

**ARIZONA ASTHMA COALITION  
ENVIRONMENTAL QUALITY RESOLUTION**

June 12, 2006

Asthma is a chronic and potentially fatal lung disease that can be exacerbated by exposure to air pollution or other airborne irritants. In Arizona, 12.4% of adults have been told they had the disease.<sup>1</sup> Asthma attacks are a common cause of admission to emergency rooms and hospitals, especially for children. Therefore the Arizona Asthma Coalition supports environmental policies that safeguard public health and reduce the risk for asthma. This requires policies, laws, funding and infrastructure that promote environmental quality. We are especially concerned about protecting the health of children, who are more vulnerable than adults to the effects of pollution.

**Part I: AIR QUALITY AND PESTICIDES**

**Indoor Air Quality**

Environmental conditions inside homes, schools and businesses may play a significant role in triggering asthma attacks. Americans spend up to 90% of their time indoors, where exposure to allergens and irritants plays a major role in triggering asthma symptoms. Allergens and other irritants include secondhand tobacco smoke, wood smoke, pests (such as cockroaches and dust mites), mold, pet dander, cleaning chemicals, perfumes and fumes from paint/gasoline. Indoor irritants and allergens can be reduced by thorough and regular cleaning.

People exposed to indoor tobacco smoke in the home, known as secondhand smoke, are at increased risk for asthma symptoms, respiratory tract infections, bronchitis, pneumonia and other serious illnesses. Exposure to environmental tobacco smoke may contribute to development of new cases of asthma, and young children are more susceptible to tobacco smoke than are older children. In June 2006, the U.S. Surgeon General reported that there is no safe level of secondhand smoke, the impact on children is more severe than previously thought, and that parents should make the home a smoke-free environment.<sup>2</sup>

**Pesticides**

Children may be exposed to pesticides through daily activities and through their food. Pound-for-pound, children may be exposed to higher relative risk than most adults. Some pesticides may play a role in asthma, according to the National Academy of Sciences.<sup>3</sup> Progressive schools, businesses and agricultural operations are changing their practices and implementing "integrated pest management" technology to minimize the use of pesticides.

**Outdoor Air Quality**

Outdoor air quality plays a significant role in the number and severity of asthma attacks. Days when the air is designated "unhealthy" or "moderate" are associated with an increase in the number of doctor visits and hospitalizations for respiratory symptoms. Recent studies have shown that pollution may harm lung growth in children. The costs related to uncontrolled air pollution include poor health, limitation of physical activity, increased medical expenses, avoidable hospitalizations, lost workdays, school absenteeism and even death.

Pollen, dust and other allergens for asthma occur naturally in the environment. Schools can adopt policies that will significantly reduce triggers for asthma by careful site selection and maintenance practices such as cutting lawns when schools are not in session.

Outdoor air pollutants arise from large industrial facilities and power plants, smaller facilities such as dry cleaners, vehicles, construction and lawn equipment, marine engines and natural phenomena such as dust storms and forest fires.

The Environmental Protection Administration (EPA) has established health-based standards for the most important components of air pollution. The following components of air pollution affect asthmatics:<sup>3</sup>

Ozone: exposure irritates airways, causes coughing, nausea, chest pain, and headaches; aggravates asthma, bronchitis and emphysema. Motor vehicle exhaust, industrial emissions, gasoline vapors, chemical solvents and natural sources emit oxides of nitrogen and volatile organic compounds that combine in sunlight to create ozone. In Maricopa County, the 1-hour EPA standard has been met, but not the new 8-hour standard.<sup>4</sup>

Particulates (PM<sub>10</sub> and PM<sub>2.5</sub>): exposure irritates membranes of the airways, aggravates heart and lung disease and can lead to premature death. Dust from traffic on paved and unpaved roads, construction, agriculture and disturbed vacant land causes over 80% of the PM<sub>10</sub> pollution in the Phoenix metropolitan area. For children, exhaust from diesel school bus emissions can be a significant source of exposure to particulates. In Arizona, EPA has designated seven rural counties as “moderate” for PM<sub>10</sub>. Maricopa County is in “serious” non-attainment for PM<sub>10</sub>. Small, fine particulates called PM<sub>2.5</sub>, are mainly produced from vehicle exhaust. The PM<sub>2.5</sub> standard has been met in Maricopa County.<sup>4</sup>

Hazardous, or Toxic, Air Pollutants (HAPs): exposure causes increased risk of cancer and damage to the respiratory, reproductive, neurological, and immune systems as well as developmental abnormalities. Federal EPA standards list 188 toxic HAPs produced by vehicle emissions, manufacturing, refining, building materials, solvents and natural sources such as volcanoes or forest fires. In 2006, Arizona passed weak regulations to control HAPs. The new rules exempt existing facilities from pollution control requirements unless they significantly expand operations.

**Therefore be it resolved that Arizona Asthma Coalition supports the following policies:**

**Indoor Air Quality**

1. Ban smoking in public areas and workplaces
2. Support programs to reduce tobacco use
3. Provide safe and healthy indoor environments to reduce asthma triggers
4. Implement the new Arizona law requiring schools to meet national environmental, ventilation, design and construction standards

**Pesticides**

1. Promote polices and practices by schools, day care centers, foster homes and other areas frequented by children that reduce exposure to pesticides.

### **Outdoor Air Quality**

1. Encourage schools to adopt comprehensive policies and practices to reduce asthma triggers and improve air quality.
2. Support stringent requirements and enforcement to limit and control emissions of particulates, precursors of ozone, and hazardous air pollutants.
3. Provide public funding and incentives for measures that reduce air pollutants
4. Implement cleaner-burning fuels and vehicle engines
5. Retrofit or replace outdated diesel equipment and passenger vehicles
6. Limit idling of trucks and buses; promote statewide legislation to require diesel trucks and buses to idle no longer than 3 consecutive minutes
7. Mandate school districts to reduce school bus idling to reduce children's exposure to dangerous diesel exhaust
8. Strengthen statutory authority for Arizona's Department of Health Services and Department of Environmental Quality to regulate pollutants

### **Part II: THE PRECAUTIONARY PRINCIPLE**

Prevention of injury and disease is the basic cornerstone of public health policy. Current environmental regulations are largely aimed at controlling pollution rather than preventing the use, production or release of toxic materials. Many products, technologies and substances are considered safe until proven harmful. Agency policies often fail to address the unique susceptibility to environmental contaminants that may occur among fetuses, children, immune-suppressed individuals and other sensitive populations. The lack of scientific certainty may be related to lack of data, failure to examine complex systems or ignorance about what effects to study.<sup>5</sup>

The Rio Declaration on Environment and Development (July 14, 1992) has been signed by the US and widely adopted by the European Union. This document states:

In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation, a statement known as the 'Precautionary Principle.'<sup>5</sup>

#### **Therefore be it resolved that the Arizona Asthma Coalition:**

1. Promote the 'Precautionary Principle.' When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically.

### **Part III: INFRASTRUCTURE AND FUNDING**

The statutory mission of the Arizona Department of Environmental Quality and environmental services in each county is to protect the public by providing assessment, planning, permitting, monitoring, reporting and enforcement.

**Therefore be it resolved that Arizona Asthma Coalition supports policies to:**

1. Provide an adequate legal framework to support the mission of environmental protection
2. Assure sufficient state and local funding to support the infrastructure and essential services of state and local environmental agencies

References:

1. Asthma: Behavioral Risk Factor Surveillance System Prevalence data: Asthma 2004. Adults who have ever been told they have asthma. US Centers for Disease Control. <http://apps.nccd.cdc.gov/brfss/list.asp?cat=AS&yr=2004&qkey=4417&state=All>
2. "Warnings on Hazards of Secondhand Smoke." New York Times, June 28, 2006.
3. America's Children and the Environment: Measures of Contaminants, Body Burdens, and Illness. Second Edition. The United States Environmental Protection Agency, February 2003.
4. Lindy Bauer, Maricopa Association of Governments. Personal communication.
5. The Precautionary Principle and Children's Health. American Public Health Association Resolution 2000-11.

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