

House dust mites

FACT SHEET prepared by the Asthma and Respiratory Foundation NZ

Around 70-80% of asthma in New Zealand is associated with allergies. One of the most common allergens (substances which provoke an allergic reaction) is in the faecal waste produced by the house dust mite.

What are house dust mites?

House dust mites are microscopic creatures, less than half a millimetre long. They are present in most human environments, thriving in warm moist places such as mattresses, bedding and carpets, and feeding mainly on flaked-off dead skin. They are sensitive to dry conditions, changes in temperature, and ultra-violet light. Their faeces, which are small and light, get into the air easily and can provoke a strong allergic response when inhaled. If you suspect house dust mite waste may affect your asthma, you can ask your doctor for a skin prick test which can help indicate the likelihood of a substance as a trigger. For further information on skin prick and allergen testing see the fact sheet "Asthma and allergy" or visit our website asthmaandrespiratory.org.nz

What can I do to avoid exposure to house dust mite allergen?

In the Bedroom:

- Get bedding covers which provide a barrier to dust mite allergens. On average, we spend a third of our lives in bed, so measures to minimise exposure to the allergen are especially important in the bedroom. Look for evidence that the cover has been tested against dust mites and achieves a 90 percent efficacy rate; has strong sewn seams; totally enclose the bedding item; can be damp-dusted, rather than having to be removed frequently to be washed; and allows moisture out. Check to see that it has a water vapour permeability index of 40 percent or more.

If your asthma is triggered by house dust mite faeces, and you take only one step towards reducing exposure to them, this should be the one. It is the single most effective measure you can take.

Feather fill bedding is recommended over synthetic fill bedding. Recent New Zealand research has shown that feather bedding contains lower levels of fungal cell products, which may have a negative effect on asthmatics with respiratory problems. This is possibly because the material around the synthetic fill has a looser weave. However, effective barrier covers are still needed for both types of fill.

- Wash sheets and pillow cases in hot water – dust mites are killed at a temperature of 60°C, which is higher than most domestic machines. Although mites will not be killed by washing in a domestic machine the mite allergen will be removed by washing at this lower temperature
- Regularly wash or dry clean bedding, including pillows and duvets – at least once every six-eight weeks. Recent research has shown that prolonged hot tumble drying can reduce house dust mites in duvets and blankets.
- Discard all old and dirty mattresses, bedding, pillows and furnishings.
- Minimise the things you keep under the bed or on top of wardrobes.

- Sleep with windows open to reduce the amount of moisture in the bedroom from breathing.

Check out your vacuuming and dusting

- Regular and thorough weekly vacuuming won't eliminate dust mites, but can reduce the level of dust mite allergen as long as the carpet is not heavily worn. If you have asthma which is triggered by dust mite faeces have someone else do it for you. Use vacuum cleaners with a micro-filter, an "S-class" filter, or an HEPA ("High Efficiency Particulate Air") filter system. Machines without these are more likely to recirculate the fine dust mite faeces through their exhaust vent, back into the air. If your vacuum cleaner does not have a filter then open windows wide when vacuuming, so that allergens not retained in the cleaner and blown into the air are displaced by fresh air and leave the house to allow the dust to settle for half an hour. Avoid using vacuum cleaners which expose you to the contents when you empty them

Vacuuming upholstery, mattresses and pillows is also recommended.

Damp dust weekly using a damp (but not wet) cloth. Avoid using feather dusters. The barrier covers on mattresses and bedding can also be damp dusted once a week, but not removed.

In addition, for any young children

- Put soft toys in the deep freeze for at least 72 hours every four to six weeks, then wash (to remove the stored allergen) and thoroughly dry – hot prolonged tumble drying will help destroy house dust mites so washable soft toys that will not shrink in the dryer are recommended.
- Avoid using sheepskins (and especially avoid using them as infant bedding)
- Do not put young children on a bottom bunk.

Measures which are not currently recommended, as there is not sufficient evidence to indicate that they are effective in reducing house dust mite allergen in New Zealand homes, include air filters, chemicals, and dehumidifiers.

Where do I get occlusive/barrier covers?

For local supply information or to purchase contact your local asthma society or Air Flow Products on free phone: 0800 AIRFLOW (247 3569)

The Asthma and Respiratory Foundation NZ can help you

The Asthma and Respiratory Foundation NZ is New Zealand's not-for-profit sector authority on asthma and other respiratory illnesses. We advocate to government and raise awareness of respiratory illnesses, fund research for better treatments and educate on best practice.

Check out our comprehensive website at asthmaandrespiratory.org.nz

The Asthma and Respiratory Foundation NZ would like to acknowledge AgResearch for the information contained in this fact sheet.