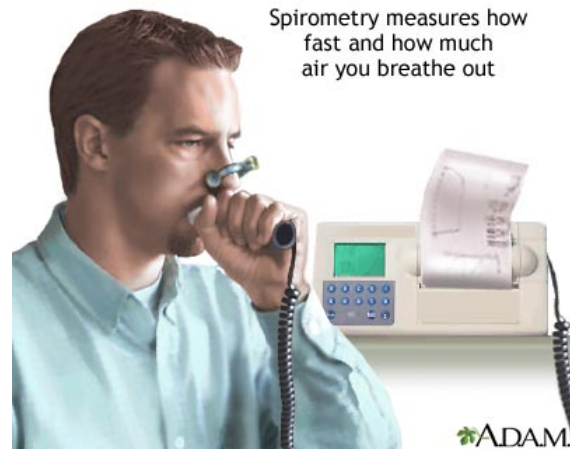


Lung Function Tests



Lung function tests (also called pulmonary function tests, or PFTs) evaluate how well your lungs work. The tests determine how much air your lungs can hold, how quickly you can move air in and out of your lungs, and how well your lungs put oxygen into and remove carbon dioxide from your blood. The tests can diagnose lung diseases, measure the severity of lung problems, and check to see how well treatment for a lung disease is working.

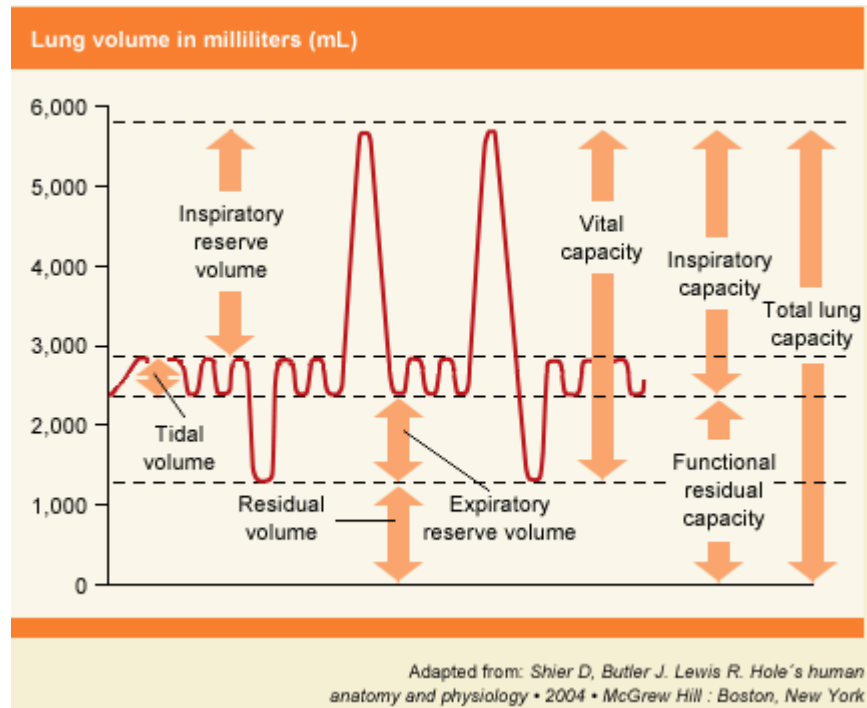
Other tests—such as residual volume, gas diffusion tests, body plethysmography, inhalation challenge tests, and exercise stress tests—may also be done to determine lung function.

Spirometry is the first and most commonly done lung function test. It measures how much and how quickly you can move air out of your lungs. For this test, you breathe into a mouthpiece attached to a recording device (spirometer). The information collected by the spirometer may be printed out on a chart called a spirogram.

The more common lung function values measured with spirometry are:

- **Forced vital capacity (FVC).** This measures the amount of air you can exhale with force after you inhale as deeply as possible.
- **Forced expiratory volume (FEV).** This measures the amount of air you can exhale with force in one breath. The amount of air you exhale may be measured at 1 second (FEV1), 2 seconds (FEV2), or 3 seconds (FEV3). FEV1 divided by FVC can also be determined.
- **Forced expiratory flow 25% to 75%.** This measures the air flow halfway through an exhale.
- **Peak expiratory flow (PEF).** This measures how quickly you can exhale. It is usually measured at the same time as your forced vital capacity (FVC).

- **Maximum voluntary ventilation (MVV).** This measures the greatest amount of air you can breathe in and out during one minute.
- **Slow vital capacity (SVC).** This measures the amount of air you can slowly exhale after you inhale as deeply as possible.
- **Total lung capacity (TLC).** This measures the amount of air in your lungs after you inhale as deeply as possible.
- **Functional residual capacity (FRC).** This measures the amount of air in your lungs at the end of a normal exhaled breath.
- **Residual volume (RV).** This measures the amount of air in your lungs after you have exhaled completely. It can be done by breathing in helium or nitrogen gas and seeing how much is exhaled.
- **Expiratory reserve volume (ERV).** This measures the difference between the amount of air in your lungs after a normal exhale (FRC) and the amount after you exhale with force (RV).



Respiratory Volumes

- Tidal Volume / 500 mL
- Inspiratory Reserve Volume / 3,000 mL
- Expiratory Reserve Volume / 1,200 mL
- Residual Volume / 1,300 mL

Respiratory Capacities

- Vitals Capacity / 4,700 mL
- Inspiratory Capacity / 3,500 mL
- Functional Residual Capacity / 2,500 mL
- Total Lung Capacity / 6,000 mL