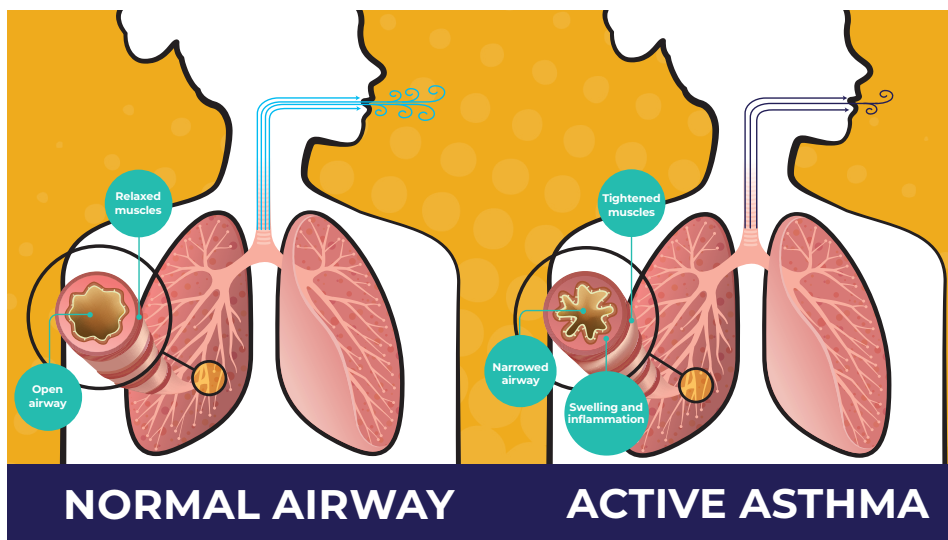


ASTHMA AND SPIROMETRY TESTING

ASTHMA IS A LUNG DISEASE WITH CHRONIC AIRWAY INFLAMMATION



- Chronic (long-term) inflammation may cause changes in your airways that make the airway openings become narrower.
- When you have asthma, you can't exhale (blow air out of your lungs) quickly or as quickly as someone without asthma because of airway narrowing.
- Narrowed airways may cause breathing symptoms, such as shortness of breath, wheeze, cough, and chest tightness.

YOUR HEALTH CARE PROVIDER WILL ASSESS YOUR BREATHING SYMPTOMS, PERFORM A PHYSICAL EXAMINATION, AND ASK YOU TO TAKE A SPIROMETRY TEST TO SEE IF YOU HAVE ASTHMA

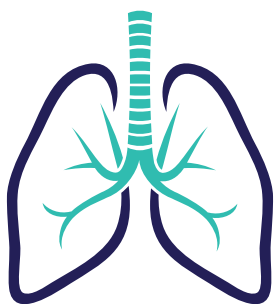
Spirometry is a lung function test that can measure if there are changes in your airways that may be affecting how quickly you can breathe out and how fast you can breathe air in.

Spirometry needs a forced exhale to measure how much air you can blow out and how fast.

Your health care provider may check your spirometry:



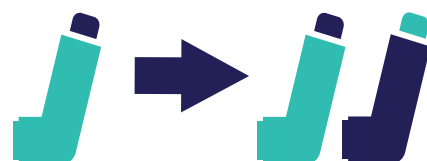
Every year or so, to see if your lung function is stable



When your asthma symptoms have changed



When your therapies have been changed

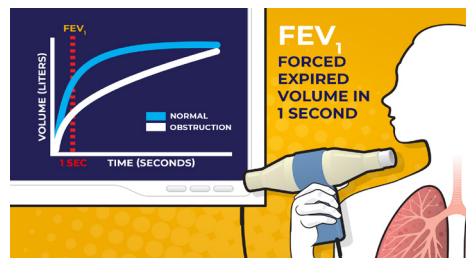




TO HELP UNDERSTAND YOUR LUNG CONDITION, YOUR HEALTH CARE PROVIDER WILL REVIEW YOUR LUNG FUNCTION NUMBERS AND A GRAPH OF YOUR BREATHING

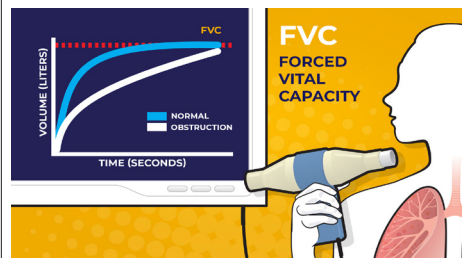
LUNG FUNCTION NUMBERS

FEV₁ - Forced expired volume in one second is the volume of air you can blow out during the first second of the test.



With asthma, this volume can be lower than normal because you can't blow the air out of your lungs quickly.

FVC - Forced vital capacity is the volume of air you are able to blow out given as much time as you need.



With asthma, this volume can be normal or lower than normal.

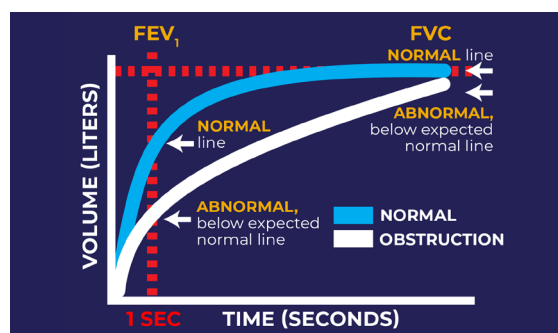
FEV₁/FVC - Ratio of FEV₁ to FVC is the amount of air you can blow out in the first second compared to how much air you can blow out given as much time as you need.



With asthma, this number can be lower than normal because you may blow out less air from your lungs in the first second of the test.

GRAPH OF YOUR BREATHING DURING THE SPIROMETRY TEST

The white line on the enlarged section of the graph is the result from someone with asthma and for comparison, the blue line is from someone with normal breathing.



Look at the FEV₁ vertical dotted red line on the left side of the graph. When you have asthma (white) you exhale less air in one second than someone with normal breathing (blue) because you can't blow air out as quickly.

Look at the FVC horizontal red dotted line at the top of the graph. When you have asthma (white), you may be able to blow out a similar volume of air as someone with normal breathing (blue), it just takes longer.

Your health care provider will use these numbers to detect improvement or worsening of your asthma, and to check how well your treatment is working. For most people with asthma, the right treatment plan can help you have normal or near normal lung function.

Talk to your health care provider about your lung function numbers.