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Environmental influences on childhood asthma: Allergens

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Abstract

Allergen exposure is associated with the development of allergen-specific sensitization, but their relationship is influenced by other contemporaneous exposures (such as microbial exposure) and the genetic predisposition of the host. Clinical outcomes of the primary prevention studies that tested the effectiveness of allergen avoidance in pregnancy and early life on the subsequent development of sensitization and asthma published to date are inconsistent. Therefore, we cannot provide any evidence-based advice on the use of allergen avoidance for the primary prevention of these conditions.

The evidence about the impact of allergen exposure among and among sensitized children with asthma is more consistent, and the **combination of sensitization and high exposure to sensitizing allergen increases airway inflammation, triggers symptoms, adversely impacts upon disease control, and is associated with poorer lung function in preschool age.** However, there are differing opinions about the role of inhalant allergen avoidance in asthma management, and recommendations differ in different guidelines.

Evidence from more recent high-quality trials suggests that mite allergen-impermeable bed encasings reduce hospital attendance with asthma attacks and that multifaceted targeted environmental control improves asthma control in children. We therefore suggest a **pragmatic approach to allergen avoidance** in the management of childhood asthma for clinical practice, including the recommendations to: (1) tailor the intervention to the patient's sensitization and exposure status by using titer of allergen-specific IgE antibodies and/or the size of the skin test as indicators of potential response; (2) use a **multifaceted allergen control regime to reduce exposure as much as possible; and (3) start intervention as early as possible upon diagnosis.**

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