

## Double trouble: The link between Allergies and Asthma

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If you have both allergies and asthma, you may wonder what they have in common besides a maddening ability to make you miserable. A lot, as it turns out. Allergy induced asthma is the most common type of asthma in the United States; 60% of people with asthma have the allergic type. James T. Li, M.D., a Mayo Clinic allergy specialist answers your questions about the similarities and the differences between allergies and asthma.

What's the link between allergies and asthma? Simply put, allergies can trigger or induce asthma. For people with allergic asthma, breathing in substances such as pollen, mold, dust mites and animal dander triggers the inflammation and swelling of the airways, leading to symptoms of asthma.

The lining of the nose and the lining of the airways are similar and are affected similarly by the allergic inflammatory process. Allergies are caused by the production of an antibody called IgE. The IgE antibodies cause a cascade of reactions in the body, including itchy skin or scratchy eyes or, for some, tightening of the airways. Simply put, if your immune system produces IgE antibody toward cat proteins, you're said to be allergic to cats.

Exposure to cats triggers inflammation and swelling of the lining of the nose, bronchial tubes or both.

If I treat my allergies, will it prevent asthma? Some studies suggest that treatment of allergic rhinitis actually improves asthma. Allergen immunotherapy (desensitization allergy shots) is a type of allergy treatment that can significantly improve asthma. In addition, if you have allergic asthma, reducing your exposure to the allergic substance can reduce your asthma problems and in some cases, completely control it.

Are allergies and asthma treated differently? Medications aimed at reducing inflammation are effective for allergic rhinitis, allergic asthma, as well as nonallergic asthma. Corticosteroids for example, reduce inflammation. Intranasal corticosteroids, which you spray into your nose, reduce inflammation from hay fever. Corticosteroid creams applied to your skin reduce the inflammation of eczema. And inhaled corticosteroids, which you inhale into your lungs using an inhaler device, reduce inflammation of the bronchial tubes in asthma.

Another medication, called a leukotriene modifier, also is used to reduce inflammation. Leukotriene modifiers are taken in pill form and are used for both asthma and allergic rhinitis symptoms.

Other medications are clearly more effective for one condition over another. Antihistamines, for example, are commonly used to treat allergic rhinitis but have a very minor benefit for asthma. Bronchodilator inhalers, which

open congested airways, are a big part of asthma treatment, though they aren't used to treat allergic rhinitis.

Who's at risk of allergic asthma? A family history of allergies is the strongest risk factor having allergic asthma. If you have allergies, you're more likely to develop asthma — up to 78 percent of people who have asthma also have hay fever.

Is all asthma caused by allergies? Though allergic asthma is the most common form of asthma, there are other forms and triggers of asthma, including exercise-induced asthma and nonallergic asthma triggered by infections or cold air or gastroesophageal reflux disease (GERD).

Nothing to sneeze at While it may be a manner of semantics to those who suffer from allergy or asthma symptoms, recognizing the relationship between the body's immune system and how the airways react has led to improved treatment of asthma symptoms for many people.

<http://www.mayoclinic.com/health/allergies-and-asthma/AA00045>

