

ASTHMA TRIGGERS AND THE ENVIRONMENT



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ASTHMA CAN BE CONTROLLED

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ASTHMA TRIGGERS AND THE ENVIRONMENT

COMMON ASTHMA TRIGGERS

Generally, there are five different categories of asthma triggers:

1. Allergens

- Dust/dust mites
- Furry or feathery animals
- Pests and pest droppings
- Molds and mildew
- Pollen
- Food allergies



2. Irritants

- Fumes, odors & strong scents
- Tobacco smoke



3. Viral illnesses (colds and flu)

4. Exercise

5. Weather and air pollution



For children with asthma, the airways are often inflamed and overly sensitive to certain things that wouldn't usually bother people who do not have asthma. These can be substances, events or activities. There are many allergens and irritants that will start or "trigger" signs and symptoms of asthma, or make the asthma worse. Avoiding triggers will reduce the frequency of asthma problems. One way to prevent asthma episodes is to help each child avoid the things that are known to trigger his or her asthma. Removing or reducing triggers in the child's environment helps the child avoid asthma episodes, and can reduce the amount of medicine that a child needs to manage asthma.

The irritating effect of triggers can be cumulative (add up), that is, a minor trigger that does not cause symptoms by itself, will cause them if exposure to another trigger occurs at the same time. Since the effect of a trigger may last two weeks, it may be difficult to anticipate just when triggers will cause an episode.

There are many things that can be triggers. Each child has his or her own triggers. Not all children with asthma have the same reaction to triggers. A child's triggers may change from season to season. **It is important to know the triggers for each individual child.** Parents can often identify the individual child's known triggers. Frequent communication with parents about the child's asthma signs and asthma triggers is important because new triggers may be identified. Keep a current list of each child's asthma triggers. Update records often (you can ask parents to review the triggers lists every few months).

All childcare and preschool staff should be informed of the things that may trigger an asthma episode for a child in their care. Tell parents about any things that you observe that might be triggers.

Eliminate as many triggers as possible. Managing the environment in the preschool or childcare setting is an important way to help children with asthma lead active lives. Eliminating or reducing allergens and irritants in the indoor and outdoor spaces used by the children will help to make the air better for everyone.

Many common asthma triggers are found in indoor air where young children spend most of their time. Improvements in indoor air quality can often be achieved with a small amount of effort and very little cost. Careful cleaning can help control many allergens and is one of the easiest steps that can be taken to help reduce allergy or asthma episodes. Close attention to housekeeping and maintaining the best possible air quality may involve everyone on the staff. Be sure to use non-toxic cleaning agents.

Both naturally occurring asthma triggers and environmental hazards such as pesticides, lead, exhaust fumes, and other chemicals occur out of doors. Pay attention to what can be eliminated or avoided outdoors. All young children are extremely vulnerable to exposures to any contaminants and irritants present on the floor, carpets, grass, or dirt.

ALLERGENS

Many children with asthma are sensitized to a variety of allergens. An allergic response can trigger an asthma episode. Dust mites, animal dander, cockroach droppings, molds, pollens, and certain foods often cause an allergic reaction.

Dust Mites

Dust mites are tiny bugs too small to see. Dust mites live in carpets, bedding, upholstered furniture and stuffed toys. Many children are allergic to the microscopic crushed skeletons and droppings of dust mites.

What to do?

- Keep the dust from accumulating inside the care setting.
- Fabric items (stuffed toys, blankets, costumes, etc.) should be washed in hot water (130 degrees) weekly. Put non-washable stuffed animals in the freezer overnight once a week to kill dust mites.
- Avoid stirring up the dust into the air, especially when children with asthma are present.
- Dust often, using a damp cloth. Wipe-up dust where ever it is found (blinds window shades, etc.).
- Clean hard surfaced floors with a damp mop daily, not a broom.

- Avoid wall-to-wall carpeting. This is a breeding ground for dust mites. Use washable throw rugs on hard-surface floors, such as hardwood, tile, or linoleum.
- If there is carpeting, vacuum when children are not present.
- Avoid letting children lay their faces or blankets directly on the carpet.
- Change heating and air conditioning filters regularly - monthly if possible.
- Store toys and books in enclosed bookcases, closed cabinets, containers or bins to reduce the accumulation of dust.
- Replace upholstered furniture with furniture that can be wiped clean.
- Dust covers for mattresses and pillows are recommended for children napping in beds at the center or care home.



Furry & Feathered Animals

Any warm-blooded animal with fur or feathers including gerbils, birds, cats, dogs, mice, and rats may trigger asthma. Animals with fur or feathers carry allergens in their dandruff (from their skin), saliva, and urine that may cause allergic reactions or trigger asthma episodes. Pet dander can be carried on the clothes of other children and staff. Some children with asthma are sensitive to this second-hand exposure. Cat dander can be detected in a house months after a single visit.

What to do?

The best thing to do in the preschool or childcare setting is to find another home for furry or feathered pets. If removing the animals is not possible, then:

- Keep furry and feathered pets outside of the childcare area or class rooms
- Do not let pets roam in the play areas
- Clean cages regularly; avoid circulating allergens through the ventilation system

Consider non-furry pets such as fish, hermit crabs, or raising and releasing butterflies.



Pests



The dried and crushed body parts and droppings of rodents and cockroaches contain allergens. Even small particles of dead cockroaches settle in dust and end up in the air we breathe; this can trigger an asthma episode. Pests are attracted to food, water and shelter (clutter and cardboard).

What to do?

Try not to let pests in and don't encourage any to stay.

- Look for signs of pests to stop them early.
- Do not leave food, water, or garbage exposed. It is important to store all food in tightly sealed containers.
- Remove pest pathways and shelters; repair screens, seal cracks in the walls, check bags and boxes for pests before bringing them into the childcare setting.
- Clean all food crumbs or spilled drinks right away and clean eating areas daily.
- Repair leaky pipes and dripping faucets so pests won't have a place to drink.
- Develop and implement a pest management plan to help keep pests away.
- Use poison baits or traps only if you can place them out of the reach of children. Avoid chemical sprays, which are very toxic to children and can trigger an asthma episode.

Molds & Mildew

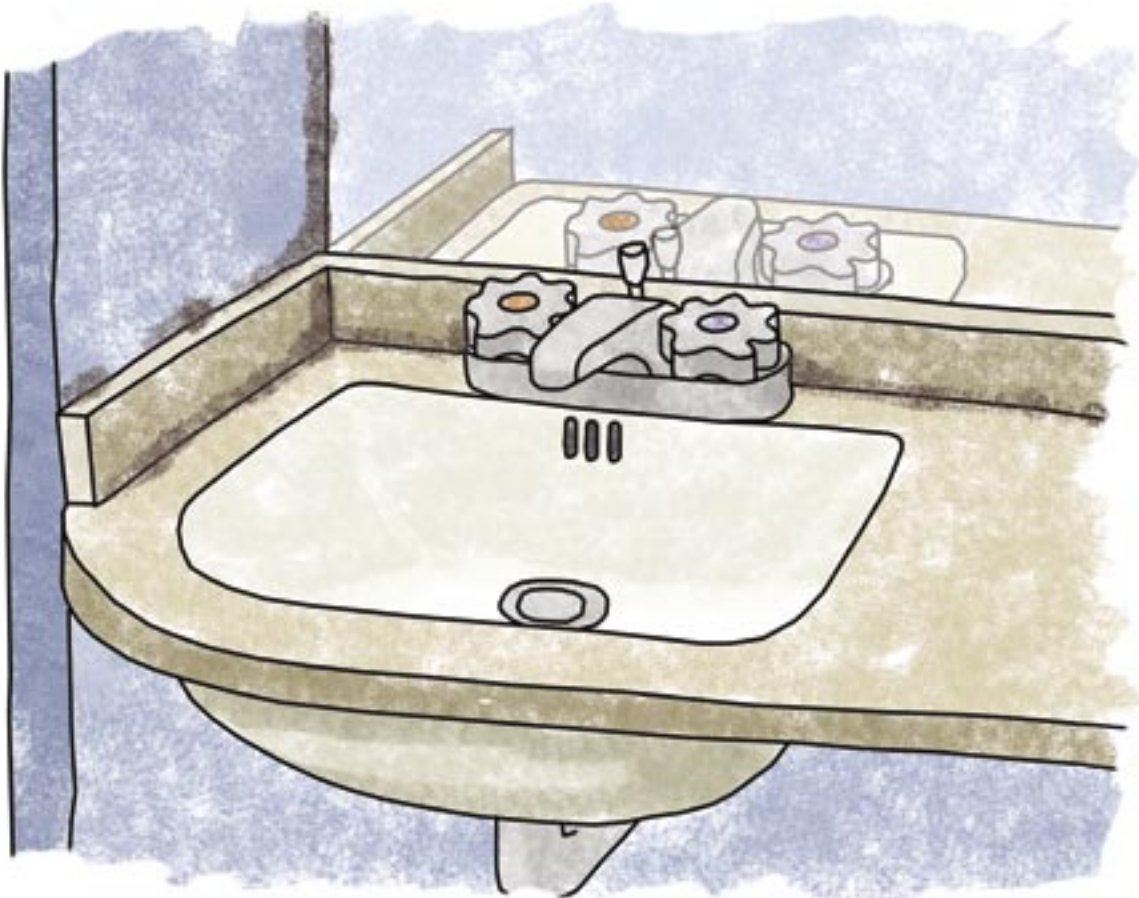
Molds and mildew are tiny plants that grow where it is warm and damp. They produce microscopic spores that are carried in the air and can be harmful to people with allergies and asthma. Wherever they land, spores start growing new mold as long as there is warmth and moisture. Molds are often found under carpets and in dark places, under sinks, on window frames and sills, and on wet appliances like air conditioners, humidifiers, refrigerators, and evaporative swamp coolers. Moisture contributes to mold growth.

What to do?

If mold is a problem, clean up the mold and get rid of the excess moisture. Excess moisture is a result of water leaks, condensation, and excess humidity. Mold growth is likely to reoccur unless the source of the moisture problem is fixed.

- Use exhaust fans or open windows in kitchens and bathrooms to cut down on moisture.
- Do not use humidifiers or vaporizers – they promote mold growth and actually spread the mold throughout the room.
- Store wet clothing and boots outside of the activity space.
- Houseplants can be sources of dampness and mold. Limit the number of plants inside and do the gardening outdoors.
- Cleaning to rid the room of mold should be done when children are not present. Wash off hard surfaces with cleaning solution. Follow label directions on cleaning products.

- Avoid spreading mold spores into the air.
- Absorbent materials such as ceiling tiles with mold may need to be replaced.
- Mold, mildew, and germs grow in wet or damp carpet. Carpets that have been wet or damp for more than 24 hours should be professionally cleaned and dried when the children are not present.
- Clean and service heating, air conditioning and ventilating systems, including evaporative coolers, regularly.



Pollen

Pollen is a common allergen. It comes from trees, flowers, grasses, and weeds. Pollen floats in the air and can land and collect on any surface, even inside the home or school.

What to do?

- Use smooth blinds or shades instead of fabric curtains. Wipe blinds weekly with a clean damp cloth. Clean and dry windows and sills regularly. Clean ceiling fans and other fixtures monthly using a clean damp cloth. If you use curtains or drapes, have them washed regularly.
- Use washable rugs at doors to catch pollen and dust. Wash rugs weekly.
- Check the daily pollen count in the newspaper, on the radio or television. On days when there is a lot of pollen in the air, have the children play indoors, especially in the afternoon when pollen count is the highest. Keep windows closed and if possible, use air conditioning on days with high pollen counts.
- Keep outdoor yard and play areas clear of fallen leaves, compost piles, and cut grass. Avoid cutting grass or blowing leaves when children are present.



Food Allergies

There are many types of food allergies, and some can be asthma triggers. Allergies are specific and unique to the individual child. Some more common foods that may cause allergic reactions are: shellfish, milk, eggs, wheat, peanuts, and corn. Some very intense allergies to certain foods can cause serious breathing problems that are different from asthma and may be life threatening. Some children have food allergies but do not have asthma, their allergic response may be skin rashes, hay fever or intestinal problems.

What to do?

- A child's health history and asthma action plan must indicate any known food allergies.
- Make sure that the child does not eat the foods they are allergic to.
- Have parents list all known food allergies and the types of food products that may contain these foods. Make sure the foods are not served to the child.
- Be sure that food preparation includes checking labels on the ingredients in all food products to verify that foods prepared for the child with asthma are free of the ingredients that cause their allergic responses.

- Adjust menus and snack plans to be able to serve foods to all the children without singling out the child with asthma. If children with asthma and food allergies cannot partake of the same foods as the other children, try to make different foods appear comparable, and help the child with allergies to not feel guilty or unhappy just because they need separate foods.
- Be alert when any foods are present that may cause trouble for a child with food allergies. They should not eat even a tiny bit of that food.

IRRITANTS

Irritants are chemical molecules and tiny particles that float in the air that cause a number of serious health problems in children and worsen asthma attacks. Reducing exposure to irritants can contribute to a favorable learning environment for children and comfort for staff and children.

Fumes, Odors & Strong Scents

Strong fumes, odors, cleaning products, hair sprays, room deodorizers and perfumes are examples of irritants that can trigger an asthma episode.

What to do?

- Avoid wearing or using hairspray, perfumes, and powders around the children. Talcum powder is not advised around adults and children with asthma due to powder's irritating effect when inhaled.
- Avoid using cleaning products or air fresheners that have strong odors.
- Clean when the children are away. Open windows while cleaning.
- Avoid arts and craft materials with fragrances and fumes. Keep chalk dust to a minimum.
- Air out rooms with exhaust fans. Gas and smoke from stoves, fires and heaters can be serious irritants.
- Keep windows closed when the air outside is full of exhaust fumes from vehicles or factories, as well as on days when air quality is low, and pollutants are high.

Tobacco Smoke

Smoke from cigarettes, pipes, or cigars and secondhand smoke (the smoke breathed out by the smoker) irritates the lungs and can trigger an asthma episode. The leftover smell of smoke can trigger asthma.

What to do?

- Provide a smoke free childcare environment.
- Smoking is not permitted inside the childcare area or around children.
- Do not allow smoking outside within 20 feet of doors, windows or the ventilation system of the facility. If smoking outdoors, wear an overcoat and remove it when coming indoors, since smoke can also cling to clothing.
- No smoking in vehicles that are used to transport children. The smell of tobacco smoke can last for weeks in a car and can trigger an asthma episode.
- Encourage parents/guardians to reduce their children's exposure to second hand smoke. Encourage parents/guardians to quit smoking. For help to quit smoking, call:



California Smokers' Helpline
1-800-NO-BUTTS

VIRAL ILLNESSES, COLDS AND FLU

Respiratory infections and illnesses, colds and flu can cause asthma flare-ups. Viruses and bacteria that cause these common illnesses can increase inflammation and irritation of the airways in the lungs. Respiratory infections are the most common trigger of asthma in young children. Help children avoid them.

What to do?

- Reduce the spread of colds and upper respiratory infections by encouraging staff and children to wash their hands often.
- Keep children with asthma away from people who have colds or flu.
- Encourage staff and children not to come to the care setting if they are ill. Establish and enforce illness exclusion policies.
- Annual flu shots are recommended for children with asthma who are over 6 months of age.
- Implement effective housekeeping policies to reduce the spread of germs.



EXERCISE

Exercise is good for children with asthma. However, vigorous exercise or active play can sometimes trigger an asthma episode. As long as a child's asthma is well controlled, he or she can usually participate in a full range of physical activities. Some children may be prescribed asthma medicine to be used prior to exercise.

What to do?

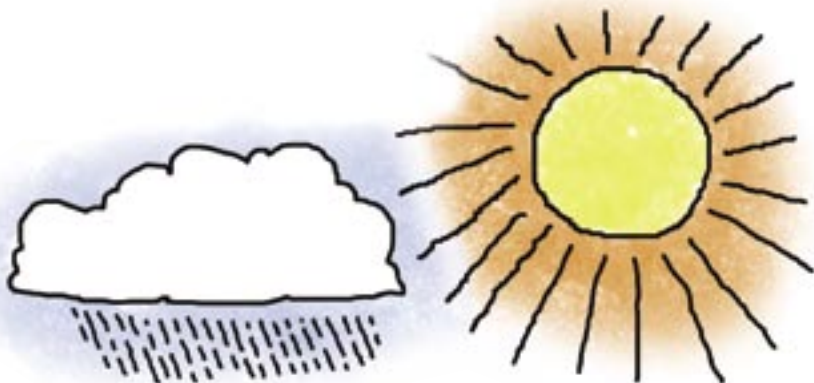
- Be aware of the asthma management plan for each child with asthma. If directed by a health care provider and parent, administer quick relief medicine to a child prior to exercise. Follow the directions of the asthma action plan.
- Be prepared to respond to an asthma episode following exercise according to the child's asthma action plan. If this occurs frequently, the child's doctor may change the dose of the controller medicine or add to the asthma action plan for the child to be pre-treated before exercise.
- Children with asthma that is triggered by pollen and air pollution may need to exercise indoors when there are high pollen or air pollution days or extreme weather days.
- When a child is having an asthma episode, the child's capacity for exercise is decreased.

WEATHER AND AIR POLLUTION

Extreme weather that is very hot or very cold can trigger an asthma episode in some children. Smoggy air can trigger asthma. Smog contains ozone, which is formed when pollutants from cars, trucks, industrial facilities, or power plants react in the presence of heat and sunlight. Changes in the weather can cause an asthma episode.

What to do?

- Limit outdoor play when the weather is very hot or very cold.
- Cover the child's mouth or nose with a scarf in very cold weather. This helps hold warm air on exhale to warm the next inhale.
- Check the daily air quality reports in the newspaper, on the radio or TV.
- On days with poor air quality, have the children play indoors.
- Plan outdoor activities when ozone levels are lower (usually early morning).
- Try to use air conditioning instead of opening the windows.
- Avoid wood smoke and burning leaves.



Reducing asthma triggers in a childcare center or family childcare home can be achieved with the cooperative effort of staff, children with asthma, and parents of children with asthma. While there is no way to completely avoid asthma triggers, childcare providers can greatly assist children with asthma by altering the childcare and play environment in practical ways. Removing triggers not only helps the children and adults with asthma, but also can contribute to the well being of all.