CYSTIC FIBROSIS

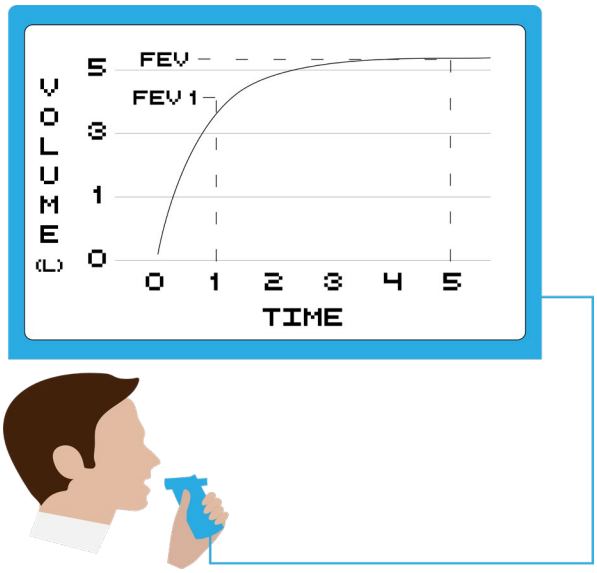
CF Fact
cystic fibrosis fact sheet

Spirometry

Spirometry, or lung function testing, is a relatively easy, non-invasive test used to assess how well the lungs are working in people with respiratory illnesses.

Spirometry is often used to diagnose and monitor patients with cystic fibrosis (CF), and to detect infections that may need to be treated.

It can also be used as an outcome measure in clinical trials of potential new CF therapies to determine how effective the new treatment is.



What Does Spirometry Testing Involve?

Spirometry testing can be done in adults and children over the age of seven. The test measures the speed and volume of air moving in and out of the lungs.

How the test is performed can change depending on exactly what is being measured. Normally, patients will have a peg placed on their nose to stop air from escaping while they breathe into a small device called a spirometer.

They will be asked to seal their lips tightly around the mouthpiece and inhale to their maximum capacity, then exhale into the mouthpiece of the spirometer as quickly as possible until the lungs are empty.

This is then repeated at least three times to make sure the results are accurate.

What Does It Measure?

The spirometry test can be used to determine several different measures including:

FEV1: Total amount of air exhaled in one second (FEV= forced expiratory volume)
FVC: Forced vital capacity is the total volume of air that can be exhaled quickly and forcefully in one breath.
FEV1/FVC: Calculates the proportion of the total inhaled volume that can be exhaled in one second.

What Do the Results Mean?

Spirometry results are compared with normal values for someone of the same age, height and gender. These comparisons will then give information about whether lung function is normal, obstructive, restrictive, or a combination.

Airways that are obstructed, such as by the thick mucus produced in CF patients, can reduce the speed at which air can be exhaled.

Restrictive spirometry results reflect a reduced lung capacity, relative to what is normal for a person's age, size and sex. In CF patients, for example, this can be due to scarring (fibrosis) in the lungs.

Many CF patients can show a combined obstructive/restrictive pattern. Your CF team will discuss the results with you.

Useful Resources

- CFWA Factsheets

Last reviewed December 2020.

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