

Asthma and Schools

“Asthma is the nation’s leading cause of absenteeism due to chronic illness, accounting for more than 14 million missed school days and educational opportunities per year...”

Spring 2003
SCHOOL
Governance & Leadership
Strengthening the vital alliance between school board & superintendent

Asthma Wellness
Keeping Children with Asthma in School and Learning

Dear Super and School Board Members,

Asthma Management, Policies and Procedures

A Childhood Epidemic

Asthma is the most common chronic childhood illness in the United States today. Both the number of children diagnosed with asthma and the severity of asthma has increased rapidly in recent years. Indeed, asthma has reached epidemic proportions—affecting more than five million children of school age. Asthma is the leading cause of school absenteeism due to chronic illness, accounting for more than 14 million missed school days per year.

This is a serious situation, concurs Dr. Beverly Hall, superintendent of the Atlanta (GA) Public Schools. “A significant number of days lost due to absences from school negatively impacts time on educational

Asthma is the nation’s leading cause of absenteeism due to chronic illness, accounting for more than 14 million missed school days and educational opportunities per year. Moreover, asthma can be deadly.

School Indoor Air Quality



- Many asthma triggers found in homes can also be found in schools (e.g. mold, pests, dust mites)
- Building conditions affect whether one is exposed to asthma triggers
- School indoor air quality has been shown to impact health and academics

School Indoor Air Quality

Building Conditions



- Classroom temperature
 - Affects schoolwork performance
 - Affects health symptoms (offices)
 - Often not well controlled
 - Minimum standards violated in almost half of classrooms

*Taken from "Performance and Health Benefits of Providing Better Indoor Environmental Quality (IEQ): A Brief Review," National IAQ Tools for Schools Symposium, Bill Fisk, Lawrence Berkely National Laboratory

School Indoor Air Quality

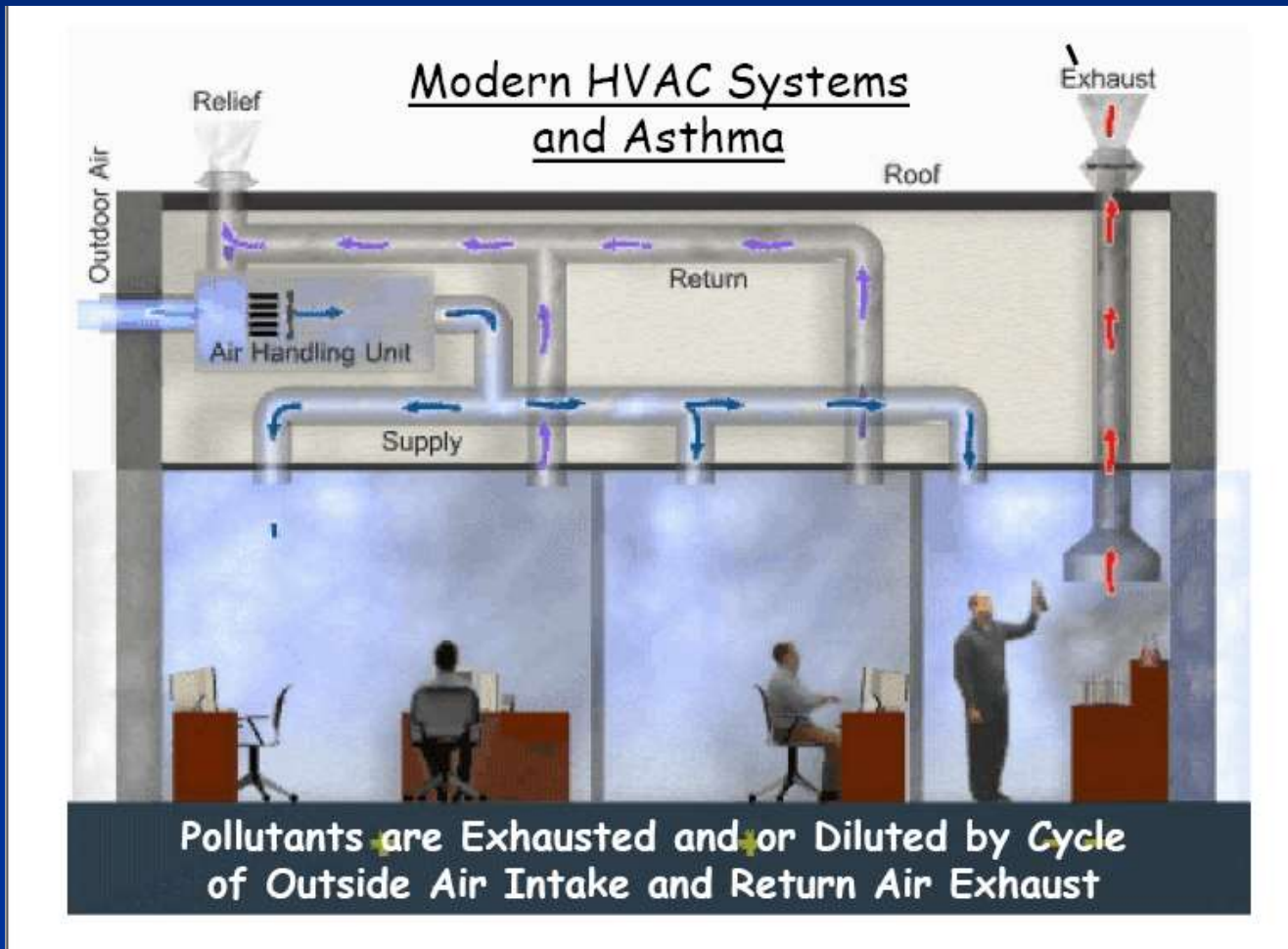
Building Conditions

- Classroom ventilation rate (outdoor air supply)
 - Lower rates → slower school work and poorer performance on standard academic tests
 - Lower rates → increased student absence
 - Lower rates → increased health symptoms (offices)

*Taken from "Performance and Health Benefits of Providing Better Indoor Environmental Quality (IEQ): A Brief Review," National IAQ Tools for Schools Symposium, Bill Fisk, Lawrence Berkely National Laboratory

School Indoor Air Quality

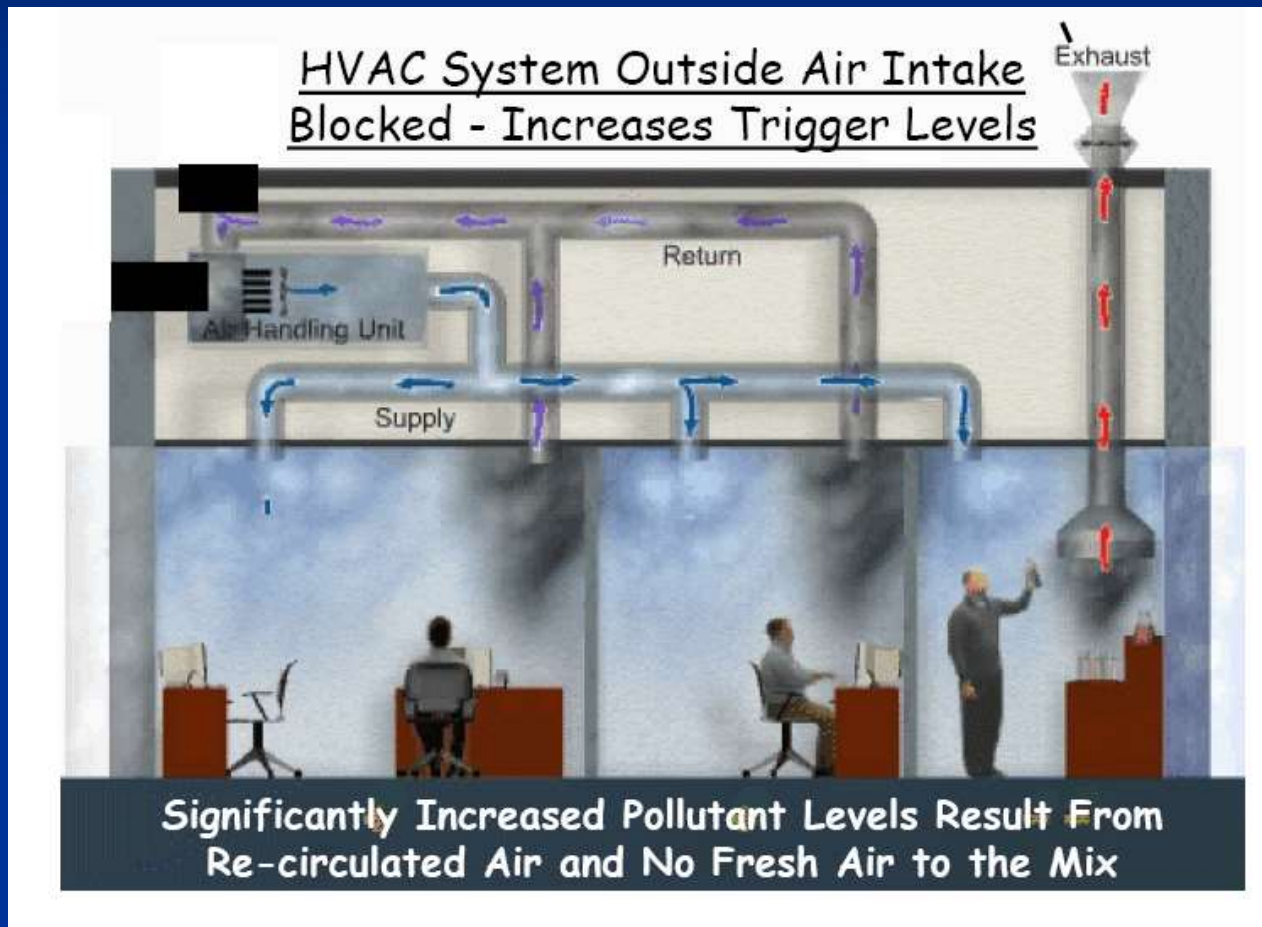
Example - Proper Ventilation



*Taken from "Asthma Friendly Schools From Field to Stakeholder Buy-In: National IAQ Tools for Schools Symposium, Brian Kasher, Charlotte Mecklenburg Schools

School Indoor Air Quality

Example Poor Ventilation



*Taken from "Asthma Friendly Schools From Field to Stakeholder Buy-In: National IAQ Tools for Schools Symposium, Brian Kasher, Charlotte Mecklenburg Schools

School Indoor Air Quality

Building Conditions

- Dampness and mold
 - In schools → dampness and mold are common
- Mold in home increases risk of asthma and other associated respiratory problems by 30-50% (EPA).

*Taken from "Performance and Health Benefits of Providing Better Indoor Environmental Quality (IEQ): A Brief Review," National IAQ Tools for Schools Symposium, Bill Fisk, Lawrence Berkely National Laboratory

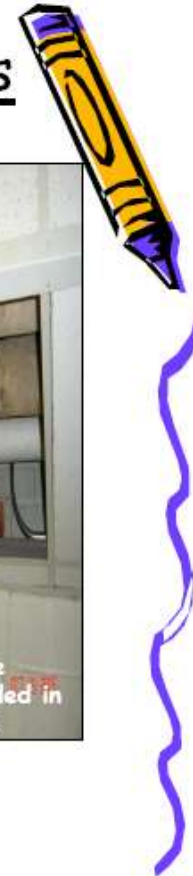
School Indoor Air Quality

Asthma

Modern Asthma Problem Sources

Building Systems

- HVAC
- Plumbing
- Roofing
- Interior Design
- Windows
- Building Seal



School Indoor Air Quality

Asthma

Modern Asthma Problem Sources

Building Materials

- Carpets
- Sheet Rock
- Sub Flooring
- Paneling
- Surface coatings
- Adhesives
- Fire Proofing
- Insulation

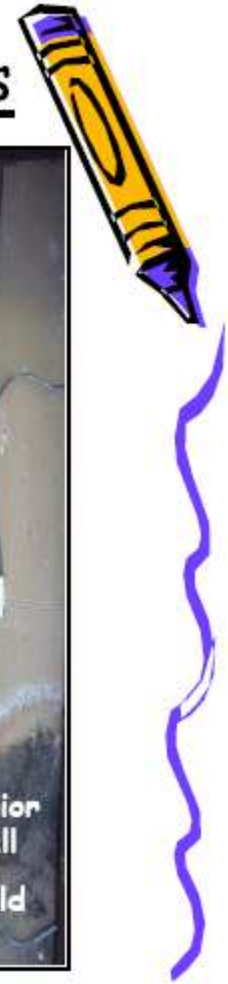


Classroom Molded
Painted Block Wall



Colonized Interior
Sheetrock Wall

A Favorite Mold
Food



School Indoor Air Quality

Asthma

Modern Asthma Problem Sources

Building Operations

- Custodial/Maintenance
- Cafe, Shop, Bathroom Exhausts
- Class Supplies (Art, Lab, Chemicals)
- Product Incompatibility
- Lawn Mowing, Watering
- Aquariums/Fountains
- Classroom Pets
- Open Windows/Doors



School Indoor Air Quality

Asthma

Modern Asthma Problem Sources

Human Factors

- Open Windows/Doors
- Stress Factors
- Perfumes/Masking Agents
- Individual Susceptibility
- Psychosomatic responses
- Carbon Dioxide Levels
- Inconsistent Environmental Comfort Factors



Asthma in the Classroom

Asthma Triggers



Triggers in the Classroom Allergens



- Some allergens in the classroom...
 - Dust mites
 - Example- found in classroom carpets and clutter*
 - Animal dander
 - Example- from class pets or pet hair on student clothes*
 - Cockroach droppings
 - Pollen and molds
 - Example - from plants in classroom or outdoors*

Create an Asthma Friendly Classroom

Keep classroom allergen free!



No dust mites here!

- Make sure classroom is clean
 - Dust with damp rag
 - Keep food tightly covered
 - Wash blankets and stuffed animals weekly in hot water
- Stay inside/close windows on high pollen days
- Consider removing furry pets from classroom
- Identify sources of water leaks and report to maintenance
- Make sure ventilation system is working and report if not

Triggers in the Classroom

Irritants



- Odors or sprays
 - Examples – perfume, scented lotions, air fresheners, scented markers
- Cleaning products
- Airborne particles such as chalk dust
- Second-hand smoke
- Air pollutants (indoor and outdoor)
 - Examples -school bus exhaust, cars idling, high air pollution days

*modified from Arizona Asthma Coalition's "Asthma in the School Setting"

<http://www.azasthma.org/Common/Files/AAC%20Asthma%20School%20Presentation%202007.pdf>

Create an Asthma Friendly Classroom

Keep classroom irritant free!



No fragrances here!

- Create a fragrance free classroom
 - Avoid use of perfumes, powdered lotions, air fresheners, scented markers, etc.
- Do not use cleaning products when children with asthma are present
- Stay inside/close windows on poor air quality/high ozone days
- Make sure ventilation system is working properly
- Promote anti-idling policies at your school

Asthma Triggers at School

Exercise



- Exercise can trigger asthma
- If a child with asthma is wheezing during exercise, it is a sign of uncontrolled asthma
 - They should talk to their doctor to see if they need to adjust their medications
- Some children take quick-relief medication before they exercise
- Children with asthma should warm-up before exercise

Asthma can be controlled and children with asthma can lead active, healthy lives!

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Asthma Triggers at School

Weather & Outdoor Air



- Check the weather and outdoor air forecast
 - Cold air can make asthma worse
 - High air pollution/ozone days can trigger asthma
 - Pollen can trigger asthma
- On cold days, wearing a scarf over nose and mouth warms and humidifies air
- Close windows and limit exposure to outdoor air on high pollution, ozone and pollen days

*modified from Arizona Asthma Coalition's "Asthma in the School Setting"

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