American Lung Association.

The Impact of Indoor Air Quality on Health

The air we breathe is filled with lots of things including gases and particles – most of which are too small to see. What we breathe in travels to our lungs and may cause harm. Some particles are so small that they can reach deep into our lungs, cross into the bloodstream, and be carried throughout the rest of the body. That is why ensuring indoor air is clean – free of harmful gases, particles, and chemicals – is important. Health impacts from indoor air quality (IAQ) can be experienced right away or over a long period of time.

Those most at risk from the effects of indoor air quality include individuals with:

- Asthma or allergies
- Chemical sensitivities
- Other respiratory diseases like COPD or lung cancer
- Suppressed immune systems
- Contact lenses

Children's bodies and lungs are also at risk because they are still developing, and their airways are smaller than in adults. Children breathe 2-3 times more often than adults. Levels of pollutants are two to five times higher indoors than outdoors, yet most of us spend up to 90% of our time indoors.

Pollutants in the environment can negatively impact children's health and development. Indoor air pollutants can cause long and short-term health problems to children and adults such as:

- Coughing, sneezing, sinus congestion
- Eye, nose, throat, and skin irritation
- Headaches
- Allergic reactions
- Worsened asthma, COPD, and/or other respiratory illnesses
- In rare cases contribute to life-threatening conditions such as radon-induced lung cancer or carbon monoxide poisoning

Beyond health problems, poor indoor air quality can have negative effects on learning and productivity. High carbon dioxide levels and poor ventilation, which plague many buildings, can adversely affect concentration, cognitive ability and test scores. Additionally, too high or low temperature and humidity can help spread viruses which can be harmful to the body's immune system, causing drowsiness, and an increased risk of cold and flu. Children and adults are more likely to miss school and work due to severe and persistent symptoms caused by poor indoor air quality.

Schools should serve as optimal learning environments for students. Schools should take steps to assess and improve indoor air quality.

Learn more at **Lung.org/CASC**