

SPIROMETRY

Patient information - Respiratory Physiology Laboratory

A GUIDE TO SPIROMETRY

Breathing tests find out how well your lungs are working and if anything is affecting your breathing.

What is Spirometry?

Spirometry is a breathing test. It measures how much, how fast and how long you can blow air out from your lungs after you have inhaled. The two main measurements are:

- FVC (Forced Vital Capacity), which is a measure of how much air you can blow out in one long, fast breath.
- FEV₁ (Forced Expiratory Volume in 1 second), which is a measure of how much air you can blow out in 1 second.

After you perform spirometry, your results will be compared with the expected results for someone of your age, gender and height. Your doctor will explain your results to you.

What does Spirometry involve?

Spirometry is straightforward and is not painful. Some people find it can make them feel tired, lightheaded or a bit puffed.

You will be sitting down to do spirometry and we will explain each step of the test to you as you go.

We will ask you to:

- 1) take in the biggest breath you can so that you fill your lungs completely
- 2) then blow out as hard and as fast as you can into a special mouthpiece for as long as possible

You will need to repeat this test at least three times to ensure the measurements are accurate and consistent. If you feel tired or lightheaded, ask for a couple of minutes to catch your breath before trying again.

After spirometry, people with certain conditions (e.g. asthma) may be given an inhaled medication that relaxes and opens the airways. Spirometry is then repeated after 15 minutes to test for any improvement in lung function.

Why am I having Spirometry?

There are several reasons why your doctor requested spirometry for you .

Common reasons include:

- Looking for the cause of problems such as cough, shortness of breath or wheeze.
- Following up a finding on a chest X-ray or other test.
- Diagnosing and monitoring common lung diseases such as asthma and chronic obstructive pulmonary disease (COPD).
- Detecting early problems in people who were exposed to things that may damage the lungs such as cigarette smoke, certain dusts or some medications.
- Assessing a person's ability to tolerate surgery or a medical procedure.

How long does Spirometry take?

The test usually takes 10 – 15 minutes, but if you have to repeat spirometry after inhaled medication, the total appointment time will be 45 minutes.

Is there a reason I shouldn't have Spirometry?

Spirometry is a safe test, however, we do not recommend the test if you have had:

- a heart attack in the last month
- an operation on your eye, head, abdomen or chest within 2 weeks
- nausea, diarrhoea or vomiting

How do I prepare for Spirometry?

Your appointment letter will give you any special instructions to follow, for example whether you need to stop taking your breathing medication before this test. In general, we recommend that you:

- Wear comfortable, loose clothing
- 3 hours before testing don't:
 - smoke
 - drink alcohol or drinks containing caffeine
 - do strenuous exercise or walk up the stairs to your appointment, if it makes you breathless
 - eat a large meal (a light meal is acceptable)

If you would like further information, please contact:

Respiratory Physiology Laboratory, Christchurch Hospital
Telephone: 03 364 0874

For more information about:

- your health and medication, go to www.healthinfo.org.nz
- hospital and specialist services, go to www.cdhb.health.nz