



Turnkey Guide To Healthier Facilities

How to Protect Your Occupants
from Asthma & Allergies

AERAMAX
PROFESSIONAL

EXECUTIVE SUMMARY

For the millions of Americans suffering from asthma and allergies, there are plenty of relief strategies available for the home. But what about in offices, schools and other shared facilities where people spend the majority of their time during the week?

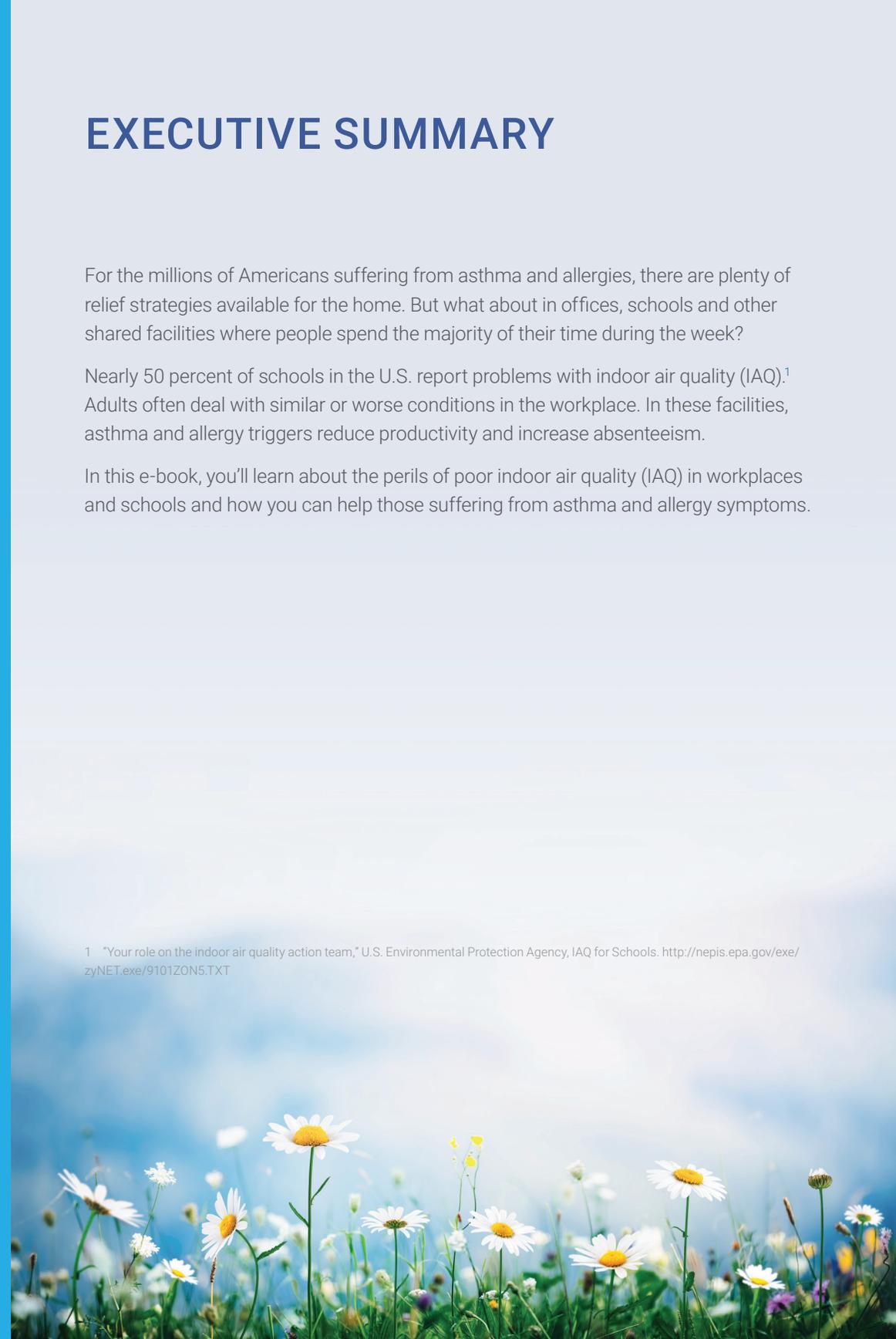
Nearly 50 percent of schools in the U.S. report problems with indoor air quality (IAQ).¹ Adults often deal with similar or worse conditions in the workplace. In these facilities, asthma and allergy triggers reduce productivity and increase absenteeism.

In this e-book, you'll learn about the perils of poor indoor air quality (IAQ) in workplaces and schools and how you can help those suffering from asthma and allergy symptoms.

1 "Your role on the indoor air quality action team," U.S. Environmental Protection Agency, IAQ for Schools. <http://nepis.epa.gov/exe/zyNET.exe/9101ZON5.TXT>

“As a society, we need to take more seriously how the environment affects physical and mental health, not only in the home, but also in the buildings in which we work and in which our children learn. Employers and educators need to provide healthier offices and learning facilities – not just for the safety of people with asthma and allergies, but so that everyone can enjoy more productive and healthful work environments.”

Dr. Cary Sennett, President and CEO
Asthma and Allergy Foundation of America (AAFA)



THE ROI OF CLEAN AIR

People who are extremely sensitive to allergens cannot function effectively in environments that regularly trigger their allergies or asthma. Yet, many organizations neglect to make changes in these environments to accommodate them, despite the value it provides.

The benefits of clean air extend to everyone in a facility. Proactively minimizing airborne contaminants in facilities:



Improves productivity



Reduces common complaints, such as odors



Reduces absenteeism from allergies, asthma



Creates a more positive and health-focused work environment



Improves perceptions of a facility

Cleaner air also provides a significant return on investment. A 2015 study by researchers at Harvard, Syracuse and SUNY Upstate Medical University found that workers in environments with cleaner IAQ scored up to 61 percent higher on cognitive assessments.²

Related research quantified the average value of that improvement at \$6,500 per employee per year.³

For these reasons and more, office workers, parents and consumers are demanding that academic and professional institutions do more to provide clean and healthy facilities by purifying the air. Facility managers and human resource executives have the opportunity to advocate positive change, using strong evidence to support the initial investment.

² "Associations of cognitive function scores with carbon dioxide, ventilation, and volatile organic compound exposures in office workers: A controlled exposure study of green and conventional office environments," Joseph G. Allen, Piers MacNaughton, Usha Satish, Suresh Santanam, Jose Vallarino, and John D. Spengler, October 26, 2015. <http://ehp.niehs.nih.gov/wp-content/uploads/advpub/2015/10/ehp.1510037.acco.pdf>

³ "Economic, environmental and health implications of enhanced ventilation in office buildings," Piers MacNaughton, James Pegues, Usha Satish, Suresh Santanam, John Spengler and Joseph Allen, November 18, 2015. <http://www.mdpi.com/1660-4601/12/11/14709/html>

The benefits from a human resources perspective are very clear: Effectively removing dust mites, allergens, volatile organic compounds (VOCs) and pollutants from the air creates more comfortable environments for those with chronic respiratory conditions.

For students, chronic respiratory conditions can be a major detriment to learning. Environments with poor IAQ result in distractions, missed classes and even long-term absenteeism. **Students miss more than 16 million school days each year** due to asthma and allergies being triggered. Research shows that poor IAQ even negatively impacts academic performance.

HOW POOR INDOOR AIR QUALITY AFFECTS US EVERY DAY

In the U.S. alone, asthma affects more than 25 million people,⁴ and nasal allergies affect 50 million.⁵

"I have often had students miss anything from several minutes to multiple days related more to asthma than allergies, though both have happened." said Mary Ellen Conley, BSN, RN, NCSN, and governance chair on the AAFA board of directors. "This is problematic as valuable class time is lost for the student, parents miss work to care for a sick child and there is a missed opportunity to provide assessment and management of the allergy or asthma."

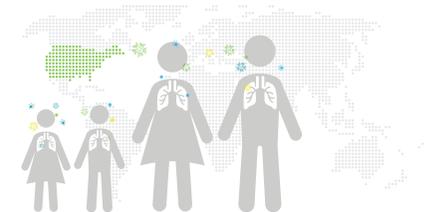
For workers, these conditions can be equally frustrating. Asthma and allergies constitute about **14.2 million missed** days of work in the U.S. each year.

From the perspective of an employer or HR manager, poor indoor air quality can negatively impact the bottom line. Organizations often overlook these issues, despite the fact that they take a long-term toll.

Asthma is estimated to be an economic burden of \$20.7 billion annually, with \$5.1 billion of that total being directly attributed to indirect costs such as sick days and lost productivity.⁶

DID YOU KNOW?

ASTHMA AND ALLERGIES CAUSE
40,000 AMERICANS



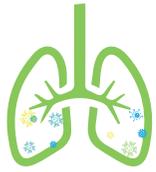
TO MISS SCHOOL OR WORK EVERY SINGLE DAY.

⁴ "What is asthma?" National Institutes of Health, August 2014. <http://www.nlm.nih.gov/health/health-topics/topics/asthma>

⁵ "Allergy facts," American College of Allergy, Asthma & Immunology, retrieved February 2016. <http://acaai.org/news/facts-statistics/allergies>

⁶ "Allergy facts," American College of Allergy, Asthma & Immunology, retrieved February 2016. <http://acaai.org/news/facts-statistics/allergies>

EACH YEAR IN THE U.S., IT'S ESTIMATED THAT AIRBORNE ALLERGENS AND OTHER POLLUTANTS THAT TRIGGER ASTHMA CAUSE:



35
MILLION

upper respiratory
tract symptoms*



16
MILLION

school
absences



14.2
MILLION

lost
work days

*Airborne allergens: Something in the air," National Institutes of Health, April 2003. <https://www.tpchd.org/files/library/d9d39f5c1a254654.pdf>



Additionally, research shows that allergens are getting increasingly potent and remaining in season longer. Thanks to increasing air pollution and other factors.

Approximately 1 in 4 buildings, suffer from sick building syndrome (SBS) because of poor indoor air quality. Creating unsafe environments for those with allergies and asthma.

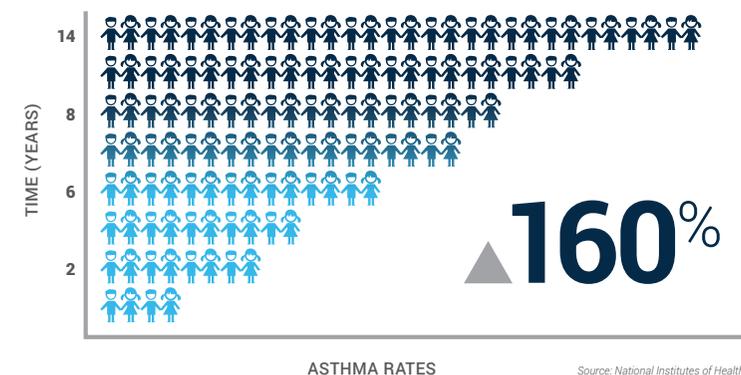
WHY COMMON AREAS SUFFER

Asthma is the most common childhood illness and the leading cause of school absenteeism. It is often triggered by common airborne contaminants including dust, mold, allergens and viral respiratory infections, such as the flu. Unfortunately, people with asthma are more likely to suffer severe complications from influenza, which frequently spreads through the air.

Asthma and allergies can also be triggered by poor building conditions, hazardous building materials or even cleaning supplies. Half the schools in the U.S. have IAQ complaints stemming from these factors. Workplaces often have similar problems, especially in restrooms, conference rooms and break rooms that regularly experience high traffic. In these areas, HVAC adjustments often can't adequately address the problem.

In general, work-related asthma is one of the most prevalent occupational lung diseases.⁷ Whereas these conditions can easily be addressed in the home, it is more challenging to develop building-wide initiatives in organizational or educational settings.

Asthma rates in children under the age of 5 have increased 160% over a 14-year period.



⁷ "Work-related asthma: Diagnosis and prognosis of immunological occupational asthma and work-exacerbated asthma," X Munoz, MJ Cruz, V Bustamante, JL Lopez-Campos, E Barreiro. December 13, 2013.

MINIMIZE ASTHMA AND ALLERGY TRIGGERS WITH CLEAN AIR

On average, **Americans spend 90 percent of their time indoors** and nine hours in shared spaces. Millions occupy unhealthy environments every day. Cleaning the air is the most effective way to address the airborne pollutants that trigger allergies, asthma and other health problems.



To mitigate the volume of triggers, some organizations have banned perfumes and fragrances. Others have switched to green cleaning products.

Despite these measures, there's only so much that can be done to control the sources of triggers directly. Continuing research has revealed that **outdoor air pollution** seeps indoors and accumulates if proper ventilation and air purification aren't in place.

Whether it's allergens entering from the outdoors, VOCs from cleaning products or the flu virus contaminating a room by an unexpected sneeze, a wide variety of sources can release triggers into common areas.

Targeted air purification is an effective method for eliminating the vast majority of triggers and pollutants in common areas. With the appropriate air purifier, organizations can **remove up to 99.9 percent of airborne pollutants**. Together with source control and improved ventilation, air purification creates healthier and cleaner environments for everyone in a building.

Using these proactive steps to improve IAQ can reduce common work complaints and enhance office well-being. Developing a comfortable and healthy work setting improves employee perception and encourages a more positive workplace culture. Similarly, in schools, improved IAQ is associated with higher productivity and increased academic performance.¹⁰

“The impact of poor air quality inside schools or the workplace is often overlooked but needs to be considered given the number of hours spent in these environments by most patients. If more attention were placed on improving the air quality in these settings, the impact for people with asthma and allergies would be significant, leading to fewer symptoms, less missed school/work days, and improved quality of life.”

*David Stukus, MD,
Board Certified Allergist/
Immunologist and Assistant
Professor of Pediatrics
Section of
Allergy & Immunology,
Nationwide Children’s
Hospital, Columbus, Ohio*

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¹⁰ “Evidence from scientific literature about improved academic performance,” U.S. Environmental Protection Agency, IAQ for Schools, November 5, 2015. <http://www.epa.gov/iaq-schools/evidence-scientific-literature-about-improved-academic-performance>

ONE SIMPLE SOLUTION

AeraMax Professional effectively **removes up to 99.9 percent of allergens and viruses** through a four-stage filtration process that includes carbon filters for odor and VOC removal. The commercial-grade air purifier also uses patented EnviroSmart™ technology to respond to the environment, allowing for efficient and low-maintenance operation, making it ideal for classrooms, conference rooms and offices.



Four-stage filtration



True HEPA filter removes up to 99.9% of airborne contaminants



Carbon filters for odor and VOC removal

For more information, visit aeramaxpro.com

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