

# THE FUTURE OF OUR CHILDREN'S HEALTH

Vol XCIII, No. 311

Friday March 25, 2016

\$1.25

## What is Indoor Air Quality?



Indoor Air Quality (IAQ) is defined as the air quality within and around buildings and structures, especially as it relates to the health and comfort of building occupants. Most people acknowledge that outdoor air quality can have an impact on their health, but they are unaware of the impact that indoor air quality can have on them. The amount of pollutants in the air are two to five times higher indoors than they are outdoors.

- Factors that affect levels of IAQ:
- Synthetic building materials & chemical products
  - Building maintenance procedures
  - Levels of moisture, mold & asbestos
  - Outdoor air quality

Issues that arise from poor IAQ have been around for years, but the issues will not be resolved if there is not enough support from the communities, both informational and financial.

### Charlotte - Mecklenburg Schools Parents band together to raise awareness about IAQ

A group of parents whose children attend school in Charlotte-Mecklenburg Schools recently met to discuss the importance of indoor air quality. Parents at the meeting discussed the importance of indoor air quality and how it affects the health of their children. They also discussed the importance of indoor air quality and how it affects the health of their children. They also discussed the importance of indoor air quality and how it affects the health of their children.



### United States Green Building Council Ideas that can help move us in the right direction

The United States Green Building Council (USGBC) is a national organization that promotes sustainable building practices. The organization has developed a number of programs and standards to help building owners and designers create more sustainable buildings. These programs include the Leadership in Energy and Environmental Design (LEED) certification system, the Green Building Initiative (GBI) GreenSource program, and the Green Building Institute (GBI) GreenSource program.

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### Health of Those in Schools



### Poor IAQ Takes Its Toll on Students ABC 11 visits high school with mold issues

In March 2015, an investigation brought ABC 11 to a high school in Charlotte, North Carolina. A former public school teacher, who had worked at the school for 15 years, reported that she had noticed mold in the school's classrooms. The mold was found in several classrooms and was causing health problems for the students. The school district was slow to respond to the problem, and the mold was still present when ABC 11 visited the school.

After knowing those and other parents, the school that had a major health problem was contacted. The school district was slow to respond to the problem, and the mold was still present when ABC 11 visited the school. The school district was slow to respond to the problem, and the mold was still present when ABC 11 visited the school.

### References

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- 2. "Indoor Air Quality." Environmental Protection Agency. n.d. Web. 25 Mar. 2016.
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- 4. "Indoor Air Quality." Environmental Protection Agency. n.d. Web. 25 Mar. 2016.
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### Charlotte - Mecklenburg Schools Parents band together to raise awareness about IAQ

A group of parents whose children attend school in Charlotte-Mecklenburg Schools recently met to discuss the importance of indoor air quality. Parents at the meeting discussed the importance of IAQ in schools and how it affects children's health. They also discussed ways to improve IAQ in schools, such as increasing ventilation, using low-VOC paints, and using air purifiers. The meeting was held in a school cafeteria and was attended by about 20 parents. The meeting was held on March 10, 2016.



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The United States Green Building Council (USGBC) is a national organization that promotes sustainable building practices. USGBC is a non-profit organization that provides leadership in the development of green building standards and certification programs. USGBC is committed to promoting sustainable building practices and to providing a platform for the building industry to share ideas and best practices. USGBC is also committed to providing a platform for the building industry to share ideas and best practices.

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### Health of Those in Schools



### Poor IAQ Takes Its Toll on Students

#### ABC 11 visits high school with mold issues

In March 2015, an investigation was brought to light when ABC 11's investigative team visited a high school in Charlotte, North Carolina. A former public school teacher, who had worked at the school for 15 years, told ABC 11 that the school had a serious mold problem. The teacher said that the mold was causing health problems for students and staff. ABC 11's investigative team visited the school and found mold in several classrooms and in the cafeteria. The mold was found in the walls, ceiling, and floor.

After knowing those and other problems, the school had the mold removed. Schools have mold contamination that could impact health and cause an asthma attack. It is a child with an existing asthma. If it is a child with asthma, it could be a problem. From this report?

There is still a lot of work to be done when it comes to IAQ. There are many things that schools can do to improve IAQ. Schools can use low-VOC paints, use air purifiers, and use energy-efficient windows. Schools can also use natural ventilation to improve IAQ. Schools can also use natural ventilation to improve IAQ.

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- 1. "What is Indoor Air Quality?" (n.d.). Retrieved from [www.epa.gov/iaq](http://www.epa.gov/iaq)
- 2. "Indoor Air Quality." (n.d.). Retrieved from [www.who.int/mediacentre/factsheets/fs252/en/](http://www.who.int/mediacentre/factsheets/fs252/en/)
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### Health of Those in Schools

Students spend an average seven hours a day inside a school building. Unintentionally, schools are not so "safe" as parents think they are. According to a study done by the Environmental Protection Agency, 50% of schools in the United States have issues connected to poor indoor air quality. A study done by the Environmental Protection Agency concluded that there is a connection between the increase in poor indoor air quality and the decrease in student attendance and performance. Students, teachers, and faculty members begin to show symptoms of respiratory infections and asthma. The study also stated that if no one voices their opinions and demands change to make schools healthier, the schools will become quarantined and be shut down. All the occupants will have to be relocated until a the building is either repaired or torn down and rebuilt with better tools, building materials and have better ventilation systems.



Poor IAQ Takes Its Toll on Students



Prezi

Dust  
Pollution

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Factors that affect levels of IAQ:

- Synthetic building materials & chemical products
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Issues that arise from poor IAQ have been around for years, but the issues will not be resolved if there is not enough support from the communities, both informational and financial.

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# Health of Those in Schools

Students spend on average seven hours a day inside a school building. Unfortunately, schools are not as "safe" as parents think they are. Approximately 50% of schools in the United States have issues connected to poor indoor air quality. A study done by the Environmental Protection Agency concluded that there is a connection between the increase in poor indoor air quality and the decrease in students attendance and performance. Students, teachers, and faculty members begin to show symptoms of respiratory infections and asthma. The study also stated that if no one voices their opinions and demands change to make schools healthier, the schools will become quarantined and be shut down. All the occupants will have to be relocated until a the building is either repaired or torn down and rebuilt with less toxic building materials and have better ventilation systems.

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In March 2011, an investigation was brought up against South Granville High School in Creedmoor, North Carolina. A mother made claims that her daughter began having worsening asthma attacks, dizziness and coughing spells, and had swollen tonsils. She accused the school of having mold and asbestos in some classrooms and near the locker rooms. The air units in some classrooms were covered in mold, and there were water spots on the hallway ceiling tiles that showed traces of black mold. James Bonner, molecular toxicology professor from North Carolina State University was brought in to look over the sites in question.

After reviewing those and some pictures, his stated that "the images definitely show mold contamination that could exacerbate and cause an asthma attack in a child with pre-existing asthma. If I had a child with asthma, I would not want them in this room."

Those with asthma are not the only ones who can be affected by IAQ. Those with allergies, respiratory diseases, compromised immune systems, and are sensitive to chemicals can suffer from mold and asbestos indoors.

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# Charlotte - Mecklenburg Schools

## Parents band together to raise awareness about IAQ

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A group of parent's whose children attended schools in the Charlotte - Mecklenburg area decided to make their voice heard about the levels of mold in the schools. They exhausted all media outlets, which brought a negative reputation onto the schools, and the local community began to doubt the school's credibility and ability to keep the student's healthy. The school system decided to make a change and incorporate IAQ management techniques. A fundamentals program about air quality was held over the summer and it helped cut work orders for mold by 54% and 100% of IAQ concerns are now addressed within 24 hours of submission. With early investigations and prompt turn-around times, the school system has lowed the overall cost of repairs from over \$150,000 to less than \$10,000.



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# United States Green Building Council

Ideas that can help move us in the right direction

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The vision of USGBC is to educate students on the importance of "healthy buildings" and the benefits they will bring to human health. Some of the design goals of the council's design challenge for this year are to incorporate environmental education into daily learning. Lots of open space, sustainable materials, and gardens need to be included to help the students learn how to make the schools and other commercial buildings more "green". It is up to the student teams to design a solution that will show off good IAQ performance. One of the student teams at East Carolina University are planning to implement a wind ventilation system in the school. This system is well-known, easy to maneuver, and cost effective for the school. "Successful wind ventilation is determined by having high thermal comfort and adequate fresh air for the ventilated spaces, while having little or no energy use for active HVAC cooling and ventilation." (Autodesk, 2013) The most common tool for wind ventilation are automated windows. Breeze funnels and rooftop vents are also useable too.

The best way to maximize wind ventilation is to take into consideration the orientation of the building and its size. The difference between high and low pressure needs to be maximized.

Cross ventilation is considered the most effective form of ventilating a building. The windows or vents are placed on opposite sides of a building to allow breezes to "cross" through.



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In March 2015, an investigation was brought to light when ABC 11's investigative team visited a high school in Charlotte, North Carolina. A number of students, teachers, and staff reported health problems, including headaches, allergies, and asthma. The school was found to have mold and other air quality issues.

After knowing those and other problems, the school had the air quality tested. The school had the air quality tested. The school had the air quality tested. The school had the air quality tested. The school had the air quality tested.

### References

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