

Climate Change: A major contributor to allergy disorders.

Allan Sether*

Asthma Control Program, Government of Sri Lanka, University of Colombo, Sri Lanka

Introduction

Climate change's health effects are becoming more widely understood. The climate change hypothesis is proposed as a significant contribution to the expanding global allergy epidemic in this paper. Climate change has a significant impact on human health, and it is now acknowledged as a major contributor to allergy disorders. As a result, allergists and immunologists must act quickly to reduce its impact and alter its long-term trajectory.

The persistent rise in global temperatures caused by the burning of fossil fuels and the buildup of greenhouse gases (GHGs) continues to destabilise all ecosystems around the world. Despite the fact that annual emissions must be cut in half by 2030 and reach net zero by 2050 to avoid some of the most severe consequences of global warming, the world's efforts to reduce GHG emissions fall short of the 2015 Paris Agreement's promises. To that end, the month of July 2021 was just proclaimed the warmest month in 142 years. These changes have significant repercussions for global temperatures, and they exacerbate outdoor air pollution, pollen exposure, and extreme weather events. Atopy and susceptibility to infections are promoted by air pollution, in addition to poor respiratory health. The incidence and severity of asthma and allergic rhinitis are affected by GHGs' impact on pollen. Temperature changes, air pollution, and extreme weather events all have negative multisystemic health consequences that disproportionately affect the poor and vulnerable. This review paper provides allergists and immunologists with an update on the health effects of climate change, which are already being felt in our daily practises. It's also a call to action and activism, with a focus on integrating climate change mitigation, education, and adaptation measures to safeguard our patients and prevent additional damage to the environment.

The Effects of Climate Change on Asthmatics

Climate change poses a significant threat to respiratory health by generating or exacerbating pre-existing respiratory disorders and increasing exposure to respiratory disease risk factors [1].

According to current evidence, air pollution can induce asthma. Climate change causes and aggravates chronic respiratory diseases like asthma by increasing water and air pollution [1].

As temperatures rise as a result of climate change, ground-level ozone levels rise, causing airway discomfort and lung tissue damage [2].

For patients with asthma, ground-level ozone, sometimes known as "bad ozone," is the most dangerous. When exposed to sunlight, a chemical reaction between nitrogen oxide and organic molecules produces ground-level ozone. Industrial emissions, automobile exhaust, and gasoline fumes are examples of these. Ground-level ozone is a primary component of urban smog, a type of air pollution, and is very likely to reach harmful levels in metropolitan locations on hot sunny days.

Children, the elderly, those with lung problems, and people who spend a lot of time outside are the most sensitive to ground-level ozone. Ground-level ozone poses the biggest threat to children, who are also more likely than adults to suffer from asthma. Increases in emergency room visits and hospitalizations for patients with asthma are linked to unhealthy rises in ground-level ozone pollution [3].

The Effects of Climate Change on Allergy Sufferers

Warmer temperatures in the United States led the pollen season to last 11 to 27 days longer across the country between 1995 and 2011 [4].

Warmer temperatures caused by climate change cause flowers to bloom earlier, releasing more carbon dioxide into the atmosphere. The concentration of pollen in the air, the intensity of airborne allergens, and the severity of allergy symptoms all rise as temperatures rise. People who do not have allergies may acquire allergic symptoms if they are exposed to higher levels of pollen and mould [5].

Some allergen-producing plants are moving to new places as a result of climate change, and winds can carry pollen and mould from outside the United States [5].

People with asthma and allergies can take a few steps to mitigate the risks and effects of climate change. Ask your doctor for advice on how to avoid places or situations that can trigger an asthma attack or an allergic reaction to lessen the health hazards associated with climate change, according to the EPA. Also, before leaving your house, check the air quality in your neighbourhood. You should aim to reduce your outdoor activities on days when the AQI is high.

References

1. Ray C, Ming X. Climate Change and Human Health: A Review of Allergies, Autoimmunity and the Microbiome. *Int J Environ Res Public Health*. 2020;17(13):4814.

*Correspondence to: Allan Sether, Asthma Control Program, Government of Sri Lanka, University of Colombo, Sri Lanka, E-mail: sether@gmail.com

Received: 08-Apr-2022, Manuscript No. AACIR-22-60004; Editor assigned: 12-Apr-2022, PreQC No. AACIR-22-60004 (PQ); Reviewed: 20-Apr-2022, QC No. AACIR-22-60004;

Revised: 22-Apr-2022, Manuscript No. AACIR-22-60004 (R); Published: 30-Apr-2022, DOI: 10.35841/aacir-5.2.109

2. Ziska LH, Makra L, Harry SK, et al. Temperature-related changes in airborne allergenic pollen abundance and seasonality across the northern hemisphere: A retrospective data analysis. *Lancet Planet. Health.* 2019;3(3):E124-E131.
3. To T, Zhu J, Stieb D, et al. Early life exposure to air pollution and incidence of childhood asthma, allergic rhinitis and eczema. *Eur Respir J.* 2019;55:1900913.
4. Ison MG, Michaels MG, AST Infectious Diseases Community of Practice. RNA respiratory viral infections in solid organ transplant recipients. *Amer J Transplant.* 2009;9(4):S166.
5. Waghmare A, Englund JA, Boeckh M. How I treat respiratory viral infections in the setting of intensive chemotherapy or hematopoietic cell transplantation. *J Ame Soc Hem.* 2016;127(22):2682-92.