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Methods and effectiveness of environmental control

Euan Tovey and Guy Marks
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Abstract
In recent years the role of allergen exposure and atopy, and the interaction between them in the clinical expression of allergic disease, has been examined in a quantitative manner in epidemiologic studies. Such analyses suggest that avoidance of exposure to domestic allergens is a critical element in integrated strategies for both the prevention and the management of asthma. The promise of primary intervention in high-risk infants, as shown in the Isle of White study, has been confirmed in a recent study in Japan, and at least 4 similar trials are in progress. Applying these principles to the management of symptoms in patients with chronic asthma has proved more difficult, and it is likely that many earlier studies were poorly designed to test the hypothesis that allergen avoidance was clinically useful. Recent studies with patients moved to high altitudes during seasonal reductions in mite exposure and randomized controlled interventions in houses have all shown improvements in clinical manifestations of asthma. These recent trials have also demonstrated something that was less certain—that massive reductions in domestic allergen exposure can be achieved and that people will adopt the significant changes to their domestic environment and lifestyles if the risks and benefits are known. In the future, it seems likely that better study designs, as well as improvements in methods to monitor exposure and clinical outcomes, will provide further support for the role of allergen avoidance in the prevention and management of asthma. (J Allergy Clin Immunol 1999;103:179-91.)