

This is Science in the News. I'm Shirley Griffith.

And I'm Bob Doughty. Spring has returned to the United States. The sky is blue, the grass is green and many plants are flowering. Spring can be a beautiful time of year. But it is especially troublesome for people with asthma. High pollen levels can keep asthma sufferers from enjoying spring flowers and the weather.

## **Asthma Awareness Month**

May is "Asthma Awareness Month" in the United States. And May first is "World Asthma Day." The Global Initiative for Asthma, or GINA, organizes the event every year. 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.

GINA held its first "World Asthma Day" in 1998. This year, the theme for "World Asthma Day" is "You Can Control Your Asthma." GINA first launched this education campaign as part of the event in 2007. The group notes that while asthma cannot be cured, it can be successfully controlled.

Asthma is a disorder that causes breathing passages to narrow. This reduces the amount of air entering and leaving the lungs, causing difficulty in breathing.

The World Health Organization says asthma affects about 235 million people worldwide. The WHO says asthma is the most common chronic disease among children. And it says the disease affects people in all countries around the world and at every development level. However, the WHO says 80 percent of asthma deaths happen in low and lower middle income countries.

Asthma affects not only millions of individuals, but families and economies alike. The yearly economic cost of the disorder is said to be close to 20 billion dollars. And, the World Health Organization warns that asthma rates are increasing worldwide by an average of 50 percent every 10 years.

## **Asthma Attacks**

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 can cause 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. They also may experience wheezing -- breathing hard with a breathy, whistling sound.

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 disorder can severely limit a person's activity, and even lead to death.

Doctors do not know what causes asthma. Medical researchers believe a combination of environmental and genetic conditions may be responsible. Forty percent of children who have parents with asthma will also develop this disorder. Seventy percent of people with asthma also have allergies. Allergies are unusual reactions of the body's natural defenses to normally harmless substances or conditions.

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

Different asthma patients 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 21 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 infections of the respiratory system.

The Centers for Disease Control and Prevention says more than 25 million people in the United States have asthma. It says the disorder affects more than 7 million American children. Among adults, more women have the disease than men. However, it is more common among boys than girls.

The National Institute of Allergy 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.

## **True Story of an Asthma Patient**

VOA broadcaster June Simms has a son with asthma. Arick Simms first showed signs of the disease when he was about two years old.

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

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 steroid medicines to help reduce swelling in his airways.

As Arick grew older, the doctor replaced his nebulizer with an inhaler. The small medical devices helped him to breathe easier. 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.

## **Advice For Controlling Asthma**

The Global Initiative for Asthma was formed in 1993. GINA works with health care experts and public health officials around the world to improve asthma care and to reduce the number of asthma cases.

In 2004, GINA released a report called "The Global Burden of Asthma." The group said asthma is a growing problem in both industrial and developing countries. It estimated that there may be an additional 100 million people with asthma by the year 2025.

GINA says there are many things that people can do to control their asthma.

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

Asthma patients should work with their doctors to control the disorder. 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.

The Global Initiative for Asthma urges governments and health officials to do more to improve asthma control. GINA hopes to reduce asthma hospitalization by 50 percent by the year 2015.

This Science in the News was written by June Simms, who was also our producer. I'm Bob Doughty.





And I'm Shirley Griffith. Join us again next week for more news about science on the Voice of America.