

ASTHMA

Children with asthma have extra sensitive airways. Asthma symptoms can be started by many things in the environment and these triggers are unique to each child. Some common triggers of asthma symptoms are cigarette smoke, perfume, strong odors, and cold airs. Other environmental factors that can affect children with asthma include weather and climate changes, pollens, house dust, molds, and animals.

Try to limit your child's contact with these triggers, especially where the child spends the greatest amount of time, such as at home and school.

SMOKING

Pipe, cigarette, and cigar smoke are harmful to children and adults in general, but the smoke poses a special problem for all children with sensitive airways. Smoking in the home of a child with asthma can be life threatening and is unacceptable.

POLLENS

Lightweight airborne pollens from grasses, weeds, and some trees can be carried for miles. These pollens strike the eyes, nose, and airways, triggering the symptoms of asthma. Flower pollens are heavier and do not travel as far. Although it is difficult to avoid pollens totally, some suggestions are:

- Keep the child's bedrooms windows shut and use central air conditioning during the allergy season. Bedroom windows should be kept closed during the early morning hours, when weed pollen counts are highest. If a room air conditioner is used, recirculate the air rather than pulp outside air indoors. Wash or change air filters every two weeks.
- After working or playing outside during high-pollen season, your child should shower and change clothes immediately. Dirty clothes should be kept outside the sleeping area.
- Mow the lawn frequently to limit the amount of pollen released. 3

MOLDS

Molds are found year-round throughout the house, outdoors, and in certain foods, but especially in areas of high moisture. Molds produce lightweight spores that can travel for relatively long distances on air currents in the house.

Bathrooms and damp basements are two common areas for mold growth, but swamp coolers, humidifiers, and the refrigerator drip pan and crisper also promote growth of molds. Here are some suggestions to decrease mold growth:

- Light and ventilation significantly deter mold growth. Thoroughly clean tile, floors, shower curtain, and tub surround and clean under plumbing fixtures on a routine basis. Use a fungicide such as dilute household bleach (1 cup of bleach to 10 cups of water) if necessary.
- For painted surfaces, enamel paint inhibits mold growth more effectively than latex paint. An antifungal substance can be added to paints to inhibit growth even more.
- Dehumidifiers deter mold growth in damp areas such as basements. Areas that become damp from hard rains are ideal for mold growth and should be fixed.
- Evaporative coolers, vaporizers, and humidifiers with a reservoir are ideal places for mold and bacteria to grow. When these appliances are operating, molds and bacteria can

- be sprayed throughout the house. In general, these appliances are not recommended. If you do use one, empty the reservoir daily, clean it with soap and water and dry it thoroughly. The reservoir should be refilled just before use.
- Greenhouses, compost piles, and homes with many plants also are frequently sources for molds. Cover the potting soil of houseplants with foil to decrease spreading of mold spores.
 - Foam pillows and mattresses can be sites for mold growth. Replace foam pillows with washable polyester ones, and cover foam mattresses with nonporous covering (for example, plastic).

HOUSE DUST

House dust is made of many things, including dirt, insect debris, dust mites, animal proteins, human skin fragments, food crumbs, bacteria, fungi, and other materials. House dust collects on every item in the home, including mattresses, upholstered furniture, clothes, rugs, drapes, and stuffed animals.

It is very difficult to avoid house dust, but the following recommendations will decrease your child's contact with house dust:

- Avoid clutter and dust catchers, particularly in the bedroom. These include wall decorations (pictures, pennants, and fabric wall coverings), drapes, and venetian or miniblinds.
- Give your child washable, "nonallergenic" stuffed toys when possible. Store ordinary toys, dolls, and play equipment outside the bedroom or in the closet.
- Keep the bedroom closet door closed. Vacuum the closet floor often. Store only in-season clothes in the closet.
- Bare floors are ideal. Carpeting can be tolerated if you vacuum frequently and thoroughly. Ideally, you should vacuum and dust early every day to let dust settle before nap or bedtime. Be sure to clean under the furniture and in the closet.
- Mattresses and box springs should be encased in allergen-proof coverings. Zippers or openings should be taped. Use only polyester pillows and wash them several times per year. Bed linens and cover should be washable cotton or synthetic fibers. Avoid use of feather, wool, kapok, or foam products.
- Forced-air furnaces should have a dust-filtering system. Filters should be changed every two weeks during the heating season. Filters can be cut to cover room vents if the central furnace filters are not changed every two weeks. Cold and warm air ducts can be professionally cleaned at least every four to five years.

ANIMALS

A substance in animal saliva, dandruff, and urine causes allergic reactions in many people. Children may be more sensitive to one type of animal (such as cats) than another. All furred animals have the potential to cause allergic reactions.

Removing a family pet is very difficult, but if your child has significant sensitivity, it may be necessary. Once the pet is removed from the house, animal residue may remain in the house for months. Thorough cleaning is essential, with particular emphasis on stuffed furniture, rugs, drapes, and the heating/cooling system.

If a child with limited animal sensitivities has a pet, the pet should live outside and NEVER be in the child's bedroom.

Written by the Asthma Task Force at The Children's Hospital, Denver.