

## ABOUT HOUSE DUST MITES

House dust mites are a common cause of asthma and allergic symptoms worldwide. It is the major cause of allergy in persons with year-round complaints of itchiness; sneezing; inflamed or infected eczema skin; watering/reddening eye; runny nose.

The allergy occurs because the immune system of allergy affected individuals, for reasons not fully understood, misinterprets a substance as a disease agent and begins producing a type of antibody against it, called immunoglobulin E (IgE). The IgE produced during this response binds to basophils in the bloodstream and to a similar type of cell called mast cells in the tissues. When the person again encounters the allergen, these basophils and mast cells release histamine, which results in allergic symptoms.

### What are dust mites?

Dust mites are microscopic eight legged creatures and are invisible to the naked eye. Their bodies are translucent making it even harder to see. They live in the fine layer of minute dust particles that continually settles on household items such as upholstered lounges, chairs, and carpets and particularly in warm, moist places where the humidity is high, like pillows and mattresses. They are attracted to these areas for food, and they feed on shed human skin scales and secretions, animal dander, house dust, fungal spores, pollen grains, plant fibres, and insect scales.

There are five stages in the life cycle of a dust mite; from the egg, the larvae stage, then two nymphal stages, and finally the adult. The whole life cycle from egg to adult takes approximately one month to complete, mature female mites can lay from 1-2 eggs per day. Adult mites can live up to two months but this is dependent on the levels of humidity and temperature of their surrounding environment.

Mites excrete partially digested food and digestive enzymes as faecal particles and each mite produces about 20 waste particles a day. These waste particles are so tiny and light they float easily in the air when the bedding is shaken or the carpet is walked on or vacuumed. When these floating particles are inhaled by a sensitive person, allergic symptoms result.



### How can dust mites be avoided?

It is virtually impossible to eliminate all dust mites from a household, but areas where mites tend to congregate can be targeted.

Raising temperature, decreasing humidity, and exposure to ultra violet light are lethal to existing dust mites. Some ways you may achieve these conditions are:

- Regularly cleaning and washing items that harbour them once a week, such as bed linen; pillows and curtains in hot water (above 60 degrees) and/ or exposure in a household clothes dryer.
- Expose mattresses and high risk furniture to sunlight for a few hours every month
- Where possible use a humidifier or air conditioner to reduce humidity to below 50%.

Along with the above ways of eliminating existing dust mites the following should be considered:

Intense vacuuming of carpets, mattresses and furniture is required once a week. A good quality vacuum cleaner is required

- Regular cleaning of dusty surfaces with a damp cloth
- All bedding should be washable and encased in manufactured 'plastic' products that aid the exclusion of mites
- Bedding and curtains should be selected to withstand frequent washing
- Sheepskins and underlays should be avoided
- Avoid soft upholstered furniture
- Keep surfaces uncluttered and dust free, dusting daily
- Where possible carpet should be substituted for flooring which is easily cleaned.

### How can a dust mite allergy be treated?

- The best form of treatment for dust mite allergies remains one of avoidance although this can be difficult.
- Use of medication such as anti-histamines, nasal corticosteroids or salbutamol as prescribed by your specialist.
- In some circumstances your specialist may commence Immunotherapy using mite extracts. This reduces your sensitivity to the house dust mite by using sublingual immunotherapy drops (extracts) containing a small amount of house dust mite over a long period of time. This causes the body to defend itself by producing protective antibodies. If your body produces enough of these antibodies, the next time you come in contact with house dust mites you may not have allergy symptoms.

### References

[https://en.wikipedia.org/wiki/House\\_dust\\_mite](https://en.wikipedia.org/wiki/House_dust_mite)

<http://medent.usyd.edu.au/fact/dustmite.html>