heart attack)?

Have you recently had a stroke?

History of an aneurysm?

Do you have any ear problems e.g. recent ear surgery, on the middle and inner ear (in the past year)?

Do you have any eye problems (recent eye op or eye trauma, cataract)?

Have you recently had abdominal surgery?

Do you have raised blood pressure ($> 200/110$ mmHg)?

Are you pregnant or within three months of having had a baby?

Do you have an acute back problem or suffer from any back discomfort?

Are you coughing up blood?

Have you had/have you got a chest infection that needed treatment with antibiotics or oral steroids or if you have any other severe illness in the last six weeks?

Please ensure you inform the nurse or doctor straight away if you feel light headed, faint, or experience pain or discomfort when performing the spirometry.

The maximum attempt of blows will be limited to 8 or less if you feel too exhausted. If unsuccessful with your attempts you may be asked to re-attend.



For more information visit

<https://www.nhs.uk/conditions/spirometry/>