

Indoor Air Quality and Asthma



People spend about 90% of their time indoors, where the air can be two to five times more polluted than outdoors. For people with asthma, airborne pollutants can trigger asthma symptoms and cause serious health problems.

What is indoor air quality?

Indoor air quality (IAQ) refers to the quality and cleanliness of the air in and around buildings. Components such as temperature, humidity, ventilation, pollutants, occupancy and building materials contribute to IAQ. When you breathe in through your nose or mouth, air travels down your airways and into your lungs. Not all the air we breathe in is clean. It can be filled with many pollutants, such as gases and particles much of which is too small to see. When these pollutants travel through your lungs to the rest of your body, they can harm your health. That is why ensuring clean indoor air is important.

What is asthma?

Asthma is a chronic (or lifelong) disease that makes it harder to move air in and out of your lungs. It can be serious – even life-threatening. There is no cure for asthma, but it can be managed so individuals can live normal, healthy lives. With asthma, there is always a little bit of swelling inside the airways of the lungs. This makes the airways extra sensitive when exposed to **triggers** such as viruses, allergens, and irritants like particles in the air.

How does poor IAQ impact people with asthma?

Even small amounts of indoor air pollution can cause serious problems for people with asthma. Because their airways are already sensitive and inflamed, exposure to indoor air pollutants can lead to chest tightness, shortness of breath, coughing and wheezing.

Common indoor air pollutants that can trigger asthma symptoms:



Chemicals



Fragrances



Mold



Pests



Pet dander



Dust mites

Exposure to these pollutants can worsen asthma symptoms which can increase medication use, emergency department visits or hospitalizations. In fact, asthma is one of the leading causes of school absences, leading to an estimated 13.8 million lost school days.

What are the solutions to poor IAQ?

Removing asthma triggers indoors improves air quality and reduces asthma symptoms in children and adults. Removing asthma triggers has been linked to several good outcomes including improved school attendance and decreased hospitalizations, emergency department visits and reduced frequency of quick-relief medication to relieve symptoms. Making sure the indoor environment is free from allergens and irritants will help keep children healthy at home and at school.

Three key ways to [protect yourself](#) from indoor air pollution are to:

1. Eliminate or reduce the source of pollution.
2. Increase ventilation by bringing in outdoor air to dilute indoor pollution (when outdoor air quality is good).
3. Filter indoor air to reduce airborne pollution.

Indoor air pollution can be found in any type of building, whether it's a home, school, or workplace. Each have their unique set of challenges, but also solutions.



Learn more at:

[Clean Air at School](#)
[Back to School with Healthy Lungs](#)
[Clean Air at Home](#)
[Clean Air at Work](#)



This project has been funded in its entirety by the United States Environmental Protection Agency under assistance agreement #84098901 (CFDA 66.034) to the American Lung Association. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does the EPA endorse trade names or recommend the use of commercial products mentioned in this document.