## UMassAmherst Environmental Health & Safety

## Allergens and Air Quality

Allergies are among the United States' most common, but most overlooked, diseases. Allergic reactions occur in people with sensitivities from exposure to allergens such as food, dust, perfumes, animals, insects, and more. You may react after eating, inhaling, injecting, or touching an allergen by coughing, sneezing, forming hives, rashes, itchy eyes, a runny nose, or a scratchy throat. In severe cases, it can cause low blood pressure, breathing trouble, asthma attacks, and even death if not treated promptly.

<u>Both indoor and outdoor air quality can trigger allergies, especially via airborne particles</u>. Allergies caused in an indoor setting may be the result of dust, indoor mold or plants, animal/insect dander, or infiltration of outdoor allergens. Often, indoor symptoms can be alleviated by closing the windows, removing indoor plants that can produce pollen and support mold growth, and regular cleaning. If symptoms persist, contact EH&S for an assessment of environmental conditions.

However, allergies are very often caused by outdoor factors, even if you aren't aware of it. Allergies can be particularly troublesome when outdoor levels of pollen or fungal spores are elevated. To check outdoor levels, please consult the <a href="EH&S Outdoor Air Quality page">EH&S Outdoor Air Quality page</a>. Thousands of people have undiagnosed seasonal allergies, or allergic rhinitis. Symptoms of allergic rhinitis include the above-mentioned allergic reactions, but may also involve swelling, dryness and itchiness in the eyes, nose, and throat, head congestion, earaches, headaches, and even general fatigue. Patients who don't treat their allergies may find their symptoms getting worse over time, and they may notice new symptoms arising, because many naturally-occurring materials (such as pet dander) are sensitizers: substances that cause exposed individuals to develop an allergic reaction in normal tissue after repeated exposure to the substance. Untreated allergic rhinitis patients are also more likely to develop periodic ear and sinus infections, as well as sleep apnea and asthma later in life.

As allergic rhinitis can result from a variety of triggers (such as tree, grass, and weed pollen), traveling or moving to a new area may alter allergy symptoms if the local climate, flora and fauna are different.

There is no cure for allergies. You can manage allergies with prevention and treatment. Consult a physician for a diagnosis and treatment plan. You can find more information on allergy treatments through <u>UHS</u>.

## **References and Sources**

- 1. <u>Initiating pollen sensitization complex source, complex mechanisms</u>
- 2. Sensitization and True Allergy
- 3. Asthma and Allergy Foundation: Allergy Facts and Figures
- 4. CDC: Pollen and Your Health
- 5. NIH Library of Medicine: <u>Identification and management of undiagnosed and undertreated</u> allergic rhinitis in adults and children
- 6. OSHA Standard 1910.1200 Appendix A4: Respiratory or Skin Sensitization