



Indoor Air Quality in Schools: A Guide for Patients and Parents

Understanding Indoor Air Quality Triggers

Asthma is a chronic inflammatory disease affecting the airways, leading to symptoms like wheezing, breathlessness and coughing. Common triggers found in schools include:



ALLERGENS

Dust mites, mold, pollen, pet dander



ENVIRONMENTAL IRRITANTS

Volatile organic compounds (VOCs) from paints, cleaning products and furnishings



SECONDHAND SMOKE

Exposure to tobacco smoke



PESTS

Cockroaches, rodents and other pests



DUST

Accumulation of dust particles, especially in carpets and upholstery



CHEMICAL FUMES

From cleaning agents, perfumes and pesticides



MOLD

Resulting from excess moisture in the building



ANIMAL DANDER

From animals in the classroom or brought in on clothing from home



Trigger Avoidance Strategies



REGULAR CLEANING

Implement a schedule using HEPA (High-Efficiency Particulate Air-Filtration) vacuums and non-toxic cleaners to reduce allergens.



MAINTAIN OPTIMAL HUMIDITY

Keep humidity levels between 30-50% to prevent mold growth.



PROMOTE VENTILATION

Ensure proper ventilation and consider using air purifiers with HEPA filters.



REDUCE VOC (VOLATILE ORGANIC COMPOUND) EXPOSURE

Choose low-VOC products for building materials and cleaning supplies.



INTEGRATED PEST MANAGEMENT (IPM)

Implement IPM strategies to control pests, reducing the need for pesticides. IPM involves identifying and monitoring pest populations, blocking access and entryways, eliminating food and water sources, applying low-toxicity pesticides and removing carpet or other allergen-containing materials.



SMOKE-FREE POLICIES

Advocate for smoke-free policies to eliminate exposure to secondhand smoke.



REGULAR MAINTENANCE

Ensure regular maintenance of HVAC (Heating, Venting and Air Conditioning) systems and prompt repair of leaks to prevent mold growth.



MONITOR THE AIR QUALITY INDEX

The Air Quality Index tracks outside air pollutants that can be brought inside through building air leaks or open doors/windows. Recommend keeping kids with asthma inside on worse air quality days.



Correcting Indoor Air Quality (IAQ)

If allergenic triggers are impacting your child's asthma, reach out to school officials to take action. Students who are affected by IAQ are eligible for accommodations through Section 504 of the Rehabilitation Act.

Additional Helpful Resources

- The EPA offers valuable guidance on managing asthma in the school environment. Visit [their website](#) for resources on measuring, identifying and correcting IAQ deficiencies.
- The IAQ [Tools for Schools Action Kit](#) provides comprehensive checklists to identify and solve such issues that can exacerbate asthma.
- By working together to address IAQ concerns in schools, we can create healthier environments for all students. Visit the [SA³MPRO™](#) website to learn more.

Resources

Esty B, Permaul P, DeLoreto K, Baxi SN, Phipatanakul W. Asthma and Allergies in the School Environment. *Clin Rev Allergy Immunol*. 2019 Dec;57(3):415-426. doi: 10.1007/s12016-019-08735-y. PMID: 31044354; PMCID: PMC6824974.

[EPA.gov/IAQ](#)

Phipatanakul W, Koutrakis P, Coull BA, Petty CR, Gaffin JM, Sheehan WJ, Lai PS, Bartnikas LM, Kang CM, Wolfson JM, Samnaliiev M, Cunningham A, Baxi SN, Permaul P, Hauptman M, Trivedi M, Louisias M, Liang L, Thorne PS, Metwali N, Adamkiewicz G, Israel E, Baccarelli AA, Gold DR; SchoolInner-City Asthma Intervention study team. Effect of School Integrated Pest Management or Classroom Air Filter Purifiers on Asthma Symptoms in Students With Active Asthma: A Randomized Clinical Trial. *JAMA*. 2021 Sep 7;326(9):839-850. doi: 10.1001/jama.2021.11559. PMID: PMC8424475.

[Additional Helpful Resources](#)

**School-based A_Asthma
Allergy
Anaphylaxis M_Anagement PROgram™**

The AAAAI's [Find an Allergist / Immunologist](#) service is a trusted resource to help you find a specialist close to home.

For more information on asthma, visit [www.aaaai.org](#).

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