Asthma is a serious breathing disorder. During an asthma attack, the tissues lining the windpipe swell, closing off the airways and leaving the person feeling as if he or she is drowning, which is pretty much the case. Asthma is characterized by wheezing, but more importantly by difficulty exhaling, which leaves stale air in the lungs, depriving the person of oxygen.

Asthma affects at least 9.6 million people in the U.S. and, in 1987, it killed at least 4360 of them.[1] (People who have asthma but don't visit a physician for treatment are not counted; people who die of it but are not labeled as dying of something else, like bronchitis or flu, also aren't counted.) The underlying causes of asthma are not understood but doctors do know some of the things that trigger it in susceptible individuals. A U.S. Public Health Service pamphlet says, "There are irritants in the environment such as cigarette smoke, cooking odors, and aerosol sprays that can adversely affect a person with asthma. These should be avoided as much as possible. An asthmatic should not smoke nor be active outdoors for prolonged periods of time during air pollution alerts."[2] Dr. R. Michael Sly, a Washington, DC, asthma expert says thinly, "Air pollution is an established cause of increased morbidity [illness] from asthma, and intense air pollution has caused increased mortality [death]."[3]

Asthma can be triggered by allergic reactions to many substances,[4] some common and some uncommon, and unfortunately the number of uncommon substances in our environment is increasing rapidly each year. Asthma is an immune-system disorder; the immune system overreacts to a chemical stimulus.

The prevalence of asthma increased 29% in the U.S. during the period 1980-1987, from 31.2 per 100 population to 40.1 per 1000. (Thus we can calculate that the prevalence of asthma is doubling every 20 years--see RHWN #197 and #199.) In 1987, some 9.6 million Americans were suffering from the disease. U.S. deaths from asthma increased 31% during the 1980-87 period, from 1.3 per 100,000 population to 1.8 per 100,000 population. The actual number of Americans who died of asthma in 1980 was 2891; by 1987 it had increased to 4360.

The official position of the U.S. Environmental Protection Agency (EPA) is either that asthma isn't related to pollution or that asthmatics are such a small fraction of the population that setting pollution standards to protect them isn't worth the effort.

There is widespread agreement among physicians that one air pollutant--sulfur dioxide (SO2)--causes asthma attacks in susceptible individuals. The federal government's present standard for SO2 is now set for a 24 hour period; very high levels can legally occur during short periods so long as the 24-hour average does not exceed 0.14 parts per million (ppm) or 365 micrograms per cubic meter of air. During the Reagan administration, environmentalists tried to get EPA (U.S. Environmental Protection Agency) to put a limit of 0.4 ppm [or 1062 micrograms per cubic meter] on SO2 averaged over any one-hour period. EPA opposed the tighter regulation, saying that asthma is a "transient and reversible" condition (even though it kills more than 4000 Americans each year) and it's simply not worth it to force reductions in SO2 to benefit asthmatics. (NY TIMES April 15, 1988, pg. A16.) The electric power industry applauded.

Sulfites added to food to prevent discoloration can also trigger asthma attacks. Sulfites are added to all sorts of foods without having to clear it with the U.S. Food and Drug Administration (FDA), which regulates most food additives. (Sulfites have been in use on U.S. foods for so long that in 1958, without testing the safety of sulfites, FDA placed them on a list known as "Generally Recognized As Safe" [the "GRAS list"] and thus exempted sulfites from all regulations.) In 1986 consumer advocates forced FDA to prohibit the use of sulfites on fresh fruits and vegetables because of the hazard to asthmatics; health advocates urged FDA to ban all uses of sulfites on food, but in 1988 someone within FDA leaked a memo to the Associated Press in which FDA officials said they knew that a million asthmatics were endangered by sulfites in food but that FDA had decided, after much thought, not to do anything about the problem. (NY TIMES July 21, 1988, pg. A17.) The food industry applauded.

The increased prevalence of asthma during the 1980s struck children, especially female children, particularly hard. As noted above, the average increase in asthma among U.S. residents of all ages was 29%, but among persons aged less than 20, the increase was 40% and among females younger than 20 the increase was 69%. Despite the rapid rise among females aged less than 20, males under 20 continued to have more asthma than females (59.9 per 1000 vs. 41.0 per 1000, respectively). These numbers draw a picture in which boys have more asthma than girls, but, as time passes, girls are catching up.

Asthma is not just a physical ailment; it has psychological consequences for children. The U.S. Public Health Service says, "The importance of emotional factors cannot be ignored; the mental suffering and loss of initiative and confidence that result from repeated asthma attacks can hinder the normal development of children."[5] The divorce rate is increased among parents of asthmatic children.

Consistently African-Americans have about a 10% higher prevalence of asthma compared to whites (44.2 per 1000 vs. 40.3 per 1000 in 1987). Socioeconomic status does not seem to be the cause.

The death rate for asthma, on the other hand, is four to five times higher among African-American males than it is among white males. Here socioeconomic status may well be the cause because, in general, adequate medical care is more readily available to whites. In addition, African-Americans seek treatment from hospital emergency rooms more than whites do, and hospital emergency rooms are often not well-equipped to treat asthma, which requires careful evaluation of each individual.

Asthma is described as chronic but reversible obstruction of the airways; it is chronic in the sense that it can occur at any time but it is reversible in that the obstruction can be alleviated either by medication or simply by waiting it out (assuming the person survives the very unpleasant waiting-out period). Doctors say that many asthmatics may not realize their condition can be fatal, thus may seek medical help too late.

In 1988, asthma-related health-care expenditures by Americans exceeded $4 billion. It is the leading cause of absenteeism among schoolchildren, and it accounts for an estimated 5 million lost work days each year.

An earlier survey of asthma revealed that asthma increased among U.S. children ages 6 to 11 from 4.8% to 7.6% between the periods 1971-74 and 1976-1980.[6] During this same period, hospitalizations for asthma increased much more rapidly, indicating that there's not only more asthma among American children but perhaps also that it's becoming more severe as time passes. Although there have been changes in the way asthma is defined during the past two decades, the studies we cite (below) considered these changes and still concluded that asthma is increasing rapidly among American children.

This is just one more good reason why we must control the glut of strange new chemicals entering our environment. They really are making more and more of us sick, especially our children.

--Peter Montague (National Writers Union, UAW Local 1981/AFL-CIO)


Descriptor terms: asthma; phs; aerosol spray; air pollution; immune system; statistics; epa; sulfur dioxide; ronald reagan; sulfites; fda; generally recognized as safe; allergies; mcs; children; age; gender; females; emotional disorders; mental illnesses; race; mortality; health care; nih;