



australasian society of clinical immunology and allergy inc.

Allergen avoidance

ASCIA Education Resources patient information

Allergies are very common in Australia and New Zealand, affecting around one in three people at some time in their lives. There are many different allergic diseases, with symptoms ranging from mild hay fever to potentially life threatening Anaphylaxis. Allergy is also one of the major factors associated with the cause and persistence of asthma.

Identifying causes which can be avoided is an essential part of treating allergic diseases. Once the causes are correctly identified, then the following practical advice on avoiding or minimizing your exposure to allergens should help.

Allergy diagnosis is the first step

It is important to identify and confirm allergens that trigger your symptoms. In some cases the offending allergen may be obvious. However, in other cases your doctor will need to consider your medical history together with the results of allergy tests (skin prick tests or blood (RAST) tests). If necessary, you may be referred to an allergy specialist for further detailed assessment.

House dust mite is a common allergen in Australia and New Zealand

The house dust mite is the most common allergen source in humid towns and cities and there is no easy way of removing it. Regardless of what advertisements may say, there is no vacuum cleaner, dust mite spray or dry cleaning that will completely eliminate the dust mite.

Depending on the severity of symptoms, and in the case of childhood asthma, eczema, chronic or recurrent sinusitis and middle ear infections with dust mite as a provoking trigger, the following advice may help.

The first room to tackle is the bedroom and in particular the bedding (points 1-4), where we spend the greatest number of consecutive hours, although some of the advice (points 5-10) can apply to other rooms in the house.

BEDDING

A combination of the following measures (1-4) is recommended.

- 1. Wash sheets and pillow cases weekly in water hotter than 55°C.** This will kill dust mites and wash away the allergen they produce. If you cannot wash in hot water, use a commercial product containing essential oils such as tea tree or eucalyptus oils, formulated to kill dust mites in cold water. If washing normally, **hot tumble drying** of washed items for 10 minutes after they are dry will kill mites. **Dry cleaning** is not as effective as it will kill house dust mites but won't remove the allergen they produce.
- 2. Cover mattress, pillow and quilt with dust mite resistant covers.** Suppliers include Allergend, Allerseach and Mite guard. Some health funds may provide a rebate for the purchase of these items. The covers must be washed every 2 months. If covers are not available, wash blankets and non-encased washable doonas every 3 months in hot water.
- 3. Remove sheepskin or woollen underlays.**

- 4. Remove all soft toys from the bed and bedroom.** Replace them with wooden or plastic toys which can be washed. If a soft toy is allowed it should be hot washed weekly. Freezing soft toys overnight kills mites but doesn't remove allergen.

OTHER MEASURES

- 5. If possible, consider replacing carpets with hard floors** such as wood, tiles, linoleum, concrete, where practical and affordable. Carpets can contain large amounts of house dust mite and animal allergens which cannot be completely removed by vacuuming. In general, dust mite levels are higher in more humid areas like the coast than in drier inland areas.
- 6. Damp dust or use electrostatic cloths** to clean hard surfaces (including hard floors) weekly.
- 7. Vacuum carpets weekly.** However, vacuuming increases the amount of house dust mite allergen in the air for up to 20 minutes. So if possible, ask someone else to do the vacuuming and wait for 20 minutes before re-entering the room. High efficiency particulate air (HEPA) filter vacuum cleaners may remove more allergen than other vacuum cleaners. Unfortunately, they still temporarily increase the amount of dust mite allergen in the air.
- 8. Reduce humidity** - have a dry and well ventilated house, adequate floor and wall insulation and Avoid using evaporative coolers (water cooled air conditioners) and unflued gas heaters, as these both release water into the air and can increase indoor dust mite and mold levels.
- 9. Windows** - venetian blinds or flat blinds are easier to clean than heavy curtains. Washable curtains or external shutters are other options.
- 10. Consider house dust mite avoidance measures** when building a new home.

Pets can be a major source of allergens in the home

Exposure to pets (eg cats, dogs, guinea pigs, horses, rabbits, mice, rats) at home or work can trigger allergic reactions in some people.

Cats and dogs are a major source of allergens in the home environment. The allergens come from the sweat glands in all cats and salivary glands in all dogs. Although the amount of allergen released can vary between breeds, there are no hypoallergenic animals or breeds.

As allergens are stuck to the hair and skin of pets, the allergens become airborne when the pet sheds their hair. The allergens can remain airborne for some time. Cat allergen is especially difficult to remove from houses. It can remain in the house for months after the cat is removed. Cat allergen can be found in places where cats have never lived. For example, it can be carried around on clothing to schools and offices.

The most effective method of allergen avoidance for people who are allergic to pets is removal of the pets from the home. For example, if there is no doubt that cat or other animal allergen is a cause of trouble then the best advice is for the animal to be removed from the home. It is an emotional decision but the health of the child should be a priority. Discussion about removal of the cat should never take place in front of the child, as they can suffer guilt feelings for a long time.

If pets cause only minor problems, keeping pets out of bedrooms and living areas may be a compromise. Even then, it may take months after pet removal before allergen levels are reduced. The effectiveness of some measures such as washing animals frequently and using HEPA air filters remains uncertain.

Dogs, guinea pigs, mice and rabbits are not as allergenic as cats and are more easily kept outside, but can still cause annoying and occasionally serious problems. Horse allergy is very serious and even animal hair on clothes may be sufficient to trigger asthma. Great care must be taken to shower and change clothes before returning to a home of a person allergic to horses. Birds may occasionally cause allergic symptoms. This is a different problem to pigeon fancier's lung which is a serious condition and requires complete avoidance.

Mould may also be a source of allergens in the home

Mould in the home and shows as mould, mildew or a musty smell. It is commonly found in bathrooms, refrigerators and in places with little air circulation such as walk-in and built-in wardrobes, and in bedrooms with ensuite bathrooms.

If you are allergic to mould, you may consider:

- removing visible mould by cleaning with bleach or other mould reduction cleaners
- ensuring adequate natural ventilation including the use of extractor fans
- sealing leaks in bathrooms and roofs
- clearing overflowing gutters and blocked under floor vents
- removing indoor pot plants (which promote mould growth)
- drying or removing wet carpets
- not working with garden compost or mulch.

Pollen can be hard to avoid

The height of the grass pollen season occurs between late September and Christmas and the major amount of pollen in the air usually occurs between 6.00 am and noon. Depending on the weather patterns, there may be an increase of pollen in the early hours of the morning.

Although pollen is known to be blown long distances on windy days, most pollen is deposited within a short distance of its source. The highest pollen counts occur on calm, hot, sunny days in late October, November and December, although in Brisbane the season is different and January is a particularly bad month. Pollen allergy in tropical areas mainly occurs during the dry season. However, thunderstorms can also cause problems. When pollen granules come into contact with water, starch granules are released that are small enough to be breathed into the airways, triggering hay fever and asthma in some people.

Avoidance of pollen is difficult but the following advice may help:

- Remain indoors (when possible) during pollen seasons, on windy days or after thunderstorms
- Avoid activities known to cause exposure to pollen, such as mowing grass
- Shower after activities where there is high exposure to pollen
- Use re-circulated air in the car when pollen levels are high
- Seek advice from your pharmacist or doctor about medications or treatments that will relieve your symptoms.

Further reading

Pollen allergy: http://www.allergy.org.au/aer/infobulletins/pollen_allergy.htm

Food allergy: http://www.allergy.org.au/aer/infobulletins/adverse_reactions.htm

Pet allergy: <http://www.allergy.org.au/month/pets.htm>

Asthma and allergy: http://www.allergy.org.au/aer/infobulletins/asthma_and_allergy.htm

Common myths about allergy and asthma exposed:

http://www.allergy.org.au/aer/infobulletins/myths_allergy.htm

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