Tasmanian Paediatric Cystic Fibrosis Service

Cystic Fibrosis

Lung Function Testing

When you are born your lungs are very small: as your body gets bigger your lungs get bigger too. The amount of air your lungs can hold depends on the size of your lungs. The amount of air that you can get in and out of your lungs is called your lung function. As you grow taller, your lung volume and function increases. When you reach early adult age you are the tallest you will be. As you reach early adulthood, your lung volume will reach its maximum.

How is lung function measured?

A spirometer is a little machine that measures your lung function. It can also draw a graph of your lung function. To use this machine, you need to blow through it as hard, as fast, and as long as you can manage - similar to blowing out a lot of birthday candles on a cake.

The EasyOne™ and EasyOn PC™ Spirometers are two of many devices used to measure lung function. You may see a different machine at your clinic.

Spirometry can measure:

FVC- Forced Vital Capacity: How much total air you can get out of your lungs after a big deep breath in.

FEV1- Forced Vital Capacity in 1 second: How much air you can get out of your lungs in the first second of blowing out.

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What do the numbers mean?

Scientists have spent a lot of time testing people's lung functions. They have created a list of the expected lung function of a healthy child or adult. This gives us what we call the normal predicted value. This normal predicted value is determined with height and age.

Example – predicted lung function:

We know a healthy 165cm; 18 year old female's forced expiratory volume in 1 second (FEV1) will be 3.44 litres to be 100%.

Spirometry results are shown in real numbers and percentages. Health care teams can compare your results to normal predicted values, or to your previous test(s).

Why do we measure lung functions?

Lung functions are an important tool to measure the health of your lungs.

Health care teams want to prevent decreases in lung function. Monitoring lung function helps your healthcare team to make treatment changes.

Things that you can do

You can help by learning to do lung functions early.

Activities to help you get used to blowing into a machine include:

- blowing bubbles in water
- straws in drinks
- party blowing whistles
- wind musical instrument;
- learning about the spirometry machine
- being patient during tests.

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Please Telephone:

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The cystic fibrosis nurse will put you in contact with your physiotherapist.

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