

# *Respiratory Function Tests*

Lung Function or breathing tests are important investigations that can help in the diagnosis of suspected lung disease and help to plan and monitor the effects of treatments. Lung function tests are also performed to evaluate a person's lung function prior to surgery, evaluate any degree of disability or monitor the lung function of a person who is regularly or has been exposed to substances that can potentially damage the lungs.

A technician will explain, demonstrate and guide you through each test. Most of the tests will be completed in under 40 minutes and although they are not difficult to perform you may cough and feel a little tired or puffed at the end. You should be aware that the amount of effort you put in can influence the accuracy of your lung function tests.

Your results will be compared against established reference values according to age, gender and height for healthy individuals and will be interpreted by a Respiratory Physician.

**Standard Lung Function Tests:** *Spirometry*, before and after bronchodilator, eg Ventolin are valuable for assessing airway narrowing in conditions such as asthma and emphysema. The test involves taking a maximal breath in and then blowing out maximally until the lungs are empty into an instrument called a spirometer. The test is repeated several times. The *Gas Transfer test*, is used to assess the lungs' ability to transfer gases through the respiratory system to the blood. The test involves taking a deep breath of a special gas mixture, holding the breath for about 10 seconds and then breathing out again. This is an important test in conditions such as emphysema where the ability of the lungs to transfer gases efficiently is impaired. *Static Lung Volumes*, are of importance in various lung conditions and enable the subdivisions of the lungs and total lung capacity to be accurately measured. Measurements are made during quiet breathing, whilst seated in a clear chamber for a few minutes.

**Specialised Lung Function tests:** *Aridol™ Challenge Test* is used to identify irritable or hyper-reactive airways. Often this test is performed when an individual has asthma symptoms but routine lung function tests do not confirm this. The test can also help identify individuals at risk of exercise induced asthma (EIA) and individuals with suspected asthma that wish to Scuba dive. The test measures how much narrowing occurs following the inhalation of small amounts of Aridol™ powder. Breathing is carefully monitored during the test and a reliever medication is given to reverse any airways narrowing that may occur. *Skin Allergy Tests*, are performed to assess an individual's response to common airborne allergens, including pollens, animal fur and house dust mite. Allergies are identified by placing a small drop of fluid containing small amounts of each allergen onto the forearm, each drop is lightly scratched and the site is observed for indications of a positive reaction (redness, itching and swelling).

*For further information please ask your Doctor or our Lung Function Technician.*