

Frequently Asked Questions

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— Anne Kelsey Lamb, MPH, Director, Regional Asthma Management and Prevention



What Is Asthma?

Asthma is a serious public health problem throughout the world and the most common chronic disease among children. Asthma is a chronic inflammatory disorder of the airways. The chronic inflammation is associated with airway hyperresponsiveness that leads to recurrent episodes of wheezing, breathlessness, tightness in the chest, and coughing, particularly at night or early in the morning. These episodes are usually associated with airflow obstruction within the lungs. Asthma attacks can range in severity from inconvenient to life threatening. Scientists continue to investigate what causes asthma, although it's clear that many factors, including genes, allergies, air pollution—including exposure to tobacco smoke—and possibly viral infections early in life, play a role. Asthma attacks are often triggered by exposure to respiratory irritants, such as air pollution and tobacco smoke, and to some chemicals or allergens, such as mold, dust mites, and animal hair.

Why Is Childhood Asthma an Important Health Issue?

Asthma is the most common chronic childhood disease with 6.8 million children affected nationwide. In California 1 in 6 children (1.5 million children) has been diagnosed with asthma, and it is one of the leading causes of hospitalization. In 2007 in California, 63,500 Emergency Department visits and 10,600 hospitalizations were reported for children with asthma. It is also one of the leading causes of school absenteeism nationwide. In 2007, 268,000 children in California missed

school because of asthma. The burden of asthma on children and their families is significant, but it can be reduced. There is now good evidence that the clinical manifestations of asthma can be controlled with appropriate treatment and decreased exposure to environmental triggers.

Why Does Asthma Disproportionately Impact Low-Income Communities of Color?

Although asthma affects Americans of all ages, races, and ethnic groups, low-income and minority populations suffer substantially higher fatality rates, hospital admissions, and Emergency Department (ED) visits due to asthma. The hospitalization rate and the rate of ED visits for asthma in California are more than three times higher for African American children than for other children. Latino children have a higher rate of ED visits for asthma than white children. Children in low-income families in California are more likely to miss school because of asthma than children in families with higher incomes. Explanations for these disparities are not clear. However, we know that the following environmental, economic, and social factors contribute:

- Poor air quality, which is more likely to be found in areas where low-income communities of color are situated
- Poverty, which systematically increases exposure to the causes and triggers of asthma
- Poor housing and poor school conditions, which create indoor environmental problems

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- Limited access to health care because of inadequate health insurance
- Lower-quality health care and underuse of preventive care and medications
- A lack of culturally and linguistically appropriate asthma education programs

The elimination of health disparities is possible. We must work together to build a common vision for solutions at the community, state, and national level to reduce the disproportionate burden of asthma.

Why Are Children Especially Vulnerable to Environmental Asthma Triggers?

Due to their anatomy and activity patterns, children breathing the same air as adults get a higher dose of pollutants—and children are more sensitive to the harmful effects of these pollutants. Since children’s lungs and immune systems are not fully developed, pollutants can penetrate their lung tissue more easily and cause more damage. Some studies indicate that damage to the lungs early in life can affect lung development and cause permanent changes that may make children more vulnerable to future respiratory problems. Children’s airways are also smaller and more reactive to pollutants and irritants than adults’ airways, which increases children’s risks of asthma attacks once they have been exposed to triggers. In addition to their greater sensitivity, children have greater exposure to some pollutants: they tend to breathe through their mouths—while adults tend to breathe through their noses—so the air is less filtered as it enters children’s lungs. Children also breathe faster than adults, so they take in more pollutants. And children spend up to five times longer outdoors engaging in physical activity than adults do, increasing their exposure to ozone and other outdoor air pollutants.

Why Should We Focus on Reducing Environmental Triggers of Asthma Through Policy Change?

Good clinical management is essential for saving and improving the lives of children with asthma. Yet even children with the best clinically managed asthma suffer if they are continuously exposed to environmental triggers. To truly help children with asthma, we need to focus on prevention. While scientists continue to explore what causes asthma, it is clear that environmental pollution plays a role in developing and aggravating asthma and can lead to serious health consequences such as emergency-room visits and even death. Additionally, we know that a number of environmental factors, including air pollutants, environmental tobacco smoke, mold, animal hair, and dust mites, can trigger asthma attacks in children who already have asthma.

Policy change provides a long-lasting, far-reaching way to reduce environmental triggers. If, for example, we can systematically reduce diesel pollution, enforce housing codes in rental units, and improve air quality in schools across the state, we can have a significant impact on the health of California’s children. That is why the Community Action to Fight Asthma (CAFA) Network has chosen to focus on environmental policy change. The success of such efforts depends upon the support and participation of policy makers, health professionals, environmental justice groups, community residents, and anyone concerned about asthma.

Please visit our website at www.rampasthma.org to learn more about Community Action to Fight Asthma, connect with local coalitions, locate asthma resources across California, and sign up for our e-newsletter.

Selected Bibliography *(For complete references, please visit www.rampasthma.org.)*

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