Blueair
Point of view

Pollen-allergy relief: Monitor and control air quality at workplace and school

Climate change and air pollution makes the global pollen season longer and more intense. This increases the economic burden on society in terms of rising health care costs, reduced working capacity and absence from work due to illness and/or care of children affected by pollen allergies. To reduce the global burden of pollen allergies, monitoring and control of air quality standards at schools and workplaces are needed.

Allergic rhinitis: A global health issue

About 40% of world's population or three billion people suffer from hay fever, or allergic rhinitis (AR), which is a risk factor for asthma and other chronic upper-airway diseases.[1] This makes allergic rhinitis a major global health issue. The problem is, however, often neglected – partly because it is hard to estimate the direct costs of the disease and partly because people generally consider pollen allergies a nuisance rather than a chronic disease. It's time to take pollen allergies seriously. Billions of work and school days are lost, productivity and performance are significantly reduced, and a lot of money is spent on healthcare.

Pollen allergies on the rise

Seasonal allergic rhinitis varies around the globe, but generally lasts between two and four months. Increasingly, more people are being affected by seasonal allergies; one study indicates that, by 2050, the number of allergy sufferers in Europe will double while in Japan the number will rise by 40%.[2] Surprisingly, city dwellers are those that may be most affected by rising pollen levels due to the increase in temperatures and air pollution; about 92% of the world's population lives in areas where the air pollutants exceed World Health Organization limits.

Dietary changes, improvements in personal hygiene and building heating and ventilation systems, and a decline in physical activity are among the various theories for the growing number of hay fever sufferers. Climate change, which makes the pollen season both longer and more intense, and air pollution, which exacerbates the effects of allergic rhinitis, are also contributing factors.[3, 4, 5] Monitoring pollen levels and air quality has therefore become increasingly important with regard to minimizing the health effects of allergic rhinitis.

The high cost of hay fever

Millions of workdays and school days are lost due to pollen allergies. The U.K. estimates that adults of working age who suffer from hay fever miss 29 million days of work each year. While it's difficult to quantify an exact number, the total cost of hay fever on society is huge.

To put the costs into perspective, consider this. An average hay fever sufferer costs society about €950, or $1,200, according to a recent study in Sweden. This takes into account direct costs for physician visits, medications, ambulatory care, hospitalization and related expenses as well as indirect costs, including lost work days, decreased productivity, and the inability to perform daily activities. For a country like Sweden, which had a population of 9.5 million in 2013 at the time of the study, the total annual cost of allergic rhinitis for its 2.3 million pollen-allergy-sufferers amounted to €1.3 billion or $1.8 billion.

Then consider the projected increase in the numbers of allergy sufferers worldwide and the rising costs of treating allergic rhinitis, which has doubled in the U.S. over a five-year period according to the World Allergy Organization.

Annual costs related to pollen allergies worldwide

Country	Year costs calculated	Estimated number of hay fever sufferers	Annual costs
India	2016	331 million	US$5.9 million
Japan	2013	32 million	US$3.2 billion*
South Korea	2007	4 million	US$273 million
Sweden	2013-14	2.3 million	US$1.8 billion
United Kingdom	2017	18 million	US$9.4 billion
United States	2016	50 million	US$24.8 billion

What you can do

1. Help change the mindset so that pollen allergies are recognized as a global health issue with substantial – and unnecessary – costs.
2. Push local and national governments to map and monitor outdoor pollen levels.
3. Push for local and national indoor air quality standards that include monitoring indoor pollen levels.
4. Raise awareness among businesses and educational institutions about how improving management of allergic rhinitis contributes to improved productivity and performance.
5. Encourage preventive treatment of allergic rhinitis to increase workplace productivity and school performance.
6. Find funding for more research and innovative ways to reduce hay fever symptoms and improve the quality of life for allergy sufferers.

Take control of the indoor air

Most people think of pollen as an outdoor allergen. Indoor air quality, however, needs to be taken into account in the overall treatment of people affected by allergic rhinitis. Airborne pollen finds its way indoors, making the indoor environment unbearable for hay fever sufferers. Monitoring pollen levels indoors, especially at workplaces and schools, will therefore go a long way towards improving their quality of life.

The high costs of allergic rhinitis are only getting higher. It's time for governments to help hay fever sufferers cope with seasonal allergies indoors by calling on national, regional and local governments to act. The world needs to do more to lessen the effects of climate change and air pollution on people around the globe. We need more research on indoor air quality and pollen. We need more people to lobby their governments to establish minimum standards for indoor air quality or, better yet, global standards. We need employers, school administrators and building facility managers to recognize that monitoring and controlling indoor air quality can contribute to higher productivity at work, increased performance at schools and a better life for everyone who sneezes, wheezes and suffers the discomforts of pollen allergy season.

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How to alleviate pollen allergy symptoms

1. Check pollen counts and pollen maps and adapt your daily routines accordingly (avoid high pollen areas, etc.)
2. When on the go, use a face mask and/or a car air purifier that filter pollen allergens.
3. Improve indoor ventilation.
4. Use a room air purifier indoors.
5. When you come in from outdoors, take off your shoes by the door and change your clothing.
6. Shower and wash your hair.
7. Use wet cloth/mop to clean surfaces and floors often.
8. Vacuum frequently.

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Contact: Sara Alsén, Global Sustainable Business & Communications Director, sara.alsen@blueair.com

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