



Asthma, Air Quality, and Environmental Justice: EPA's Role in Asthma Education and Prevention

Asthma is a serious problem in our society. It kills about 4,000 people a year and was estimated to cost \$6.2 billion in medical care and lost time from school and work in 1990.* Asthma is the leading chronic illness of children in the United States and the leading cause of school absenteeism due to chronic illness. Asthma deaths and the number of Americans diagnosed with asthma continue to increase each year.

The U.S. Environmental Protection Agency (EPA) supports asthma education and prevention as part of its general commitment to environmental and health protection and its specific commitment to environmental justice for all Americans. Environmental justice means that all people should have an equal opportunity to live in a healthful environment. Where people are living in unhealthful environments, EPA is working to protect them by trying to reduce or eliminate their exposures to pollution.

Asthma can be aggravated by exposure to pollutant "triggers" such as certain components of vehicle exhaust and industrial emissions, tobacco smoke, pollen, and allergens from animals and insects. Often, urban environments have high levels of outdoor pollution and poor housing conditions, which frequently are

associated with increased levels of indoor pollution. Disproportionate numbers of people of color and people from low income households live in these areas, and thus may be exposed to higher than average levels of air pollution, both indoors and outside. These exposures, along with other factors such as inadequate health care, may explain why roughly two to three times as many African Americans as Caucasians die from asthma. Asthma also affects children disproportionately: five times more children than adults die from asthma each year.

EPA has made real progress in reducing air pollution that can cause problems for people with asthma. Levels of ozone, particles, and other contaminants in the outdoor air are decreasing in many places. EPA is also working to reduce pollution levels indoors, where many Americans spend 90% or more of their time. But there is still a long way to go, and everyone must be part of the solution. EPA can help people understand how air pollution can affect asthma, and how to prevent asthma episodes by reducing or avoiding exposure to potential triggers such as pollution.

* Asthma statistics cited in this fact sheet are from the Institute of Medicine's 1993 report *Indoor Allergens: Assessing and Controlling Adverse Health Effects*.

Simple Steps For Reducing Or Avoiding Pollutants That May Trigger Asthma Episodes

Outdoors

- Use public transportation, carpool, and encourage everyone to limit polluting activities. Stay inside or avoid heavy outdoor exercise on days when pollutants such as ozone, sulfur dioxide, or pollen are high.

In the Home

- Don't smoke indoors, unless you are in a room just for smokers, with a separate ventilation system to exhaust smoke outside. Never smoke around children or people with asthma.
- Combustion gases and particles can cause breathing difficulties for people with asthma. Call the appliance service representative or local utility company to check combustion-powered furnaces, stoves, or heaters every year to make sure they're operating properly. Change furnace filters according to manufacturer's instructions, or every month or two during periods of use. Consider installing higher efficiency filters to reduce the number of particles in the air. Never use a gas stove to heat the home, and always use the exhaust fan when cooking on a gas stove.
- Try to keep humidity levels between 30 and 50%, because high humidity can promote growth of biological agents that may trigger asthma episodes. Use exhaust fans or open windows in kitchen or bathroom areas when taking showers, cooking, or using the dishwasher. Make sure clothes dryers are vented to the outdoors, and use a dehumidifier in the basement if necessary.
- If you're using a humidifier, clean it according to the manufacturer's instructions, and refill with fresh water every day so harmful microbes will not grow and be dispersed into the air.
- Keep the house clean to reduce allergy-causing agents like microscopic dust mites, animal dander, and pollen. If you're allergic, use allergen-proof comforter and mattress covers, wash bedding in hot (130° F) water, and avoid furnishings which can collect dust. Get rid of cockroaches, and consider keeping pets out of the bedrooms of family members with asthma. Consider using a high efficiency vacuum filter or a vacuum system that's vented to the outside.

In Schools

- Some people with asthma may be sensitive to allergens from classroom pets such as birds and gerbils. Keep cages clean and don't let animals roam.
- Strong-smelling chemicals in laboratories or art supplies can trigger asthma episodes. Make sure ventilation is adequate.
- Gyms, locker rooms, and libraries may be a source of dust and mold; make sure they are cleaned regularly and humidity levels are kept between 30 and 50%.

For more information, contact:
Indoor Air Quality Information
Clearinghouse (IAQ INFO)
P.O. Box 37133
Washington, DC 20013-7133
1-800-438-4318 (202-484-1307)

IAQ
INFO