Asthma

Asthma is a lung condition that causes your airways to be very sensitive. When you are exposed to an allergen, or stimuli that makes your airways react, it can lead to:

- Shortness of breath
- Coughing, especially at night
- Wheezing
- Chest pressure or tightness
- Mucus in the airways
- Reoccurring lung infections, such as bronchitis

Your body may make more mucus to clear the allergen out of the lungs, or the airways will swell or get tighter. Any of these reactions can make it harder for you to breathe.

About Your Lungs

Your lungs are made up of air tubes that allow oxygen to enter your body and carbon dioxide to leave. The largest air tube is called the trachea and is located in the upper middle part of your chest. The trachea branches out into 2 large areas, one called the right lung (bronchus) and the other is the left lung. Your lungs are air sacs with multiple lobes so that oxygen can be brought to different body systems.
Within each lung, there are smaller groups of air sacs called **alveoli**. These air sacks take air from the lungs into the bloodstream. There are millions of air sacs helping to transfer oxygen into your body and then removing carbon dioxide.

**Asthma and the Lungs**

Asthma causes the walls of the larger air tubes to swell, also called inflammation. Swelling in the walls of the air tubes causes constriction or makes the airway smaller. Mucous also builds up inside the airway. Exposure to asthma triggers cause more swelling and can close the airway. This is called an asthma attack. Asthma attacks need to be treated quickly.

<table>
<thead>
<tr>
<th>Normal Airway</th>
<th>During Asthma Attack</th>
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<tbody>
<tr>
<td><strong>Bronchus</strong></td>
<td><strong>Extra Mucus</strong></td>
</tr>
<tr>
<td><strong>Muscles</strong></td>
<td><strong>Tight muscle</strong></td>
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<tr>
<td><strong>Mucus lines the tubules</strong></td>
<td><strong>Inflamed swollen airway</strong></td>
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<tr>
<td></td>
<td><strong>Alveoli with trapped air</strong></td>
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**Tests**

A health care provider will ask questions about your breathing and check your lungs and heart during an exam. A chest x ray and breathing tests may be ordered to help make the diagnosis of asthma. If sinus problems, allergies or acid reflux are causing your breathing problems, other tests and treatments will be needed. The test results and how often you are having breathing problems will determine how severe your asthma may be.

**Treatment**

There is no cure for asthma. Medicines can be given to stop or control chronic inflammation in the air tubes and prevent asthma attacks. Rescue medicines open the air tubes and are given to all people with asthma to inhale when breathing problems occur. The goal of medicines and changes in lifestyle are to reduce the effects asthma may have on your quality of life.
Talk to your health care team about your asthma so you know when and how to use your medicines. Take medicines as directed, even when you feel fine, and include these steps in your asthma plan:

- Avoid allergens or triggers that can lead to breathing problems if you know what you are allergic too.
- Keep your scheduled appointment with your doctor even if you feel ok.
- Lose weight if you are overweight.
- Stop smoking and tobacco use and avoid second hand smoke.
- Get the flu vaccine every year and the pneumonia vaccine as needed to reduce serious infection.
- Make a list of emergency numbers and keep them by your phone.
- Call your health care provider if your asthma gets worse or if medicines are not working as well. Dealing with a problem early can prevent a severe problem later.
- If you ever need to go to an emergency room or hospital for breathing problems, follow up with your doctor within 1 week.
- **If you are pregnant**, talk with your doctor about your asthma condition. You are breathing for you and your baby. Take all medicines regularly to keep asthma controlled and contact your obstetrician (OB) or asthma doctor if you have any questions or concerns.

**When to Call 911 or Visit the Emergency Room**

If you have asthma, take your breathing seriously. If you have any of these signs, take action to get medical care right away:

- You feel like you cannot breathe at all.
- You cannot say 4 to 5 words because you are so short of breath.
- You cough so much you cannot take a breath.
- Your lips or fingernails are bluish in color and you are short of breath.
- Your peak flow numbers drop below half of your personal best.

If you ever have questions or concerns about your asthma condition, or the treatments used to monitor your condition, contact your health care team or go to [www.asthma.osu.edu](http://www.asthma.osu.edu) for more information.

You may request more written information from the Library for Health Information at (614) 293-3707 or email: health-info@osu.edu.