National Institute of Environmental Health Sciences

Climate change, aeroallergens, and pediatric allergic disease

Author(s): Sheffield PE, Weinberger KR, Kinney PL
Year: 2011
Journal: The Mount Sinai Journal of Medicine, New York. 78 (1): 78-84

Abstract:

The degree to which aeroallergens are contributing to the global increase in pediatric allergic disease is incompletely understood. We review the evidence that links climate change to changes in aeroallergens such as pollen and outdoor mold concentrations and, subsequently, aeroallergen association with pediatric allergic disease. We specifically explore the evidence on both the exacerbation and the development of allergic disease in children related to outdoor pollen and mold concentrations. Pediatric allergic diseases include atopic dermatitis or eczema, allergic rhinitis or hay fever, and some types of asthma in children, typically defined as < 18 years of age. We discuss how the timing of aeroallergen exposure both in utero and in childhood could be associated with allergies. We conclude that the magnitude and type of health impacts due to climate change will depend on improved understanding of the relationship between climatic variables, multiple allergen factors, and allergic disease. Improved public-health strategies such as adequate humidity control, optimum air filtration and ventilation, and improved anticipatory public-health messaging will be critical to adaptation.

Source: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3075981

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution, Precipitation

Air Pollution: Allergens, Interaction with Temperature

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States, United States

Non-United States: Asia, Europe, Non-U.S. North America

Health Impact:

specification of health effect or disease related to climate change exposure

Dermatological Effect, Respiratory Effect

Respiratory Effect: Asthma, Upper Respiratory Allergy

Population of Concern: A focus of content

Population of Concern:

populations at particular risk or vulnerability to climate change impacts

Children

Resource Type:

format or standard characteristic of resource

Review

Timescale:

time period studied

Time Scale Unspecified