



Improving Indoor Air Quality for Children

How Safe Is Your Indoor Air Quality for Kids?

Children spend a large part of the day with caregivers either at home or in childcare facilities. Common indoor air pollutants include asbestos, carbon monoxide, radon, tobacco smoke, those found in building and/or painting materials and cleaning supplies, dust, etc. Indoor air contaminants may adversely affect the health and comfort of infants, toddlers, preschoolers, and the staff who care for them. Small children may be especially at risk of health effects because they breathe more air per pound of body weight than adults.

Many health problems can be triggered by polluted indoor air, such as coughing or making asthma symptoms worse, headaches, and eye irritation. Inadequate ventilation may increase indoor pollutant levels by not bringing enough fresh outdoor air to dilute emissions from indoor sources and not carrying indoor air pollutants out of the home or child care facility. High temperature and humidity levels can also increase concentrations of some pollutants, i.e., mold and dampness.

The most effective ways to improve indoor air quality (IAQ) are to reduce or remove the sources of pollutants and to ventilate with clean outdoor air. Filtration may also be an effective supplement. Using a portable air cleaner (also known as air purifiers or air sanitizers) or upgrading the air filter in the furnace or central heating, ventilation, and air-conditioning (HVAC) system can help to improve IAQ. Air filters should have a Minimum Efficiency Rating Value (MERV) of between 8 and 13. Always ventilate and follow manufacturers' instructions when using products or appliances that may release pollutants into the indoor air.

Here are more suggestions to improve air quality and reduce IAQ-related health risks:

1. Control pollution by eliminating individual sources or reducing emissions.
2. Ventilate: Open windows and doors that have screens attached or run an air conditioner with the vent control open. Bathroom and kitchen fans with exhausts to the outdoors also promote adequate ventilation and help remove pollutants.
3. Change air filters regularly for HVAC and portable air purifiers.
4. Adjust humidity: High humidity keeps the air moist and increases the likelihood of mold. Keep indoor humidity between 30 and 50 percent.

EPA also offers free IAQ Tools for Schools resources—including the [School IAQ Assessment Mobile App](#)—to help schools maintain a healthy indoor environment by identifying, correcting and preventing IAQ problems.

For more information about improving air quality and children's health, please consult the following resources from the U.S. EPA, American Lung Association, and Agency for Toxic Substances and Disease Registry (ATSDR):

- [What is Indoor Air Quality?](#)
- [Resources about Indoor Air Quality for Child Care Providers](#)
- [Why Indoor Air Quality is Important to Schools](#)
- [Reference Guide for Indoor Air Quality in Schools](#)
- [Clean Air at School](#)
- [Protecting Kids from Environmental Exposures](#)

The Division of Environmental Health Epidemiology (DEHE) at the Pennsylvania Department of Health created this e-newsletter to share environmental health information with the public. DEHE is a resource for learning about environmental health hazards in schools and how to keep children safe from environmental exposures. Contact dehe@pa.gov with questions, concerns, or feedback on topics you want to learn more about.