

Reducing triggers of asthma attacks around the house

Follow these steps to control asthma triggers. Check off the ones you can do. Keep in mind that a complete solution will probably involve implementing a number of controls, and that implementing a single measure will probably not be sufficient.

General tips to reduce allergens and irritants: *The list includes general cleaning or maintenance practices that are effective at reducing many kinds of triggers in the house.*

Managing at the source

- Remove shoes before entering the house if possible. If not, place good quality, commercial grade doormats at all entrances. This will allow less tracking in of dust, pollen, mold and other toxic materials.
- Remove carpeting if possible, particularly from the bedroom.
- Repair any source of leaking water inside or outside the house, such as faucets, pipes, gutters, and downspouts. Make sure that all downspouts direct water away from the house.

General cleaning

- Vacuum frequently and thoroughly. Use a powered brush for carpeting. Use ultrafiltration vacuum bags if available. Consider purchasing a vacuum cleaner with a dirt sensor and HEPA filter.
- Dust weekly using a damp, lint-free rag. Do not use a dry cloth since this just stirs up dust.
- Use the least toxic cleaning products available.
- Wear protective gloves and an appropriate mask while cleaning to reduce exposure to dust, dander, mold or cleaning irritants.
- To eliminate pests, use integrated pest management (IPM) and mechanical methods over chemical.

Proper ventilation, humidity control and indoor air

- Since indoor air tends to be more polluted than outside air, ventilate the house by opening the windows when conditions permit: e.g. on days with a low pollen count if you are allergic and when the outside air quality is good. You can check the local air quality by contacting Puget Sound Clean Air Agency (www.pscleanair.org) and pollen prevalence by contacting (www.pollen.com) or by checking local newspapers.
- Use a pleated paper filter for your home's forced air heating and/or cooling system. Clean or change the filter monthly or every 3 months. Consider purchasing room air purifiers that use HEPA filters. Do not purchase any purifier that generates ozone.
- Since dust mites and molds thrive in high humidity, maintain indoor humidity between 30-50%. Humidity levels can be measured by hygrometers that are available at hardware stores.

Proper maintenance of heating/air conditioning systems

- Keep the furnace in good working order by having it cleaned, inspected and serviced annually by a licensed heating contractor.

Pets: *Pet allergies are caused by proteins secreted by oil glands that are shed as dander, proteins in saliva or urine of animals. Though the best way to remove pet allergens is to remove the pets from home, there are some things that you can do to reduce triggers if removing the pet is not a viable option. Keep in mind that the pet allergens will remain in the house for several more months even after the removal of pets.*

Managing at the source

- Find new homes for pets if possible (once the pet is removed, dander will still be present for another six months.)
- If removing pets is not possible, keep them out of bedrooms.
- Try to keep pets off of carpets or upholstered furniture.

General tips

- After playing with your pet, wash your hands and clean your clothes to reduce pet allergens.
- Having pets bathed weekly may be helpful.
- Dust often with a damp cloth to reduce pet dander in the house.

Cockroaches: *Cockroaches are one of the most common indoor pests, especially in crowded urban areas and older buildings. The proteins in saliva, bodies and droppings of cockroaches are highly allergenic to people who are sensitive. If the problem is serious, call for professional help and talk to your landlord or homeowners association if you live in a multi-family dwelling.*

- Limit the spread of food around the house. Keep food out of bedrooms.
- Avoid leaving open food or garbage inside the home.
- Store food in airtight containers.
- Eliminate water sources that attract cockroaches. Fix leaky faucets and drain pipes.
- Plug up crevices around the house through which cockroaches can enter.
- Mop the kitchen floor at least once a week. Wash the countertops daily.
- Use mechanical traps instead of pesticides if possible. If you must use chemical treatments, use them only when you are away from home. Boric acid is effective and low in toxicity to humans.

Mold: *Mold spores can be airborne when dry and are powerful allergens when inhaled or touched. They are found both indoors (especially in damp areas such as bathrooms and basements) and outdoors (in soil, decaying plant materials and rotten wood). There is no definite seasonal pattern with indoor molds, but outdoor molds pose problems mainly between spring and fall. If the problem is serious, call for professional help. Some molds are not only allergenic but can also be toxic.*

Ventilation and Humidity Control

- Use a dehumidifier or air conditioner to maintain relative humidity below 50%.
- Use bathroom and kitchen fans. Install 60 minutes timers on bathroom fans to increase ventilation of moisture during and after showers or baths.
- Vent all fans (bathrooms and kitchens) and clothes dryers outside. Don't vent them into the attic or crawl space.
- Increase the flow of air within your home. Moving furniture away from walls and opening closet doors to permit air circulation limits the growth of molds. Make sure to open drapes during the day to increase circulation behind them.
- Avoid hanging laundry inside. Use a clothes dryer or dry in a well ventilated area.

Managing at the source

- Check faucets, pipes and ductwork for leaks.
- Remove carpets that are laid on concrete floors. Use throw rugs that can be cleaned.
- Remove decaying debris from the roof and gutters.
- Install 6 mil Black Visqueen plastic sheeting over all exposed dirt in the crawl space and install adequate ventilation.

Cleaning

- Regularly clean tubs, sinks and other places where mold and mildew grow.
- If mold is present, remove using 10% bleach solution or dishwasher detergent.

General tip

- Avoid raking leaves, mowing lawns or working with peat, mulch, hay or dead wood. If you must do yard work, wear a mask and wash yourself after the work.

Dust and dust mites: Dust may contain molds, pollens, fibers and dander from pets as well as dust mites. Dust mites are microscopic creatures that feed on flakes of skin shed by humans and animals and live in carpets, mattresses, bedding, etc. Their waste products can provoke allergic reactions in people who are sensitive. Although it is virtually impossible to eliminate dust or dust mites, you can reduce the number of mites and alleviate the dust problems by adopting some preventive strategies.

Managing at the source

- Encase your mattress and pillows in dust mite-proof or allergen-impermeable covers.
- Wash sheets and pillow cases once a week in hot water (130°F or above) to kill dust mites. (Since this can be scalding, if there are children in the home, increase hot water temperature one hour before washing and turn down after washing.)
- Replace wool or feathered bedding with synthetic materials, and replace traditional stuffed animals with washable ones.
- Remove carpets if possible, particularly from the bedroom. Use throw rugs and clean them regularly.
- Remove or reduce the number of stuffed animals, wicker baskets, dried flowers and other dust collectors around the house.
- Replace heavy drapes and blinds with washable curtains or shades.

Cleaning

- If there is carpeting, have it professionally cleaned using hot water steam extraction twice a year. Carpeting should dry within 24 hours. Avoid chemical treatments of carpeting.
- Dust weekly using a damp, lint-free rag. Do not use a dry cloth since this just stirs up dust.
- Ask someone to vacuum for you, if possible. If you must vacuum, wear a high quality dust mask. Or consider getting a vacuum cleaner with a HEPA filter.
- Consider having air ducts for heating, ventilation and air conditioning cleaned every 3-5 years or after any remodeling work.

General tip

- Use a dehumidifier or air conditioner to maintain relative humidity at about 50% or below. Dust mites thrive in high humidity.
- Avoid sleeping or lying on the carpet or upholstered furniture.

Pollen and outdoor air quality: Pollen and outdoor air pollution can trigger asthma attacks. Pollens are produced by plants and often seasonal. They are carried by wind for a long distance and then can be carried

inside your house on your clothes or pets. Although the air pollution level is strongly affected by the weather, it is a year-round problem.

- If you are sensitive to airborne allergens and irritants, limit time spent outdoors when pollen levels or air pollution levels are high.
- Use air conditioning to avoid having to open windows if possible. Clean the filter every month.
- Avoid hanging laundry outside. Instead, dry your clothes in an automatic dryer. Or hang dry inside if humidity is not a problem.
- If you buy plants for your yard, look for species that do not aggravate allergies.
- Keep track of the local air quality (www.pscleanair.org) or pollen prevalence (www.pollen.com)

Smoke and other irritants: *Tobacco smoke is one of the most powerful irritants of the lungs found in our daily lives. It irritates the airways and can cause permanent damage to the lungs of healthy people, and it can trigger asthma attacks in people with asthma. Smoke or fumes released by some household items such as wood-burning stoves, candles and incense can also trigger asthma attacks.*

- Do not smoke and do not allow others to smoke in your house or car. Avoid exposure to tobacco smoke.
- Since the tobacco smell remains on the clothes and can trigger an asthma attack, going outside to smoke may not prevent an asthmatic family member from having an attack. If you must smoke, smoke outside and use a smoking jacket and hat and leave them outside. Wash hands and face afterwards.
- Do not use wood-burning stoves and fireplaces.
- Do not burn candles in the house.
- Avoid strong-smelling products, such as cleaning products, air-fresheners, perfumes, hair sprays, etc.
- Remove or seal the sources of formaldehyde with a water-based sealer.

Cold air: *Changes in the weather, especially cold air, can trigger asthma attack.*

- Dress warmly in a cold weather.
- Breathe through your nose so air is warmed before reaching your lungs.
- Wear a scarf around your nose and mouth in a cold weather.

Food: *Some people have food allergies that can trigger asthma attacks while others have symptoms such as skin problems and intestinal problems. Some react to preservatives found in processed food. Food allergies can be fatal in certain people.*

- Beware of foods that may cause you symptoms.
- Learn to read food labels carefully. If dining out, ask about the ingredients used in preparing a particular dish before tasting the food.
- If you have had severe reactions to a specific food, talk to your doctor about carrying an epinephrine injector.

Other Tips:

- Ask your health care provider about skin or blood tests to tell if you have allergy problems.
- Ask your health care provider about getting an annual flu shot, since influenza can lead to serious respiratory problems.
- Treat respiratory infections promptly.