

Infant Lung Function Studies

What are infant lung function studies?

Lung function studies will measure the size of your child's lungs. They will also measure how easily air moves in the lungs. The results of lung function studies will tell us how your child is breathing and help us with a treatment plan.

Where do I take my child for these studies?

Your child should come to the Pulmonary Diagnostic Center on the third floor of the Outpatient Pavilion. You should check in at the main desk.

How do I prepare my child for these tests?

Your child must be asleep to perform this study. We will give your child a sedative to help them sleep through the test. The sleeping medication is quite safe, but ask your doctor if you have any questions.

We will try to schedule the test around your child's usual naptime. This will help your child sleep through the test. Before the test we ask that you do the following:

- Keep your child awake for 4 hours before the test. Even a short nap can make it harder for your child to fall asleep for the test.
- Do not feed your child:
 - Solid foods for 8 hours before the test.
 - Formula for 6 hours before the test.
 - Breast milk for 4 hours before the test.
 - Clear liquids such as juice or Pedialyte™ for 2 hours before the test.
 - Your child will be able to take a small amount of liquid (formula) after the sedative is given.
- If your child is on oxygen, please call the lab personnel in the respiratory care department at 720-777-2613.
- If your child is on bronchodilators (albuterol, Xopenex) please hold them the morning of the test. Call the lab if this is not possible. Their phone number is 720-777-2613
- After the sedative is given, it will take at least 2 hours to complete the study.

What is done during the study?

Your child will be placed on a heart monitor and blood oxygen monitor. Your child will be examined and then be given a sedative by mouth. It is not unusual for your child to become quite active until the sedative takes effect. While holding your child, be sure to support the head and neck. It will take about 30 minutes for the sedative to take full effect.

After the sedative has taken effect and your child is asleep, the test will begin. Lab personnel will be with your child at all times until your child wakes up. Your child will lie in a small cradle in the pulmonary function machine with a mask over their nose and mouth. Your child will be able to breathe normally throughout the test. If needed, oxygen can be delivered through the mask. For a brief time, it

will be necessary to close a Plexiglas™ box around the cradle your child is sleeping in. This test usually takes about 5 minutes and helps to determine lung size and volume.

An inflatable jacket will be placed around your child's chest to help them blow out air. This jacket helps to measure how easy air moves through the lungs. The pressure in the jacket is no more than the pressure used to take blood pressure readings. The machine is somewhat noisy during this part of the test. Most children do not wake up during this time. During part of the jacket test, we will deliver a few positive pressure breaths to your child's lungs. These breaths will help us to measure how your child is breathing out with the assistance of the jacket.

The test normally takes 45 minutes to 2 hours. The amount of time needed depends on how much your child can sleep through the study.

What is done after the study?

Your child will remain in the care of hospital staff until your child is awake and ready to leave. Continue to support your child's head and neck for up to 6 hours after the test. Your child may be somewhat sleepy for a few hours after the test. If your child does not seem fully awake within 4 to 6 hours, contact your physician. Your child should be able to eat and drink normally after the study, when they are fully awake.

Test results will be given to your child's doctor. Your child's doctor will discuss the results with you.

If you have questions concerning this test, you may call:

Infant Pulmonary Function Lab	720-777- 2613
Pulmonary Medicine	720-777- 6181