

Breathing tests (PFT): What is plethysmography or lung volume measurements?

Lung plethysmography, also known as body plethysmography, is a type of pulmonary function test that measures the volume of air in the lungs. This test is used to evaluate lung function and to diagnose certain respiratory conditions such as chronic obstructive pulmonary disease (COPD), asthma, and pulmonary fibrosis.

This is a specialised breathing test performed in respiratory laboratories. During lung plethysmography, the patient sits inside a small, airtight box called a plethysmograph. The patient breathes through a mouthpiece attached to a tube that is connected to a pressure transducer. The transducer measures the changes in pressure inside the box as the patient breathes.

In cabinless plethysmography offered in our Australian Pulmonary Function Test Laboratory, patient do not need to sit in a tight box. Rather using Minibox ultra-modern technology, patient sit outside and breathe through the tube into the machine and machine measures the different parameters during the test.

The patient is asked to perform several breathing maneuvers, including normal breathing, maximal inspiration, and maximal expiration. The measurements obtained during these maneuvers are used to calculate various lung volumes, including total lung capacity (TLC), residual volume (RV), functional residual capacity (FRC), and others.

Lung plethysmography is a safe and non-invasive test that provides valuable information about lung function. It is typically performed by a respiratory therapist or a pulmonary function technologist and may be used in combination with other pulmonary function tests to provide a comprehensive evaluation of lung function.

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