

# Allergy and Immunology

## HOUSE DUST MITES AND ALLERGIC DISEASE

### **What are House Dust Mites?**

House dust mites are microscopic insects invisible to the naked eye. They are everywhere in our environment. Mites are found in bedding, carpets, soft furnishings and clothing. Mites feed off skin flakes that we all shed continuously. The allergen that may cause problems for allergic people is present in the mite faeces. Dust mites are one of the most common allergens.

### **How can we avoid house dust mites?**

House dust mites cannot be totally eliminated from our surroundings. A major site of exposure to house dust mite allergen is in the bedroom.

Since children spend up to 10 hours each day sleeping, it is best to focus dust mite avoidance measures on the bed.

Remove soft toys, and cushions from the bedroom

**Washing of bedding weekly in hot water** (>60°C) will kill dust mites and wash away the allergen that they produce. If you cannot wash in hot water, use a commercial product containing 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 dust mites. Dry cleaning is not as effective as it will kill house dust mites but won't remove the allergen they produce.

Regular vacuuming may help reduce mite allergens in carpets or rugs but this is not very efficient. Vacuuming alone without undertaking other measures will not reduce levels significantly.

Having non-carpeted flooring and removing soft furnishings such as curtains, soft toys and sheepskins reduces the amount of house dust mite allergen.

Methods that do not help include chemical sprays, air filtration, negative ion generators and "allergen-free" products. Attempts to kill dust mites with acaricides are not very successful and are currently not recommended.

Mattress, doona and pillow covers may reduce allergen exposure in the bed. Make sure they are removable and machine washable. The protector should entirely encase the mattress. Commonly available brands of covers are Allergend® and Mite Guard®. Mattress protectors which do not completely encase the mattress are not effective and should not be used.

Even though these measures may reduce the amount of house dust mite in the home environment it is not clear that this reduction will improve the symptoms of allergic disease.

### **Should we remove our carpets?**

The effects of removing carpets are controversial and this is not generally recommended in the first instance. Removing carpets is expensive and a major imposition to most families.

### **What about Air filters and Acaricide sprays?**

These are not recommended. Air filters do not alter dust mite levels in the environment as dust mite allergen does not remain airborne for any length of time.

Acaricide sprays are chemicals that are toxic to dust mites. They only reduce dust mite numbers for short periods of time and must be applied frequently. They do NOT reduce levels of the dust mite allergen already present in the bedding.

### **What do trials of house dust mite avoidance show?**

There have been a number of trials of house dust mite avoidance measures which in some but not all cases have suggested that symptoms of asthma, eczema and rhinitis can be improved. The usefulness of these house dust mite elimination measures should be discussed with your doctor.