Pulmonary (Lung) Stress Testing

Pulmonary stress tests are done while you are exercising to see how well your lungs are working. Spirometry readings are first done while you're resting. Readings are then taken again following exercise. Spirometry measures how well you can move air in and out of your lungs. It can be done in your caregiver's office or at home with a small handheld spirometer. The spirometer is used to measure:

- **FEV1** or **Forced Expiratory Volume1** (the amount of air you can forcefully breathe out in the first second of forcefully breathing out).
- **FEV6** or **Forced Expiratory Volume6** (the amount of air you can forcefully breathe out after six seconds).

These are good tests of FVC or Forced Vital Capacity (the largest amount of air you can breathe out after you breathe in as deeply as possible).
The amount of air you breathe out may be measured at:

- 1 second (FEV1).
- 2 seconds (FEV_2).
- 3 seconds (FEV_3).
- 6 seconds (FEV6).

This is a simple test for you and convenient for your caregiver. The measurements of the FEV1 and FEV6 by a spirometer are important for you and your caregiver to help diagnose:

- Asthma.
- COPD (chronic obstructive pulmonary {lung} disease).
- Other lung problems.

These values can also be followed regularly at home. This helps monitor your lung problems and how they are responding to treatment. You can keep a record of these values when they are done at home. Record all the values and what medications you were taking at the time. Record at what values you feel you needed additional medications.

More testing may be done if your caregiver feels it is necessary to more completely check your lung function.

PROCEDURE:

- A nose clip will gently keep your nose sealed so you can't accidentally push air out your nose.
- You will be asked to hold the tube of a spirometer in your mouth.
- You then inhale as much air as possible, then breath out forcefully into the tube for six seconds or more or as instructed.
- The information from the spirometer may be printed out on a chart called a spirogram. If you are given copies of your spirograms, keep them in a book as a measure of how you are doing from one test to the next or if needed when seeing another caregiver.

HOME CARE INSTRUCTIONS

- Use your spirometer as directed.
- Record your measurements and how you are using your medications.
- Let your caregiver know if you are having problems with shortness of breath which is not improved with medication use.
- Use prescription medications as ordered by your caregiver.
- Avoid pollen, dust, animal dander, molds, smoke, and anything that causes attacks at home and at work.
  - You may have fewer attacks if you decrease dust in your home. Electrostatic air cleaners may help.
  - It may help to replace your pillows or mattress with materials less likely to cause allergies.
- Drink 8 to 10 glasses of water each day if you are not on fluid restriction.
- Discuss possible exercise routines with your caregiver.
- If animal dander is the cause of your asthma, you may need to get rid of your pets.

SEEK MEDICAL CARE IF:

- You have wheezing and shortness of breath even after taking medicine to prevent attacks.
- An oral temperature (fever) above 102º F (38.9º C) develops.
- You have muscle aches, chest pain, or thickening of sputum.
- Your sputum changes from clear or white to yellow, green, gray, or bloody.
- You have any problems that may be related to the medicine you are taking (such as a rash, itching, swelling, or trouble breathing).

SEEK IMMEDIATE MEDICAL CARE IF:

- Your usual medicines do not stop your wheezing.
- You have increased coughing and/or shortness of breath.
- You have increased difficulty breathing.

Document Released: 12/18/2006 Document Re-Released: 09/26/2009
ExitCare® Patient Information ©2011 ExitCare, LLC.