

Pulmonary Medicine, Allergy and Immunology

SPIROMETRY TESTING

AT CHILDREN'S HOSPITAL OF PITTSBURGH OF UPMC, we believe parents and guardians can contribute to the success of this test and invite you to participate. Please read the following information to learn about the test and how you can help.

Fast Facts About Spirometry Testing

- Spirometry testing measures air flow in the lungs, and is one of the most widely used tests to measure lung function or pulmonary function. (The word spirometry means "measuring of breath.")
- The test is done by having your child take a large breath and then breathe out very hard and fast through a tube connected to a computer.
- Spirometry testing is totally painless, but your child will need to cooperate and follow directions.
- The spirometry test itself only takes a few minutes, but the test may need to be repeated after 15 to 20 minutes.
- Your child will be asked to take several large breaths with each test to get an accurate measurement.
- Your child may resume a normal diet and activities afterwards.

What Is Spirometry Testing?

Spirometry (*spy-ROM-a-tree*) is a simple way for the doctor to measure your child's lung function, and to tell how well his or her medications are working.

- Spirometry testing is a simple way to find out if your child's lungs or airways are obstructed (blocked) in any way because of asthma or other conditions that affect breathing.
- The test is sometimes repeated a second time 15 minutes after the child has used his or her bronchodilator (*brank-o-DIE-late-er*) medication (such as albuterol).
- The results of each test are measured on a computer screen that shows how fast air flows in your child's lungs.

Home Preparation

Very little preparation is required before spirometry testing.

- Your child might be asked not to use his or her short-acting asthma medications for 4 hours before the test.
- Your child may wear normal clothes to the test.



Before the Spirometry Test

Spirometry testing is done through the Division of Pulmonary Medicine, Allergy and Immunology of Children's Hospital or one of the Children's satellite locations. This test may be done on its own, as part of another appointment, or while your child is a patient in the hospital.

After you have registered your child at the desk, you will be asked to sit in the waiting area. We invite one parent or guardian to stay with your child during the treatment. Other adults and siblings must stay in the waiting room during the test.

- You and your child will be called to the examining room and asked some screening questions by one of the doctor's assistants. The assistant will take your child's vital signs, weight and medical history. As the parent or legal guardian, you will be asked to sign a consent form for testing.
- You may ask any questions or discuss concerns about your child's treatment at this time.
- Your wait time will vary, depending on how many children are being seen that day and the type of testing that has been ordered for your child. Since every child is different, the length of time needed to do each treatment will vary. Please be patient with the medical staff.

SPIROMETRY TESTING *cont'd*

The Spirometry Test

You will be joined in the examining room by a pulmonary function technician. The spirometry test will be overseen by a physician, but the actual test will be performed by the technician. The results will be reviewed by a doctor.

- Your child will be asked to sit in a chair next to the spirometry machine. He or she will not be asked to remove any clothing.
- It is important that your child listens closely to the technician's instructions.
- The technician will ask your child to place a sterile mouthpiece into his or her mouth and to wear padded noseclips.
- Your child will be asked to breathe normally at first.
- The technician will then ask your child to take a deep breath, inhaling (breathing in) to completely fill the lungs and then exhaling (breathing out) in a blasting breath as hard as he or she can. These blasting breaths must be repeated at least 3 times to make sure the results are accurate.
- The technician will ask your child to use an inhaler as he or she normally would at home. Your child will then be asked to wait 15 minutes. (Sometimes other tests will be performed during this waiting period.)
- Your child will be asked to repeat the breathing test as before, with at least 3 big blasting breaths.
- The doctor will then review the results of the spirometry testing and discuss them with you.



After the Spirometry Test

Your child may resume normal activities immediately, unless otherwise directed by the doctor. Spirometry testing does not cause side effects.

Special Needs

If your child has any special needs or health issues you feel the doctor or pulmonary function technician performing the test needs to know about, please call the Division of Pulmonary Medicine, Allergy and Immunology at Children's Hospital of Pittsburgh **before the test** and ask to speak with a pulmonary function technician. It is important to notify us in advance about any special needs.

Division of Pulmonary Medicine, Allergy and Immunology
Children's Hospital of Pittsburgh of UPMC
Children's Hospital Drive
45th and Penn Ave.
Pittsburgh, PA 15201
(412) 692-5630

Children's North
2599 Wexford Bayne Road
Sewickley, PA 15143

Children's South
1300 Oxford Drive
Bethel Park, PA 15102

Children's East
Corporate One Office Park
Building One
4055 Monroeville Blvd.
Monroeville, PA 15146

A Parent's/Guardian's Role During the Spirometry Test

The most important role of a parent or guardian during the test is to help your child stay calm and relaxed. The best way to help your child stay calm is for you to stay calm.

- You may stay near your child.
- Feel free to ask any questions, but please ask them before or after the test.

To see the list of all available patient procedures descriptions, please visit www.chp.edu/procedures.