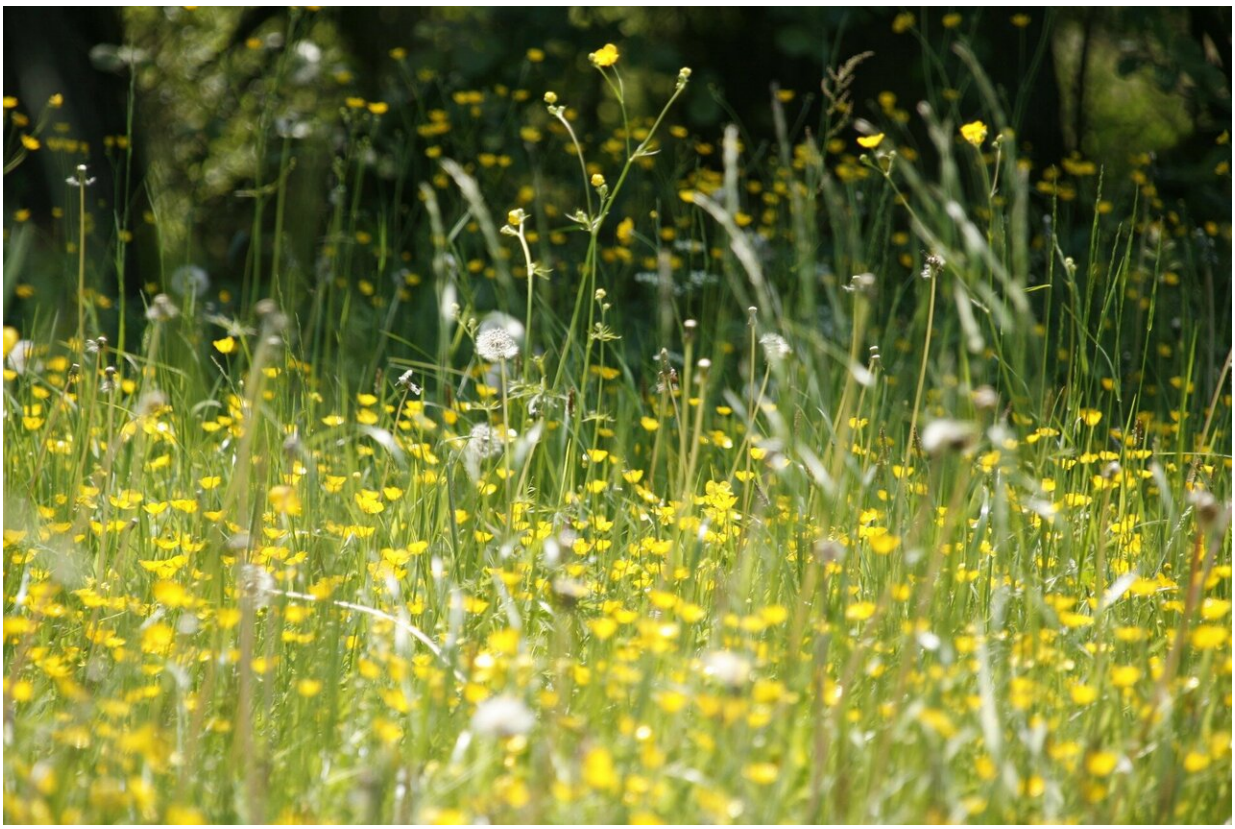
# Measuring grass pollen allergens instead of grass pollen count could help hay fever sufferers

January 8 2024



Credit: Pixabay/CC0 Public Domain

Measuring airborne grass allergen levels instead of pollen counts will be more beneficial for hay fever sufferers, as new research shows grass

allergen levels are more consistently associated with hay fever symptoms than grass pollen counts.

The research, published today in *The Journal of Allergy and Clinical Immunology* and led by King's College London and Imperial College London, shows for the first time that measuring airborne allergen levels will help people with hay fever to better control their symptoms.

One in four adults in the UK suffer from hay fever from late-March to September. Symptoms include a runny or blocked nose, sneezing and coughing, and itchy, red or watery eyes. Hay fever can make lung conditions such as asthma worse, causing wheezing and breathing difficulties that can lead to hospitalization.

Many people with hay fever monitor peak pollen times to manage their symptoms. In the UK, pollen grains are manually measured to find the daily pollen count. But authors of this study say measuring allergen levels instead will be more accurate, as each pollen grain can release a different amount of allergen each day, and it is the allergens in the air that are primarily responsible for causing hay fever symptoms. Currently, there is no regular monitoring of allergen levels in the UK or elsewhere.

Authors collected daily symptom and medication scores from adult participants in an allergy clinical trial as well as daily counts of asthma hospital admissions in London. They measured grass pollen counts and also sampled air for the grass pollen Phl p 5 grass allergen protein in the same location at King's College London over the same time period.

First author Dr. Elaine Fuertes, from Imperial College London, said, "Grass pollen is the most common hay fever trigger. In this study, we measured grass allergen (Phl p 5) levels and found this was more consistently associated with allergic respiratory symptoms than grass pollen counts."

Senior author Professor Stephen Till, from King's College London, said, "High pollen season can be serious for people who suffer with hay fever, and can trigger severe asthma attacks in those who are allergic to grass pollen. This study shows there is a superior way of measuring pollen allergens in the air than the traditional pollen count. Monitoring grass allergen instead of grass pollen counts gives results that are more consistently linked to patients' symptoms and could allow people with serious allergies to be better prepared during the pollen season."

Research is ongoing to see whether regular measurement of allergen levels can become the standard in the UK, and whether there are other environmental factors—such as meteorological factors including temperature, wind, humidity, and air pollutants—that influence how much allergen each pollen grain releases.

**More information:** Phl p 5 levels more strongly associated than grass pollen counts with allergic respiratory health, *The Journal of Allergy and Clinical Immunology* (2024).

Provided by King's College London

Citation: Measuring grass pollen allergens instead of grass pollen count could help hay fever sufferers (2024, January 8) retrieved 11 May 2024 from https://medicalxpress.com/news/2024-01-grass-pollen-allergens-hay-fever.html