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Allergen avoidance in house dust mite allergy

Background

House dust mite allergy is closely related to allergic asthma and perennial rhinitis. Allergen avoidance may play a key role in the management of allergic airway disease however as asthma is showing different phenotypes, allergen avoidance cannot necessarily achieve benefit in all patients.

Key message

Allergen avoidance has been introduced as one therapeutic measure, e.g. in food allergy but also in house dust mite allergy. In terms of primary prevention, house dust mite allergen avoidance was successful in a complex approach in the Isle of Wight Study, but not successful in the prevention of house dust mite sensitisation in the Manchester Asthma and Allergy Study (MAAS). The German MAS study, an observational birth cohort study, demonstrated that high exposure to dust mites favours sensitisation and that sensitised individuals are more likely to develop asthma.

Furthermore, sensitised, exposed children showed impaired lung function at school age. So, allergen avoidance, at least as an approach of secondary prevention, seems to be reasonable in children. In adults, asthma or chronic obstructive pulmonary disease have many triggers, and avoidance of house dust mite allergens often has only poor effect. This can also be explained by the observation that successful avoidance of house dust mite allergens means a 98% reduction, especially in countries like the UK, Australia and the US with high exposure due to housing and climatic conditions, which is often not achieved.

Summary and conclusion

Intervention and observational studies showed that allergen avoidance as primary prevention is not always successful, but as secondary prevention, it might decrease impairment of lung function in mite sensitised young individuals.

