MY CHILD'S ASTHMA – WHAT IS IT?

Asthma

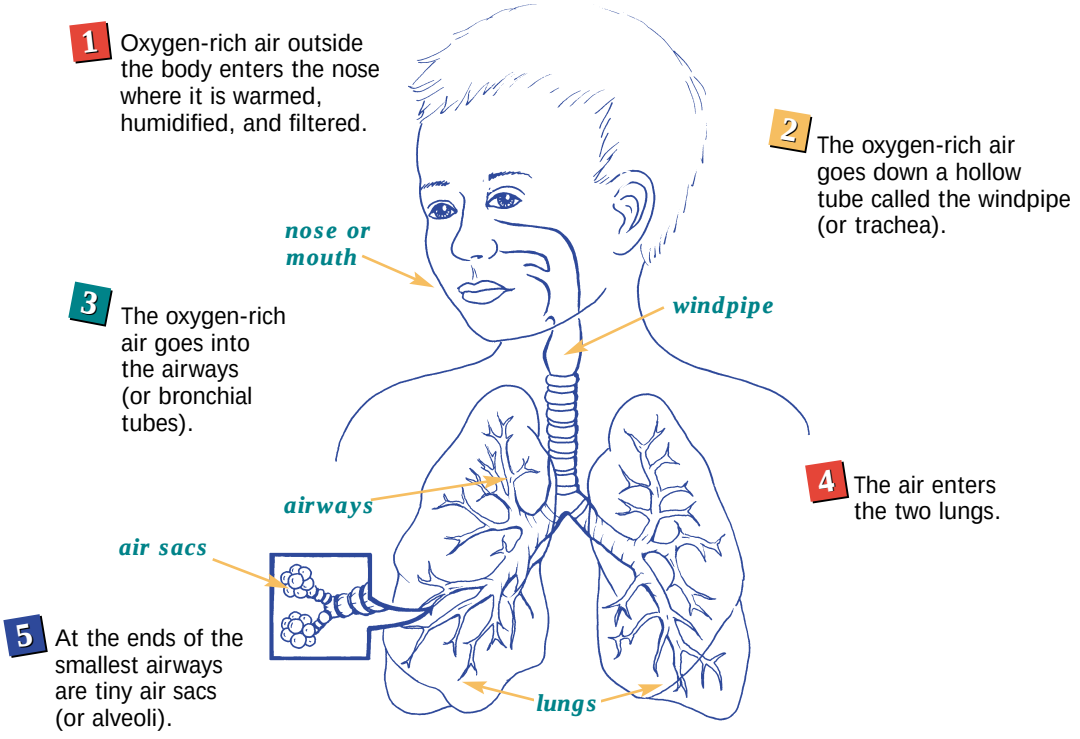
Asthma is a disease of the airways that affects breathing. Breathing is difficult for a child during an asthma flare up.

Some children will have asthma for many years. Some may have asthma symptoms their whole life. There is no cure for asthma yet, but there are many things that you and your doctor can do to control asthma flare ups.

Breathing ...

Breathing involves the exchange of oxygen and carbon dioxide. When air is inhaled (breathing air in), oxygen from the air is taken into the lungs and exchanged for carbon dioxide, a waste product of the body. When air is exhaled (breathing air out), carbon dioxide is forced out of the lungs.

The breathing path…

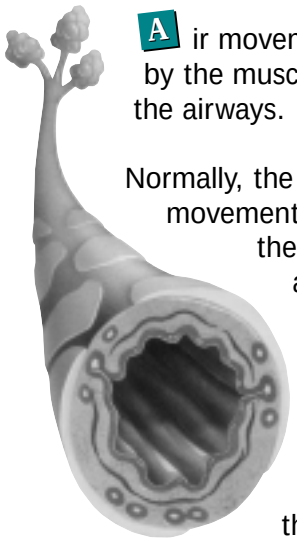


The air sacs are separated from the blood vessels of the lungs by a thin membrane. It is across this membrane that the oxygen from the "fresh" air is exchanged for carbon dioxide ("used" air). The heart pumps the blood with this fresh air with oxygen to all parts of the body.

ASTHMA FOCUS

Children with asthma have very sensitive airways. Their airways react and become irritated by things, such as cigarette smoke or cold air, that do not affect the airways of other children. When the airways react to irritation, your child experiences an asthma flare up.

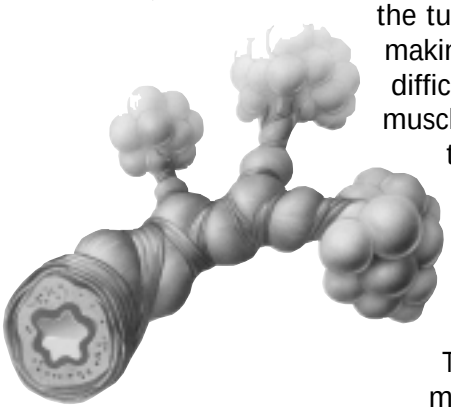
Asthma affects the airways …



Normal airways

Air movement is affected by the muscles that surround the airways.

Normally, the path for air movement works because the airway muscles are relaxed and open, making it easy for the fresh air to reach the lungs and the used air to leave the lungs.



Airways affected by asthma

When the muscles tighten (or contract) the tubes gets smaller, making breathing more difficult. The tighter the muscles, the harder it is to breathe.

The mucosa is moist tissue lining the airways.

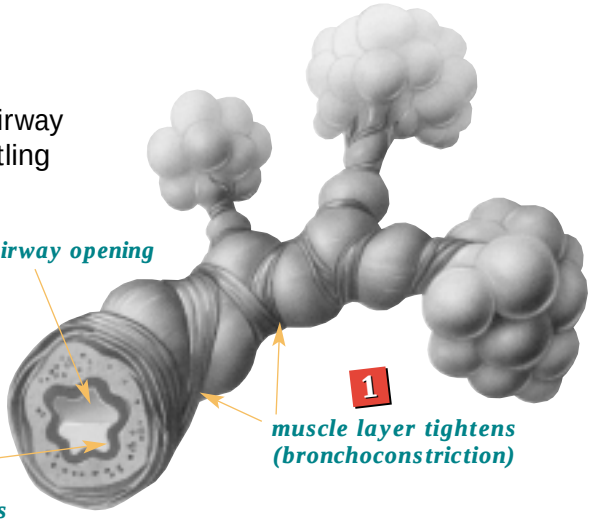
The mucosa produces mucus (also called phlegm or sputum). Mucus helps keep the airways moist and traps irritants that are inhaled. Irritants that are trapped by the mucus are then sneezed or coughed out.

ASTHMA

During an asthma flare up TWO things happen … Bronchoconstriction and Inflammation

1. The muscles around the airway tubes tighten, making the airway tubes smaller. This is called **bronchoconstriction**. A whistling sound (wheezing) may occur as the air moves through the narrowed airways.

2. The lining (the mucosa) inside the airways swells. This is called **inflammation**. This swelling makes the airway tubes smaller so air movement is more difficult. When inflammation occurs, extra mucus or sputum is produced in the lining of the airways. This mucus is usually thick and sticky, and may form mucus plugs. When mucus plugs form, the airways are blocked, causing your child to cough and become short of breath.



Breathing gets harder when these two things happen to the airways.

A severe asthma flare-up can be life-threatening. Asthma medicine must be taken exactly as directed by a doctor. If your child is using a quick-relief inhaler more than twice a week or is waking up at night with asthma symptoms (like coughing, or shortness of breath) more than two times per month, his or her asthma may not be under control – see your child's doctor.

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