



Do you know what John F. Kennedy, Teddy Roosevelt, Helen Hayes, Charles Dickens, Che Guevara, Billy Joel, Liza Minnelli, Bob Hope, Coolio, Elizabeth Taylor, Wynonna Judd, Kenny G. Dennis Rodman, Greg Louganis, Jackie Joyner and Jerome Bettis have in common? They, like 1 of every 12 of your friends and family, have asthma. Some of these people died from their asthma just like an average of 14 Americans die daily from this incurable disease.

Asthma is the most chronic incurable disease affecting children. It is the leading reason for school and workplace absenteeism. More girls than boys have asthma and more African-Americans and Hispanics have asthma than Caucasian Americans. No one yet knows why some people have asthma and others don't. Scientists think it's a combination of genetics or heredity and environmental factors. If one or more of your parents have asthma, there's a good chance you'll have it, too. Almost 70% of those with asthma have allergic asthma, meaning their asthma symptoms are started or triggered by allergies. Others have asthma that is triggered by exercise, and some have a combination. Some people have mild asthma which means they don't have symptoms often; others have severe asthma with symptoms most of the time. Asthma is a chronic disease, which means it never goes away, but it can be controlled. It can be controlled or managed by eliminating or avoiding the triggers or allergens and irritants which cause symptoms or flare-ups and by following the medication plan that a physician prescribes.

What Is Asthma?

Asthma is a **disease** of our **respiratory or breathing system**. The respiratory system is made up of two sections: the **upper** respiratory tract - the nose, mouth, **larynx** (voice box which allows us to make speech), and trachea (windpipe). The **lower** respiratory tract consists of the **lungs, bronchi**, and **alveoli**, where air travels to feed our blood with oxygen. When we breathe in 1) air enters the body through the nose and the mouth and travels down the airway passage to the lungs.

2) Nasal hairs and **mucus** (a slimy lubricating fluid) in the nose filter out dust particles and bacteria and also warm and moisten the air.

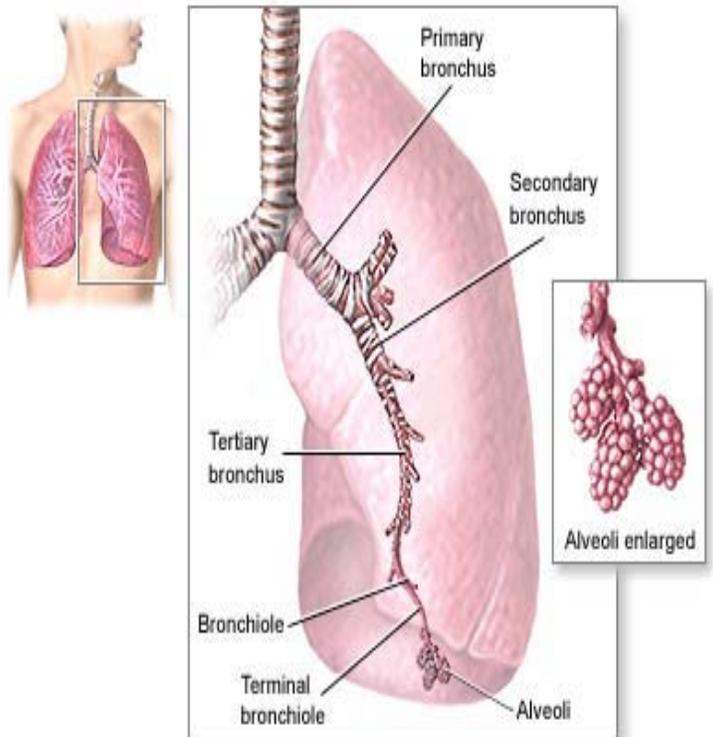
3) Air travels down the throat.

4) Air continues down the windpipe or trachea, which branches into right and left **bronchi**, (tubes that pass from the windpipe to the lungs).

5) The main bronchi divide into smaller bronchi or tubes, then into even smaller tubes called **bronchioles**. The bronchi contain hair-like projections called **cilia** that sweep debris out of the lungs, like a filter.

6) Once in the bronchioles, the smallest of the bronchial tubes, the air is at body temperature and 100% humidity, and is (hopefully), completely filtered of dust or other particles.

7) Air sacs called **alveoli** – (small, thin-walled "balloons" arranged in clusters like grapes) are at the end of the bronchioles.



When we breathe in, our chest cavity gets bigger and the "balloons" expand as air rushes in. When we breathe out, the "balloons" relax and air moves out of the lungs.

8) Tiny blood vessels or capillaries surround each of the alveoli or clusters. When we breathe in, oxygen, a colorless gas, is carried to these capillaries and sent into our blood stream; carbon dioxide gas, a waste gas, passes out of the blood into the alveoli and is then breathed out.

When we are healthy, the process of breathing is so smooth most of us are not even aware we are doing it. But many things can happen to make breathing difficult if not impossible: the flu, a cold, sinus infections, anxiety or panic attacks, COPD including emphysema, cystic fibrosis or **asthma**.

Asthma is a **chronic** (always with us) lung disease that has two main physical parts: **airway inflammation** - the airway, the path air takes from the nose to the lungs, is swollen and so becomes smaller- and **broncho-constriction** - muscles around the airways get tight, squeezing the tubes, making them even smaller which results in **wheezing** (difficult breathing, making a whistling sound), coughing, chest tightness or shortness of breath (feeling like you can't get air).

If we follow a control plan using proper medication and eliminate irritating triggers that cause problems, asthmatics can breathe normally. But when we are exposed to a "trigger" the airways become even **more swollen** than usual, making it harder to breathe. Finally the airways can become **congested** or clogged, due to a build-up of mucus. Many triggers can cause this **constriction** or tightening.

Allergies are caused by a different reason. Our immune system is designed to fight viruses and bacteria that can make us sick. **Allergy** happens when the immune system mistakenly produces **antibodies** or chemicals (histamines) that fight off and try to destroy foreign substances or proteins, **things like pollens, dust mites, mold spores and animal dander** (skin flakes) all normally **totally, absolutely harmless substances**. But people with allergies simply have an immune system that makes a mistake and their immune systems fight these normally harmless allergens. **Histamines**, the chemicals released by the immune system to fight allergens, cause allergy symptoms to occur. For more information about allergens and how to control and eliminate them, contact AAFA-TX. **Ask your physician about diagnosis and treatment options** to control **your** asthma and allergies.