

**IQAir Bulletin: September 11, 2014**

## Is Your Child Breathing Healthy Air at School?

This school year schoolchildren will spend an average of 1,300 hours in school buildings, where teachers, administrators and other school personnel will concentrate on helping them learn and grow. That means more than just developing curriculum. It also means making sure their schools provide a safe, healthy environment.

Over the last few years, issues that affect the health of our children such as nutrition and exercise have been receiving a great deal of focus. Unfortunately another matter that has a tremendous impact on a student's health and ability to succeed has been largely overlooked — Indoor Air Quality (IAQ). In order to be successful, students must have clean, healthy air to breathe. Not only can poor IAQ cause illnesses that keep them home from school, but recent findings have also shown that it may directly reduce their ability to learn.

### Clean air is crucial for student success

Children are particularly vulnerable to harmful and irritating air contaminants such as microbiological pollutants, allergens, chemicals and ultrafine particles. Their lung development is directly affected by air pollution. Exposure to polluted air during these developing years has been associated to decreased respiratory function later in life. Increasing reports of asthma among school age children have been directly linked to elevated air pollution exposure. In fact, according to the *Asthma and Allergy Foundation of America*, respiratory illnesses are the most common cause of absenteeism, with asthma-related illnesses accounting for more than 14 million missed school days every year in the USA alone. Studies have also associated poor Indoor Air Quality with a decrease in students' ability to perform specific mental tasks requiring concentration, calculation and memory. There is also mounting evidence that poor IAQ can cause verbal, perceptual, motor, and behavioural disabilities in children. It can also cause hearing impairment, irritability and developmental delays.

### Pollution comes from a variety of sources

There are several sources of air pollution in schools. According to the EPA, in newer schools, the trend toward tightly sealed buildings with a lack of natural ventilation is one factor. The use of synthetic building materials and furniture that off-gas chemicals, such as formaldehyde, is also a problem. Issues in older schools range from lead, asbestos and radon contamination, to mould caused by condensation and dust from crumbling walls. In classrooms both old and new, a lack of funding has many schools turning off their HVAC systems or failing to properly maintain them. Meanwhile, outdoor pollutants such as vehicle exhaust, pesticides and factory emissions can make their way inside, making what is already a polluted environment even worse. In fact, EPA studies have shown that it is common for indoor pollution levels in classrooms to be two to five times higher than outside. In fact, the location of many schools close to major roads and other pollutions sources, can make them account for a major part of a child's air pollution exposure.

### Taking action to affect change

Parents can take action to make sure their children are breathing clean, healthy air in every classroom. Here are some questions parents should be asking the administration at their children's schools:

- Are health complaints by pupils relating to typical poor indoor air quality (such as allergic reactions, itchy eyes, throat irritations, breathing difficulties, headaches) taken seriously?
- Is the school choosing safe building materials and furniture that do not release harmful chemicals?
- Are professional air quality checks made in response to pupil's health complaints? Have action/remediation plans been established for periods of poor indoor air quality or in response to increased health complaints?
- If a ventilation system is installed, is the school inspecting and maintaining the HVAC systems regularly?
- Is the maintenance staff using safe cleaning products? Is dust removed daily with a damp cloth and are floors cleaned using vacuum cleaners with high-efficiency (HEPA) filters?
- Is the district conducting regular building inspections and developing management plans for pollution sources?

For more information on how to create healthy indoor environments in schools, visit:

<http://www.epa.gov/iaq/schools/>

<http://www.umweltbundesamt.de/sites/default/files/medien/publikation/long/3689.pdf> (German only)