Respiratory Parameters

Respiratory (breathing) parameters are a set of tests that measure the strength of your breathing muscles. You may have one or more parts of this test while you are in the hospital. This test also may be done several times a day. It will show whether your breathing is improving with the treatment.

This test is commonly done for patients with Guillain Barré, Myasthenia Gravis or Muscular Dystrophy. The results of this test will help your doctor look at the progression of your disease and how it affects your breathing muscles.

During the Test

You will be asked to breathe through a mouthpiece and to wear a nose clip or pinch your nose closed during the test. If necessary, use your hands or a mouth seal to keep a tight grip on the mouthpiece. All of the air that you breathe out during the test must go through the mouthpiece to be sure the results are accurate. Accurate measurements depend on you following the instructions and giving your best effort!

Steps of the test:

- Relax and breathe normally into the mouthpiece for one minute. This measures the number of breaths per minute that you are breathing and size of each breath.
- Breathe in as deeply as you can and then blow your air out completely. Keep a tight seal with your lips and teeth around the mouthpiece.
- Breathe in as hard as you can against a closed valve. For this breath, you will not be able to draw any air in for 1 to 2 seconds. You may only need to be repeat this step once or twice. This part of the test measures breathing muscle strength.

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- The test may make you tired or short of breath, so you can rest between the repeated tests.
- There are no side effects from this test.

**About the Test Results**

- **Tidal Volume** ($V_T$) is the amount of air that you breathe in (inhale) and breath out (exhale) during relaxed normal breathing. The normal value is based on your ideal body weight.

- **Slow Vital Capacity** (SVC) is the amount of air that is inhaled as deeply as possible and then exhaled. You may take all the time necessary to exhale completely. This part of the test measures how deeply you can breathe. Deep breathing is necessary for coughing and clearing secretions.

- **Negative Inspiratory Force** (NIF) is the greatest force that the chest muscles can exert to take in a breath. The normal value is greater than -60. This number shows the doctor how strong your breathing muscles are.

Talk to your doctor or others on your health care team if you have any questions. You may request more written information from the Library for Health Information at (614) 293-3707 or email: health-info@osu.edu.