

## Diagnosis

To properly diagnose asthma, you'll discuss your medical history and have a physical exam with a physician. You may need lung function tests to detect possible limitations in your breathing, and, in some cases, you may need additional tests, such as a chest or sinus X-ray. If you or your child are having problems breathing on a regular basis, don't wait! Visit a doctor immediately. Knowing what to expect during the diagnostic process and how your doctor arrives at a diagnosis may help.

**Common Diagnostic Techniques:** Personal and medical history. Your doctor will ask you questions to get a complete understanding of your symptoms and their possible causes. Bring your notes to help jog your memory. Be ready to answer questions about your family history, the kinds of medicines you take, and your lifestyle at home, school, and work. This includes any current physical complaints. Shortness of breath, wheezing, coughing and a feeling of tightness in your chest may indicate asthma. This also includes all previous medical conditions. A history of allergies or eczema increases the possibility of asthma. Any past or present medical conditions experienced by your parents, brothers or sisters, or children. A family history of asthma, allergies or eczema increases your likelihood of asthma. Your doctors will be interested in any home or occupational exposure to environmental factors that can worsen asthma — for example, pet dander, pollen, dust mites and tobacco smoke. Overall physical examination. If your doctor suspects asthma, he/she will pay special attention to your ears, eyes, nose, throat, skin, chest and lungs during the physical examination. This exam may include a pulmonary function test to detect how well you exhale air from your lungs. You may also need an X-ray of your lungs or sinuses. A physical exam then allows your doctor to further evaluate your overall health. Lung function tests. To confirm an asthma diagnosis, your doctor may conduct one or more breathing tests known as lung (pulmonary) function tests. These tests measure many aspects related to your breathing. Common lung function tests used to diagnose asthma include:

**Spirometry.** During this test — the recommended test for confirming the diagnosis of asthma — you breathe into a mouthpiece that's connected to a device known as a spirometer. The spirometer records the amount of air you're able to exhale. You'll likely be asked to take a deep breath and then exhale forcefully. A spirometer — useful in diagnosing conditions such as asthma — measures the amount of air you're able to breathe in and out and its rate of flow. The number displayed when breathing into the peak flow meter is a measurement of your ability to force air out of your lungs.

**Peak Airflow.** This test, one of the simplest lung function tests, uses a peak flow meter — a small, hand-held device that you breathe into — to measure the rate at which you can force air out of your lungs. During the test you breathe in as deeply as you can and then blow into the device as hard and fast as possible. If you're diagnosed with asthma, you can use a peak flow meter at home to help monitor your condition.

Lung function tests are often done before and after inhaling a medication known as a bronchodilator, which opens your airways. If your lung function improves significantly with use of a bronchodilator, it's likely you have asthma. Your doctor may also prescribe a trial with asthma medication to see if it improves your lung function. Trigger tests. If your test results so far are normal, but you've been experiencing signs and symptoms of asthma, your doctor may use known asthma triggers to try to provoke a mild reaction. If you don't have asthma, you won't react. But if you do have asthma, you likely will. For example, your doctor may have you inhale a substance called methacholine. If you have asthma, inhaling the methacholine will cause your airways to constrict. Your doctor can measure these constrictions using a lung function test. Or, if your doctor suspects you have exercise-induced asthma, he or she may have you take lung function tests before and after exercising to see if there's a difference. Additional Tests to Rule Out Other Conditions. If your doctor suspects you have a condition other than asthma or in addition to asthma, he or she may conduct other tests or assessments, such as a chest X-ray, gastroesophageal reflux test, sinus X-rays, sputum induction and examination, or other. Your doctor may also perform allergy tests. Allergy tests aren't used to determine whether you have asthma. However, allergy tests can indicate if you have allergies that may be causing or worsening your asthma. Diagnosing Asthma in Children. The procedures used to diagnose asthma in children under the age of 5 are slightly different. Children this age usually aren't given a breathing test. Instead, the doctor asks about certain signs and symptoms and prescribes a bronchodilator if he or she thinks it might be asthma. If the bronchodilator is helpful in reducing your child's signs and symptoms, that is a sign that your child may have asthma.