

## Recommendations for reduction or elimination of asthma triggers

### Home walkthrough program

Asthma trigger	Known allergy?	Reason for investigation	Area of investigation	What to look for	Recommendations	Room(s) where trigger is identified	Comments
Smoking	Yes No	Asthma attacks can be triggered by smoke	Smoking in the home	Smell of smoke in the home	Refer family members who smoke to smoking cessation resources such as the Lung Help Line 1-800-548-8252.		
					Ask family members who smoke to smoke outside. Implement a smoke-free home and vehicle rule in the home and car.		
			Third-hand smoke	Smell of smoke on clothing	Do not smoke in the house. If not possible, limit smoking to either the basement or attic.		
					When smoking outside, use a smoking jacket to limit the smell when coming back into the home. Wash hands after smoking.		
Dust/Dust mites	Yes No	Dust mites like to live in dark and damp environments and can often be found in the base of the carpet, upholstered furniture and stuffed animals	Furniture	Upholstered or stuffed chairs	Remove, where possible, upholstered (stuffed) furniture and replace with wooden, leather or plastic furniture. If not possible, vacuum weekly. A HEPA vacuum with hand attachment works well to lower dust.		
				Bed	Wash sheets weekly in hot water and thoroughly dry in hot dryer. Use mattress and pillow covers to reduce dust mites. Mattress and pillow casings do not need to be washed.		
				All horizontal surfaces (e.g. bookshelves, counters)	Avoid open bookshelves, as they are great dust catchers. Wet dust all shelves, counters, etc. Use wire shelving to limit dust collection, especially in the top of the closets.		
			Stuffed animals	Allergen free stuffed animals	Replace existing stuffed animals with allergen free stuffed animals.		

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Dust/Dust mites <i>continued</i>	Yes No	Dust mites like to live in dark and damp environments and can often be found in the base of the carpet, upholstered furniture and stuffed animals	Stuffed animals <i>continued</i>	How often are they washed?	Stuffed animals should be machine washable and washed in hot water or placed in the freezer overnight at least weekly.		
				Where are stuffed animals kept?	Stuffed animals contained in closed containers are less likely to gather dust.		
			Carpet	Carpeting covering room flooring	Carpet should be removed, if possible, where the person with asthma sleeps and plays. If carpets cannot be removed or replaced with hard flooring, carpeting should be vacuumed daily. A HEPA vacuum will lower the most dust counts.		
				Area rugs	Area rugs should be laundered weekly.		
			Overall cleanliness	General clutter (clothing, toys, food, etc)	Use plastic totes for organizing and storing. Use hangers for clothing. Ensure there is open space to walk to closets, windows and doors.		

Mold / Moisture / Mildew	Yes No	Inhaling mold spores can cause an asthma attack and mold growth can occur in less than 12 hours	Basements and attics	Musty odor, stains on ceilings	Repair or replace leaky roofs, missing gutters/downspouts, foundation holes, missing mortar. Use dehumidifier.		
				Cardboard on floor or against basement walls	Cardboard (boxes or loose cardboard) should be stored on shelves, on a plastic pallet or in plastic tubs. Never store cardboard on floor or against walls.		
			Furnace	Dirty furnace filter	Change furnace filter every 3 months. Recommended use of filters rated MERV 8 or above, or capable of filtering molds.		
			Roofs and gutters	Leaky roofs, clogged gutters and downspouts	Repair or replace leaky roofs and clean gutters and downspouts annually. Water from downspouts should be directed away from the house.		
			Walls, ceilings and flooring	Discolored spots or condensation, especially in corners and behind shelves	Clean the mold from the surface it's growing on with a soapy solution.		

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<b>Mold / Moisture / Mildew continued</b>	<b>Yes No</b>	Inhaling mold spores can cause an asthma attack and mold growth can occur in less than 12 hours	Walls, ceilings and flooring	Discolored spots or condensation, especially in corners and behind shelves	<p>Home recipes to remove mold:</p> <ul style="list-style-type: none"> <li>- Sprinkle baking soda over mold first then use a mixture of vinegar, (1/2) water (1/2), teatree (couple drops).</li> <li>- Full strength vinegar. Apply with a sponge or scrubby.</li> <li>- Full strength lemon juice. Apply with a sponge or scrubby.</li> <li>- Mix 1 part hydrogen peroxide (3%) with 2 parts water. Apply to area, wait at least 1 hour before rinsing.</li> </ul>		
			Appliances	Appliance that is on or near carpeting Water located near or under appliance	If possible, ensure refrigerator is located on hard flooring. Use a rubber tray to catch water.		
			Bathroom facilities	Standing water	Bathrooms should be free of standing water on sinks and floors. Repair broken seals around toilets and/or replace missing gaskets.		
				Cleanliness of bathrooms	Bathrooms should be cleaned regularly.		
			Ventilation	Exhaust fans in bathroom and kitchen	Exhaust fans should be vented to the outside and used during bathing and cooking for 1 hour after finished. If there is no exhaust fan, open windows. Exhaust fans should be cleaned in the spring and fall.		
			Sink	Standing water	Identify where the water is coming from and fix the problem.		
				Carpeting or rug is next to sink	When possible, put hard flooring around sink area.		

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<b>Mold / Moisture / Mildew continued</b>	<b>Yes No</b>	Inhaling mold spores can cause an asthma attack and mold growth can occur in less than 12 hours	Plants	Any plant in the home	Limit number of plants, use watering trays and encourage regular maintenance (such as tossing dead leaves, emptying full water trays regularly). Remove plants from window space to increase air flow.		
			Windows and glass doors	Condensation on the glass	Condensation on the glass is normal when there is a big change from outdoor and indoor air temp. If glass is always wet it means that there is not enough air circulation. Remove furniture, plants or window dressings covering air ducts in front of windows.		
			Mold/moisture that cannot be controlled by steps above	Mold/moisture issues beyond control of family	If the mold cannot be managed contact a remediator: <a href="http://www.dhs.wisconsin.gov/eh/hlthhaz/fs/moldinfo.htm">www.dhs.wisconsin.gov/eh/hlthhaz/fs/moldinfo.htm</a>		

<b>Pests / Vermin</b>	<b>Yes No</b>	Droppings or body parts of decaying cockroaches and other pests (mice, ants, silverfish) can trigger asthma	Evidence of pest/vermin can be found in corners, behind book shelves, under sinks, along window sills, or any dark/wet area	Look for droppings or dead pests	Remove or block hiding places. Caulk cracks and crevices to prevent access. Do not store newspapers, paper bags, and boxes for long periods of time. Bathe pets regularly and wash mats or surfaces they lie on to control fleas.		
					Block potential entryways. Install screens on floor drains, windows and doors. Install weather stripping on windows and doors. Install door sweeps. Install copper mesh on mouse holes as it does not rust. Patch holes in walls, especially under sinks.		
					Check exterior of home for entry points such as holes or gaps in the foundation.		
					Reduce/remove water sources. Fix leaky plumbing. Regularly empty water trays for plants and under refrigerator.		
					Do not use over-the-counter pesticides as they could trigger an attack. Pest glue traps and closed bait stations are safe methods for removing pests.		

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Pests / Vermin <i>continued</i>	Yes No	Droppings or body parts of decaying cockroaches and other pests (mice, ants, silverfish) can trigger asthma	Evidence of pest/vermin - <i>continued</i>	Look for droppings or dead pests - <i>continued</i>	Regularly clean the stove and refrigerator. Pull the appliances out from the wall and clean behind them.		
					Wash dishes after every meal. Keep dirty dishes out of the sink.		
					Degrease all kitchen surfaces weekly.		
					Store food in sealed glass or plastic containers with lids. Do not leave food out on counter. Do not leave food in pet bowls.		
					Garbage cans should have tight fitting lids and should be removed from the home when full.		
					Clean up droppings and dried bugs with HEPA vacuum OR spray/mist with water and then wipe or gently sweep up.		
					Visit <a href="http://www.chawisconsin.org/asthma-resources.htm">www.chawisconsin.org/asthma-resources.htm</a> for information on pest control and pesticide safety.		

Animals (cat, dog, etc)	Yes No	Pet's dead skin flakes, urine, feces, saliva and hair/feathers can trigger asthma	Pets	Warm-blooded animals such as dogs, cats, mice, gerbils and hamsters; or birds	Remove animals from home, if possible. If not possible, keep animals out of sleeping space.		
					Acceptable animals include: fish, amphibians, butterflies, nonpoisonous snakes.		

VOC producing products	Yes No	VOC producing products are both potentially toxic and can irritate airways	Paints and thinners	Paint and thinners stored near heating appliance or ventilation system	Store paint and thinners in ventilated areas (e.g. garage). Store a minimum of 10 feet away from heating appliances (e.g. furnace or water heater). Never stored in a confined furnace room.		
			Cleaning chemicals	Look to see if cleaning products have strong scents or chemicals	Keeping a clean home is important. Use home cleaning recipes or select consumer products that are fragrance-free and release limited chemical odors.		
					Visit <a href="http://www.chawisconsin.org/asthma-resources.htm">www.chawisconsin.org/asthma-resources.htm</a> for information on fragranced consumer products and green washing.		

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Odors	Yes No	Musty odor often indicates mold	Musty odor	Look for source of odor around plants, around windows and sinks or appliances	Remove plants that smell stale.			
					Sinks should be wiped, in and around, after every use. <i>(See Mold/Moisture/Mildew for more information).</i>			
		Poor ventilation can cause odors to linger	Ventilation	Exhaust fans in bathroom and kitchen	Exhaust fans should be used during bathing and cooking (for 1-hour following). If there is no exhaust fan, open windows.			
		Wood smoke contains harmful gases and small particles	Wood burning stove or fireplace	Home smells of smoke and has a wood burning stove and/or fireplace	Wood-burning stove or fireplace may not be working correctly. Have stove and chimney inspected every year to ensure no gaps, cracks or unwanted drafts and to remove dangerous creosote build-up.			
					Only burn dry wood that has been split, stacked, covered and stored for at least six months.			
					Ensure stove is externally exhausted.			
		Scents/fragrances could also trigger asthma	Perfume / air fresheners		Overpowering fragrances	Perfume should be used sparingly.		
					Plug-in / spray air fresheners	All scented items should be eliminated or restricted. Plug-ins and air fresheners may mask water intrusion or lack of ventilation. Bleach should not be used in living space. <i>(See Mold/Moisture/Mildew for more information).</i>		
					Potpourri			
					Scented candles			

Information and resources gathered from WI Asthma Coalition members, the Environmental Protection Agency, Centers for Disease Control, and the Department of Housing and Urban Development.