



Allergens in the Home

Australia and New Zealand have a higher incidence of asthma and allergies than any other country in the world. A range of inhalable substances that can cause an allergic reaction – called allergens – have been linked to respiratory problems. Common allergens are produced by house dustmites, cockroaches, grasses, pollens, moulds and mildew, and pets such as dogs, cats and birds.

A large range of other triggers can cause a respiratory reaction. Some of the triggers that have been researched include exercise, cold air, tobacco smoke, workplace pollutants, some foods, medications, colds and flus, chemical odours, and pollutants from cooking appliances and heaters.

There is a misapprehension that having carpet in the home increases the likelihood of exposure to dustmite allergens, so let's take a look at the facts.

How are we exposed to dustmite allergens in the home?

Live dustmites are always present in the home and are found in a range of places including bedding, curtains, soft furnishings, soft flooring, soft toys and in clothing. It is important to remember that live dustmites are harmless. A dustmite related respiratory reaction can only occur by inhaling airborne dustmite allergens – faecal matter or fragments of dead dustmites.

Bedding provides the main habitat for dustmites (and their allergens) because it is protected, humid and food rich (dustmites feed on shed human skin scales). Accordingly, bedding is regarded as the primary dustmite allergen exposure site as it provides long periods of nose and mouth contact.

Dustmites are found in isolated areas in some carpets, but it is important to remember that allergens are harmless if they are trapped within the carpet pile. Studies have shown that airborne allergens are no more prevalent in carpeted homes than homes with hard floors. Indeed, dustmite allergens on hard floors are more likely to circulate and become airborne.

“No significant different [in airborne dust levels] was found between carpeted and non-carpeted homes.”

Dingle P, “A study of dust levels between homes containing wall-to-wall carpeting and homes with hard floor surfaces”, *Research Study*, School of Environmental Science, Murdoch University, 2001

How can you reduce indoor allergen levels?

How people become exposed to indoor airborne allergen, and at what levels, is not well understood. Furthermore, the health effect of various allergen control strategies – both physical and chemical measures – has not been scientifically demonstrated.



Bedding

However, if you wish to take steps to lessen contact with airborne allergen, the first thing to think about is bedding hygiene. Some of the measures that have been recommended include:

- washing bedclothes regularly in hot water
- airing mattresses, pillow and bedclothes regularly, and where possible, in direct sunlight
- using special protective covers on mattresses and pillows

“We think that families with asthma should avoid drastic lifestyle modifications [such as removing carpets].”

Marks GB and Abramson MJ, “House dustmite avoidance: facts & fiction”, *Asthma Update*, June 2001.

Flooring

- vacuum your floor regularly
- ensure your vacuum cleaner is in good working order and has a fine filter system
- If you have hard flooring, wet wash the floor after vacuuming and replace the water when it discolours from soiling
- have your carpets professionally cleaned about every 18 months

Other steps

- encourage air circulation by opening windows and doors – this reduces indoor humidity and encourages fresh air exchange
- regularly vacuum curtains and have them periodically professionally cleaned
- regularly vacuum fabric furnishings such as lounge suites
- regularly place children’s soft toys in sunlight
- wash clothing as soon as possible after it has been worn

Managing a respiratory condition

The key to managing a serious respiratory condition like asthma is knowledge and professional medical intervention. This means knowing and understanding personal triggers and being able to recognize the early signs and symptoms that may require treatment. The Asthma Foundation also recommends the development of individual Action Plans, in conjunction with a doctor, which includes details of medication normally taken when well, how to recognize worsening asthma and what to do in an asthma emergency.

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