

Indoor Air Quality in Schools

Impact on Teachers & School Staff



We all want children and teachers to be safe and healthy at school. Some dangers—such as poor air quality—are not always obvious. Indoor air pollution can cause health problems for teachers and staff.

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.

How does poor IAQ impact teachers and school staff?

Levels of pollutants are two to five times higher indoors than outdoors, yet most of us spend up to 90% of our time indoors. For those working in or attending school, nearly half their waking hours may be spent in the school building.

Common issues found in classrooms that contribute to poor IAQ:

- Indoor/outdoor air pollutants (including mold, chemicals, fumes, etc.)
- Poor air filtration and poor air flow
- Improper room pressurization/ventilation
- Temperature (either too hot or too cold)
- High or low humidity

Americans spend approximately **90%** of their time indoors, where indoor air is **two to five times** more polluted than outdoor air.

Many studies have linked indoor air quality problems in schools to a variety of harmful outcomes, including:

- Increase in severity and frequency of asthma and allergy symptoms
- Increased viral and bacterial transmission resulting in more colds, flu, and other respiratory diseases
- Reduced teacher and staff performance due to discomfort, sickness, or absences
- Increased staff dissatisfaction and turnover
- Increased stress regarding students' health, absenteeism, performance

Who is the most susceptible to the effects of poor IAQ?

Individuals most vulnerable are those living with underlying health conditions (asthma, COPD, or other chronic diseases such as diabetes), older adults, children and people with disabilities. The inflammation triggered by breathing air pollution puts additional stress on people's lungs, heart and other organs that can already be compromised by other conditions. Pregnant individuals are at higher risk because indoor pollutants, even at low levels, may be associated with adverse birth outcomes.

What can teachers and staff do to address poor IAQ?

There are many components influencing IAQ, but some low or no-cost actions can be taken immediately to address poor indoor air quality. First, teachers or staff can talk to school administrators about IAQ. Teachers and staff should also understand any state or local regulations about workplace safety and health and find out if your school or district has a documented IAQ Management Plan. Finally, teachers can have immediate impact in their classroom by following 5 tips found in our [Tips for Teachers fact sheet](#).

Good indoor air quality helps to create a healthy workplace for teachers and staff, resulting in more comfort, job satisfaction and productivity.



Learn more about IAQ and energy management in schools by visiting Lung.org/CASC.



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