

In keeping with its commitment to supporting worthwhile causes, Dunlop Foams has formed a corporate partnership with Asthma Foundations in Australia that is providing financial support and significant high profile promotion of their work.



For more information on asthma, contact your local Asthma Foundation office on Freecall 1800 645 130 or visit www.asthmaaustralia.org.au

An Internet site that contains comprehensive information on allergies is maintained by the American Academy of Allergy, Asthma and Immunology on: www.aaaai.org/index.html

Dunlop Foams also supports the National Asthma Council www.nationalasthma.org.au



Dunlop Foams

Dunlop foams are manufactured under strict environmental controls and without the use of ozone-depleting CFCs.

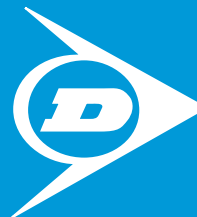
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Ultra-Fresh® is a registered trademark of Thomson Research Associates

Asthma, Allergies and Dust Mites...

Steps to a healthier home™ environment



DUNLOP FOAMS
COMFORT THAT LASTS

Every day science is revealing more and more about the effects of the environment on our health

In fact, recent evidence has shown that the home environment can be a significant contributor to health problems.

It seems that the more comfortable we make our homes by insulating, carpeting, furnishing and sealing off from the outside world - as well as bringing pets into the home - the more we may create health hazards.

We are creating environments in which the triggers of serious health problems can proliferate: moulds, mildew, fungus and bacteria and perhaps the greatest culprit of all, the house dust mite. This has been proven to be a significant trigger for asthma, hayfever, rhinitis and eczema.

Dunlop Foams has produced this booklet to help increase awareness and understanding, and to suggest ways to minimise these problems.

The facts are that in Australia:

- 1 in 4 children,
- 1 in 7 adolescents and
- 1 in 10 adults suffer from asthma symptoms;
- over 400 hundred people die from asthma each year;
- asthma is the major cause of hospitalisation for children;
- asthma is estimated to cost the community over \$580 million annually;
- the prevalence of asthma is relatively high, by international standards.

Research in Australia and around the world shows that up to 85% of people with asthma are allergic to the house dust mite. This allergy not only has a significant effect on the development of asthma and the severity of its symptoms, it has also been shown to be a trigger for hayfever, rhinitis and eczema.



Asthma:
a growing
health problem

Dust mites: the ugly facts

Dust mites, and the role they play in respiratory allergies, are now better understood.

In 1999, the Australian Government made asthma a National Health Priority, recognising that asthma is a significant problem.

Research shows that:

- 25% of all allergies are due to dust mites
- a high proportion of asthma symptoms are triggered by dust mites
- 5% of the population is allergic to moulds.

Dust mites are of microscopic proportions. These tiny animals (close relations to ticks and spiders) vary in size from 0.2 to 0.5 of a millimetre, which means that up to 6 mites could fit on the head of a pin! But although they are usually almost invisible, they are found in homes everywhere (particularly in coastal regions) in the dust that accumulates in bedding, carpets, furnishings and even clothing. They multiply rapidly as soon as the temperature reaches 20°C and the relative humidity exceeds 70%.

Well insulated houses and in particular, humid micro-environments such as beds, present a particularly favourable habitat for the breeding of dust mites.

To give you an idea of the scale of the problem, up to 2,000,000 mites can live in a mattress and up to 200,000 in a single square metre of carpet.

Each dust mite has 3 claws and 2 pincers on each of its 8 legs, making them extremely difficult to dislodge during normal vacuuming.

Dust mites feed on the minute skin particles that humans and pets shed in clothes, on bedding, seats etc. In order to digest these skin particles dust mites need the help of moulds, which also represent a health threat.

Dust mites are most prevalent in bedrooms in mattresses, pillows, carpets and bedding as well as other soft household furnishings such as lounge suite cushioning.

The health threat posed by dust mites comes from their faeces (droppings) which contain the allergens. The droppings are released into the air we breathe along with bacteria and spores from moulds and fungi, which also collect in house dust.

Dust mite allergens are disturbed by vigorous activity such as vacuuming or making the bed. They rise two to three feet in the air and stay there for 20-30 minutes before falling. Children are more susceptible to asthma if exposed to these allergens as babies.



Taking steps to a healthier home™ environment

Asthma can usually be managed well with preventer and reliever medications and a written asthma action plan. However, if your doctor has helped you work out which allergens trigger your asthma, there are some avoidance strategies you can use in the home to minimize your exposure to these allergens:

Dust Mites



- Weekly hot washing (above 55°C) of bed linen in soapy water will kill dust mites. Dust mite covers also require a regular hot wash and PVC covers should be wiped down regularly with a damp cloth. Always check manufacturers' instructions.
- Expose blankets, quilts and bedspreads to direct sunlight for several hours each week if possible and wash every 2-3 months as described above. Choose pillows and quilts which can stand this treatment.
- Small items and fluffy toys which should be kept out of the bedroom can be put in a plastic bag and frozen for 4 hours every fortnight. This kills the mites but doesn't remove the allergens.
- Dust all surfaces 2 or 3 times a week with a damp or electrostatic cloth.
- Ensure that rooms are light and well ventilated.
- Scatter rugs should be put out in the sun for 3 hours every month and washed if possible. Fitted carpets and soft furnishings should be vacuumed 2 - 3 times a week with a vacuum that has a good filter system (triple internal, HEPA or replaceable electrostatic) or one that is ducted outside.
- Avoid handing down old, and possibly mite infested, mattresses or upholstered furniture to other family members, particularly where babies or young children could be users.

Pet Allergens

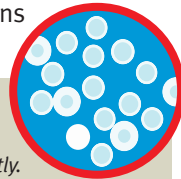
Some people are allergic to dander (skin cells) of animals. They may react when they touch the animal or simply by being in the same room.



- For the more sensitive it may be sensible to minimise contact with pets.
- Follow the steps on carpet treatment already outlined
- Keep pets out of the house if possible and definitely out of bedrooms.
- Avoid water filtered vacuum cleaners as pet allergens are water soluble and can be sprayed out through the filter.

Moulds

Moulds are tiny fungi which form in damp and dark places. Mould forms in laundries, bathrooms, drip trays of fridges, the top soil of indoor plants and gutters full of leaf litter. It can be found on walls, under wallpaper, in cupboards and wardrobes, on clothing and on food. Moulds produce a musty odour and millions of spores which become airborne easily.



- Ensure your house has good ventilation and an intact damp-proof course.
- Clear out gutters and keep yards free of weeds.
- Clean out the drip tray of the fridge frequently.
- Throw out old food from the fridge.
- Vent air flow from laundry driers to the outside.
- Wash and air clothing and shoes frequently.
- Put indoor plants outside regularly and change the top soil.
- Clean evaporative air conditioners annually.
- Treat any mould growth with a bleach solution - do not inhale the fumes.

Now the bad news for... dust mites, bacteria, moulds and mildew

Implementing the strategies outlined in this brochure will go a long way to controlling the causes of health problems in the home.

In the case of soft furnishings and mattresses for example, it's simply not a practical proposition to pop them into the washing machine or the freezer.

Of course, you can clean the surfaces, but this won't get dust mites, bacteria, moulds and mildew that live and multiply deeper down in their cosy and protected environment.

Laboratory tests show that foams, fibres and fabrics treated with Ultra-Fresh®

at the manufacturing stage provide effective control of house dust mites as well as the growth of bacteria, moulds, mildew and fungi, important triggers for allergic and asthmatic responses, particularly in children.

Ultra-Fresh® is a proven anti-microbial compound that has passed the most stringent international testing procedures for efficacy and safety.

In fact, Ultra-Fresh® has been performance proven in many applications for almost 50 years.

Products treated with Ultra-Fresh®:

- have lasting hygienic freshness
- resist deterioration, discolouration and degradation caused by fungi and bacteria
- have longer life than untreated products
- provide effective odour protection.

Ultra-Fresh® has been proven effective against all top 15 bacteria indicated by the USA Centre for Disease Control, and several independent studies have been undertaken to assess the effect of Ultra-Fresh® on dust mite colonies.

Controls Dust Mites



Controls Bacteria



Controls Mould



Controls Mildew



Ultra-Fresh®
TREATED



Laboratory tests show Ultra-Fresh® is effective against a wide range of micro-organisms - including *Staphylococcus aureus* (Golden Staph)

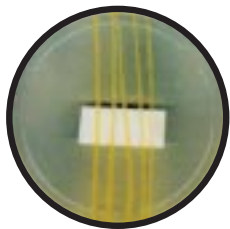


Products treated with Ultra-Fresh® help reduce the spread of infection by controlling bacteria and fungi. Tests have shown that Ultra-Fresh® inhibits a wide range of micro-organisms including:*

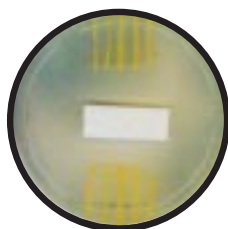
Bacteria

- *Bacillus cereus*
- *Bacillus subtilis*
- *Enterobacter aerogenes*
- *Escherichia coli*
- *Klebsiella pneumoniae*
- *Proteus vulgaris*
- *Pseudomonas aeruginosa*
- *Pseudomonas fluorescans*
- *Salmonella choleraesuis*
- *Staphylococcus aureus*

Untreated



Treated with Ultra-Fresh®



Fungi

- *Aspergillus niger*
- *Candida albicans*
- *Chaetomium globosum*
- *Penicillium funiculosum*
- *Trichoderma viride*

Untreated



Treated with Ultra-Fresh®



The conclusion from all independent research and evaluation of Ultra-Fresh® is that by inhibiting bacterial and fungal growth and dust mite proliferation, it assists in the prevention of allergies, respiratory tract disorders and asthma. By incorporating Ultra-Fresh® into the

manufacturing process, manufacturers have taken an important first step in protecting the home environment from hidden health hazards. If you care about the health and wellbeing of yourself and your family, it's worth looking for products treated with Ultra-Fresh®.