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## **Appendix 1: Patient Information Sheets: Pull-Out Sheets of Practical Allergen Avoidance Advice**

### **House Dust Mite Allergen Reduction**

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*Aims to reduce the amount of mite allergens in the home*

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*Major Strategies (WHO Strength of Recommendation A)*

- Wash bedding regularly (every 1–2 weeks) at 55–60°C, if possible, to kill mites (washing with cold water removes 90% of mite allergens; washing at 55–60°C kills mites but does not denature mite allergens)
- Wash pillows and duvets in hot water 55–60°C, and encase pillows and mattresses with documented protective coverings
- Latin-American Network of Human Genetics Sufficient ventilation of dwellings to decrease humidity; aim to reduce indoor relative humidity to below 50% and avoid damp housing conditions

*Additional Strategies*

- Use a good quality vacuum cleaner (if possible one fitted with HEPA filter)
  - Use a damp duster when dusting and cleaning surfaces
  - Replace wall-to-wall carpets with linoleum or wooden floors which can be wiped clean
  - Remove/reduce curtains and soft furnishings in the bedroom
  - Replace fabric-covered seating with leather or vinyl
  - Remove soft toys from the bedroom; wash them at 55–60°C or freeze them (in a kitchen deep-freezer) to kill house dust mites
  - Do not allow pets in the bedroom
  - House dust mites are transparent and have no natural protection against sunlight; exposure of mattresses, rugs and carpets to direct strong sunlight (for more than 3 h) kills mites and can be used in appropriate regions.
  - A hammock, easily washable and susceptible to air and sun drying, is used in many areas of the world
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## **Pollen Avoidance**

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*Provides mechanical barriers to pollen contact*

- Keep windows closed at peak pollen times, e.g. in the evening when airborne pollens descend to lower altitudes
  - Wear glasses or sunglasses to prevent pollens entering the eyes
  - Consider wearing a mask over the nose and mouth to prevent inhalation of pollens at peak time
  - Do not cut grass yourself
  - Keep windows closed when the grass has been mown
  - Use air-conditioning if possible
  - Install car pollen filters if possible
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## **Pet Allergen Avoidance**

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*Reduces the amount of pet allergen indoors*

- If possible, find another home for the pet, and do not bring new animals into the home
  - Exclude pets from bedrooms and if possible keep pets outdoors
  - Vacuum carpets, mattresses and upholstery regularly, if a power source and equipment are available
  - Change clothes before going to school/work if you have attended your horse/cat/dog
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## **Cockroach Allergen Avoidance**

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*Removes the cockroaches, eliminates the places and conditions in which they can live, and removes allergens*

- Eradicate cockroaches with appropriate insecticides
  - Seal cracks in floors and ceilings
  - Remove sources of food
  - Control dampness
  - Scrub floors with water and detergent to remove allergens
  - Bedding, curtains and clothing can be contaminated and must be washed
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## **Mould Allergen Avoidance**

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*Prevents mould from growing, and mould spores from becoming airborne during mould removal*

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### *Indoors*

- Use dehumidifiers in the home if relative humidity is constantly high (above 50%)
- Ensure heating, ventilation or air-conditioning systems are properly maintained
- Use 5% ammonia solution to remove mould from bathrooms and other contaminated surfaces
- Replace carpets with hard flooring; replace wallpaper with paint
- Repair indoor water damage immediately

### *Outdoors*

- Avoid cutting grass in late summer when mould spores are present in decaying vegetation
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## Severe Reactions, Allergic Anaphylaxis

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*Aims to prevent contact with the allergens that induce anaphylaxis in susceptible individuals, and to provide strategies for dealing with episodes of allergic anaphylaxis*

- Carry an epinephrine auto-injector and know how and when to use it; always have a spare auto-injector available
- Carry an emergency pager or mobile telephone to call assistance
- Carry/wear MedicAlert information
- When travelling abroad, carry an anaphylaxis-alert card in the language of the country being visited, detailing food, drug, and insect allergies
- Avoid stinging insects, and learn how not to attract them:
  - do not wear perfumes or bright colours
  - do not pick ripe fruits, and avoid refuse bins and compost heaps which attract insects
  - keep car windows closed when driving
- Avoid allergenic ingredients in ready-made food by learning how to interpret ingredient lists
- If eating out check with the chef that allergenic foods/oils are not used in dishes; explain the significance of avoiding allergenic ingredients

*In the school environment*

- Ensure that parents, teachers, fellow students, and school administrators are aware of the necessity to provide a safe environment for children at risk for anaphylaxis to foods or insect stings
- Create a no-food area of the school playground
- Identify a supervisor to carry a telephone for emergencies

*In the occupational environment*

- Avoid contact with airborne or contact allergens; for example, airborne latex can be avoided by co-workers using powder-free latex gloves
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