



Pulmonary function tests

To get the best results from your lung tests:

- Do not exercise heavily for at least 30 minutes before the test.
- Do not smoke for at least 1 hour before the test.
- Do not eat a large meal for at least 2 hours before the test.
- Do not drink alcohol for at least 4 hours before the test.
- Do not wear tight clothing.
- Ask your health care provider if there are any medicines that you should not take on the day of your test.

Pulmonary (lung) function tests (PFT's) are breathing tests to find out how well you move air in and out of your lungs and how well oxygen enters your body. The most common PFT's are spirometry (spy-RAH-me-tree), diffusion studies and body plethysmography (ple-thiz-MA-gra-fee). Sometimes only spirometry is done; other times more tests will be scheduled.

Lung function tests can be used to:

- Compare your lung function with known standards.
- Show if exposure to substances at home or work has harmed your lungs.
- Measure the effect of chronic diseases like asthma, chronic obstructive pulmonary disease (COPD) or cystic fibrosis.
- Decide if a medicine (such as a bronchodilator) could be helpful.
- Find out if you can handle surgery or medical procedures.

What is spirometry?

Spirometry measures how much air you can breathe into your lungs and how much air you can quickly blow out of your lungs. This test is done by blowing into a tube connected to a machine (spirometer). You will take in a deep breath and then blow out all of the air as fast as you can.

You will be asked to repeat this test at least three times, but no more than eight times. This allows for an accurate measure of your lung function. It can take practice to be able to do spirometry well. The staff person will work with you to learn how to do the test correctly. This test usually takes about 30 minutes.

You may also be asked to repeat the test after you have taken medicine to help you breathe (bronchodilator). This allows staff to see if the medicine helps you breathe better.

What are diffusion tests?

Diffusion tests find out how well oxygen moves from your lungs into your blood. Like spirometry, you will breathe into a mouthpiece connected to a machine. You will be asked to empty your lungs by gently breathing out as much air as you can. Then you will take in a quick, deep breath, hold it for 10 seconds, and breathe out as instructed. This test usually takes about 15 minutes.

What should I know before taking this test?

- Do not smoke and stay away from others who are smoking for at least 4 hours before this test.
- If you are on oxygen, you will usually be asked to be off oxygen for a few minutes before the test.

What is body plethysmography?

Body plethysmography measures how much air is in your lungs after you take a deep breath, and how much is left after you breathe out all you can. You can never get all of the air out of your lungs. You will sit in a clear plastic booth and wear a nose clip. A staff person will give you instructions on how to breathe through a mouthpiece. This test gives your health care provider information about how well your lungs are working and helps guide your treatment. This test usually takes about 15 minutes.

What should I know before taking this test?

- If you are on oxygen, you may be asked to be off of it during this test.
- Let the technician know if you have trouble in closed spaces.

What are normal results for lung function tests?

Your health care provider uses standards based on your height, race, age and gender. Your lung function can be tracked over time to see if it has changed.

