

Asthma is a serious disorder that makes breathing difficult. The World Health Organization says asthma affects about three hundred million people worldwide. An estimated two hundred fifty thousand people die from the disease every year. And more than five hundred thousand others are treated in hospitals.

Asthma happens when tissue that lines the airways to the lungs begins to expand or swell. This swelling makes the airways smaller. The muscles in the airways tighten.

Cells in the airways begin to produce a lot of mucous. This thick, sticky substance causes the airways to close even more.

This makes it difficult for air to flow in and out of the lungs.

This series of events is called an asthma attack. As asthma sufferers struggle to get air into their lungs, they may begin to cough a lot. They may also make a whistling or breathy sound called wheezing.

Some asthma sufferers have tightness or pain in the chest. They say it feels as if someone is sitting on them.

When asthma is most severe, the person may have extreme difficulty breathing. The disease can severely limit a person's activity, and even lead to death.

Doctors do not know what causes asthma. Researchers believe a combination of environmental and genetic conditions may be responsible.

Forty percent of children who have parents with asthma will develop the disease. Seventy percent of people with asthma also have allergies. Allergies are unusual reactions of the body's immune system to otherwise harmless substances or conditions.

Doctors have identified many of the things that may trigger, or start, an asthma attack. Triggers are things that cause the asthma sufferer's airways to swell.

Different asthma patients usually have different triggers. Allergens are one of the most common triggers. These impurities in the air cause allergic reactions.

Some of the more common allergens include animal hair, dust, mold and pollen.

Pollen is a fine dust that comes from grass, trees and flowers. Mold is a kind of fungus. It can grow on the walls or floors of homes. It is often in wet or damp areas like bathrooms, kitchens and basements. The Environmental Protection Agency estimates that twenty-one percent of asthma cases in the United States have links to mold and dampness in homes.

Air pollution can also trigger asthma. Cigarette smoke is a major problem for asthma sufferers. So is air pollution from motor vehicles. Chemical sprays like air fresheners, hair spray, cleaning products and even strong beauty aids can trigger an asthma attack.

Some people cough, wheeze or feel out of breath during or after exercise. They are said to suffer from exercise-induced asthma. During the winter, breathing in cold air can trigger an asthma attack. So can colds and other respiratory infections.

The Centers for Disease Control and Prevention says more than twenty-three million people in the United States have asthma. Among adults, more women have the disease than men.

Asthma affects more than seven million children each year. It is more common among boys than girls.

The National Institute of Allergies and Infectious Diseases says the disease affects African-Americans more than whites. African-American children die from asthma at five times the rate of white children.

Special English reporter June Simms has a fourteen-year old son with asthma. Arick first showed signs of the disease when he was about two years old.

The doctor gave Arick a medicine called albuterol. Albuterol helps to increase air flow and reduce tension in the airways. The doctor also gave Arick a machine called a nebulizer. It connects to a mask that he placed over his mouth and nose.

The nebulizer turns the liquid albuterol into a fog-like mist. Arick inhaled the mist through the mask. The treatments made it easier for him to breathe.

During times when Arick's asthma was really severe, he was also given steroids to help reduce swelling in his airways.

As Arick grew older, the doctor replaced his nebulizer with a small medical device called an inhaler. He also began seeing a doctor who specializes in treating patients with asthma.

The doctor discovered that Arick also suffers from allergies. He now takes medicines every day to help keep his asthma and allergies under control.

Asthma has become a major health issue around the world, and a problem for many individuals, families and economies. The yearly economic cost of asthma is close to twenty billion dollars.

The World Health Organization says asthma rates are increasing worldwide by an average of fifty percent every ten years. The largest increase has been among children.

The Global Initiative for Asthma, GINA, was formed in nineteen ninety-three to raise attention about asthma. It also seeks to improve asthma care around the world.

GINA is a joint effort of the World Health Organization and the National Heart, Lung and Blood Institute of America's National Institutes of Health.

In two thousand four, GINA released a report called "The Global Burden of Asthma." The report said asthma is a growing problem in both industrial and developing countries.

The report suggests that asthma rates in developing countries increase as they become more westernized. It estimates that there may be an additional one hundred million people with asthma by the year twenty twenty-five.

While asthma cannot be cured, it can be successfully controlled. This year, GINA's World Asthma Day campaign was called "You Can Control Your Asthma." The organization launched the campaign in two thousand seven. Its aim is to show that a large majority of asthma patients can control the disease with correct treatment.

GINA says several simple steps can help people control their asthma. People should take their asthma medicines as directed by their doctor.

Most people need two kinds of medicines. One is a quick-acting "rescue" medicine taken when needed to stop the signs of asthma. The other is a controller medicine taken every day to prevent these symptoms.

People should know the causes of their asthma symptoms and try to avoid these triggers. For example, seek to avoid animal hair, dust, pollen from trees and flowers or cigarette smoke. Some people may need to take medicines before they work hard or exercise.

Patients should work with their doctors to control the disease. They should go to the doctor for medical examinations even if they are feeling fine. They should make sure they understand how and when to take their medicines. They also should act quickly to treat asthma attacks and know when to seek medical help.

This year, GINA launched a campaign to urge governments and health officials to do more to improve asthma control. The campaign seeks to reduce asthma hospitalization by fifty percent in five years.

Earlier this year, researchers identified what they hope will be a new tool in the fight against asthma. They said a new, non-steroidal treatment made from a human protein has proven successful in greatly decreasing the signs of asthma in mice.

The researchers said the protein, called IGFBP3, prevented the development of some physiological conditions linked to asthma. This includes inflammation and over activity of the lungs.

The researchers say the protein attacks an important cellular pathway called nuclear factor kappa B. NFkB is responsible for the lung inflammation linked to asthma. The discovery could have a major effect on asthma, as well as other respiratory problems related to inflammation, like rheumatoid arthritis and atherosclerosis.

The results of the study were made public earlier this year at the Endocrine Society's ninety-second annual meeting in San Diego, California.