

# The Need to Reduce Exposure to Allergic Triggers Is Widely Supported



Allergen exposure reduction advances the management of allergic asthma by:

- Supplementing treatment with a multifaceted approach
- Improving asthma care and outcomes

## Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma

Section 3, Component 3: Control of Environmental Factors and Comorbid Conditions That Affect Asthma

Bethesda, MD: US Department of Health and Human Services, National Institutes of Health, National Heart, Lung, and Blood Institute, National Asthma Education and Prevention Program; 2007. NIH Publication no. 07-4051.

### Asthma Diagnosis

- Exposure of patients who have asthma to allergens (**Evidence A**) to which they are sensitive has been shown to increase asthma symptoms and precipitate asthma exacerbations
- For at least those patients who have persistent asthma, the clinician should evaluate the potential role of allergens, particularly indoor inhalant allergens (**Evidence A**)

### Asthma Management

- The first and most important step is to advise patients to reduce their exposure to relevant allergens to which they are sensitized (**Evidence A**)
- Effective allergen avoidance requires a multifaceted, comprehensive approach; individual steps alone are generally ineffective (**Evidence A**)
- Allergen-control interventions in the home setting have been proven effective for reducing exposures to cockroach, dust mite, and rodent allergens (**Evidence A**)

## The role of allergens in asthma

Platts-Mills T, Leung DYM, Schatz M. *Am Fam Physician*. 2007;76:675-680.

- Patients who are allergic to dust mites and cockroaches are often unaware of the effects of perennial exposure on their lungs
- Allergy testing for aeroallergens including perennial indoor allergens is recommended for persons with persistent asthma who are taking daily medications (**Evidence Rating A**)
- An intensive indoor environmental control program is recommended for patients with allergy-mediated asthma (**Evidence Rating A**)

## Understanding allergy in the diagnosis and management of patients with respiratory disease: a guide for clinicians

Rollins DR, Katial RK, Good JT Jr. National Jewish Health.

- Studies have shown patient history alone underestimates the role of allergic inflammation in a patient's disease, especially indoor aeroallergen exposure
- Medications do not take the place of trigger exposure reduction in the patient's environment
- Physician should advise patients about trigger exposure reduction

# The Effectiveness of Exposure Reduction to Allergic Triggers Is Proven



Target allergens to improve asthma symptoms and outcomes by:

- Reducing airway inflammation and bronchial responsiveness
- Enhancing the effectiveness of medications

## Effect of mattress and pillow encasings on children with asthma and house dust mite allergy

Halken S, Høst A, Niklassen U, et al. *J Allergy Clin Immunol*. 2003;111:169-176.

- Encasing of mattresses and pillows resulted in a significant long-term reduction in house dust mite concentration in mattresses and in the need for inhaled steroids
- After 1 year, the dose of inhaled corticosteroids was reduced by >50% in the active treatment group without worsening symptoms, lung function, or need for rescue medication
- The median change from baseline in the daily dose of steroid was 200 µg/d in the active treatment group and 0 µg/d in the placebo group, with the difference being significant ( $P<.01$ ).

## Results of a home-based environmental intervention among urban children with asthma

Morgan WJ, Crain EF, Gruchalla RS, et al. *N Engl J Med*. 2004;351:1068-1080.

- After 12 months, the maximal number of symptom days was reduced by ~50% in the active intervention group
- Observed reduction in symptoms translates into 34 fewer days of wheezing, an effect similar to that described in placebo-controlled studies of inhaled corticosteroids
- Remediation strategies can be implemented that result in sustained improvements in asthma-associated morbidity, symptoms, and healthcare use

## Influence of allergen avoidance on the eosinophil phase of airway inflammation in children with allergic asthma

Piacentini GL, Martinati L, Mingoni S, Boner AL. *J Allergy Clin Immunol*. 1996;97:1079-1084.

- There is a close relationship between airway inflammation, bronchial responsiveness, and exposure to relevant allergens
- In asthmatic children with allergy to house dust mites, a 3-month period of reduced exposure significantly reduced bronchial hyper responsiveness and the eosinophil phase of airway inflammation
- This study supports the value of environmental measures to control asthma