

Frequently Asked Questions

WHAT IS ASTHMA?

Asthma is a chronic disease characterized by (a) ongoing inflammation in the lungs (meaning excess mucous and tissue swelling) and (b) episodes in which the small airways of the lung undergo spasms and tighten up (an “asthma attack”). Mostly, the inflammation continues unnoticed by the person with asthma. Asthma attacks, however, can range in severity from inconvenient to life threatening.

Scientists continue to argue about what causes asthma, although it’s clear that many factors, including genes, allergies, and environmental pollution, play a role. Asthma attacks are often triggered by exposures to allergens, such as animal hair, pollen, and mold, or respiratory irritants, such as air pollution and some chemicals. Why a child with asthma reacts in this way while another child may be unaffected is unclear, but it is convenient to think of asthma as a disruption of the development of the immune system, specifically that part of the immune system that deals with allergies and reactions to environmental stimuli.



WHY IS ASTHMA ON THE RISE?

Measuring trends in asthma over time can be confusing, because one is never sure if the way we are defining the disease today is the same way people defined it 10 years ago. It’s also clear that we are more aware of asthma today than we used to be, which probably means that we’re more apt to recognize it when we see it.

In spite of this difficulty, studies suggesting that asthma is rising dramatically are surprisingly consistent. Also, some indicators of asthma that we see increasing, such as the number of deaths due to asthma per year, are pretty hard to mistake.

Debate rages on why asthma is increasing the way it is in so many industrialized countries and why children in low-income families and African American children suffer disproportionately from asthma. While some pollutants in the environment have been decreasing over the past decade, a great many more have been increasing. Lifestyles are also constantly changing and our exposures to everything from indoor air to pollution to exercise are constantly in flux.

WHY DOES ASTHMA DISPROPORTIONATELY IMPACT LOW-INCOME, URBAN COMMUNITIES AND COMMUNITIES OF COLOR?

Although asthma affects Americans of all ages, races, and ethnic groups, low-income and minority populations experience substantially higher rates of fatalities, hospital admissions, and emergency room visits due to asthma. Nationwide, African American children are 5 times more likely to die from asthma than white children.¹ The hospitalization rate for asthma in California is more than 3 times higher for African American children than for white children.^{2,3} In California, Latino children are hospitalized for asthma at a rate that is 10% greater than for white children.⁴ Urban neighborhoods throughout the U.S., including some in California, which are predominately low-income communities of color, have higher hospitalization rates for asthma than neighboring suburban and/or rural communities.⁵ Explanations for these disparities are not clear. Although some genetic factors contribute to these disparities, we also know environmental, economic, and social aspects contribute. These include:

- ▶ Geographical concentration in areas with poor air quality;
- ▶ Poverty, which systematically increases exposure to causes and triggers;
- ▶ Poor housing and school conditions, creating indoor environmental problems;

- ▶ Limited access to health care;
- ▶ Inadequate health insurance;
- ▶ Lack of culturally and linguistically appropriate asthma education programs; and
- ▶ Schools with poor indoor air quality

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 burden of asthma on our most vulnerable populations.

IS ASTHMA INCREASING BECAUSE WE'RE TOO OBSESSED WITH HYGIENE?

Some studies have turned out to be quite provocative, showing that children with older siblings or those who attend daycare are less likely to develop asthma. The idea is that exposure to some common viruses and bacteria, when occurring early in life, may tweak the development of the immune system in a beneficial way.⁶

This finding reminds us that our bodies develop in constant interaction with our environment and that exposure to microbes can be beneficial. For example, we have long known that many strains of bacteria live in the human large intestine and that without early exposure to these bacteria (which happens naturally), the intestine doesn't develop properly. Similarly, other bacteria serve to protect children (and adults) from urinary tract infections.

Some concern has been raised that the increasing number of people with asthma is the result of keeping children "too clean," but this would be very difficult to prove. Also, this explanation would fail to account for why some social groups suffer more from asthma than others. Although these findings don't explain the increase in asthma, they do provide an important reminder that germs are a normal part of life and we are probably causing problems by using antibiotics as much as we do, an idea that has long been argued by scientists.

WHAT CAN YOU DO?

Families alone cannot initiate large-scale changes to improve their children's environments and reduce the frequency of their asthma attacks. Yet we know that prevention can be achieved through a combination of consistent health care and decreased exposure to environmental triggers which fan the flames of asthma.

For helpful resources and information on how you can take action in your community, go to Community Action to Fight Asthma's website at <http://www.calasthma.org>.

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