

# Home Characteristics and Asthma Triggers

## Checklist for Home Visitors

### Using this Home Assessment Can Help Make Homes Healthier.

A trained home visitor can help find common asthma triggers in homes and discuss ways to reduce and remove triggers. Removing asthma triggers in the home, along with proper medical care can improve health.

The checklist is organized into a Core Assessment plus two appendices (Dust Mite Module and Mold and Moisture Module). The Core Assessment can be used for all types of housing and climates, but the additional modules can be used if dust mites or mold/moisture issues are suspected by the trained home visitor. The suggested action items in this checklist are generally simple and low cost.



## Glossary of Asthma Triggers Commonly Found in Homes

### Combustion by-products

**Triggers:** Particles and gases that are formed when fuel is burned.

**Where Found:** Gas cooking appliances, fireplaces, woodstoves, candles, incense, cigarettes, and unvented kerosene and gas space heaters.

### Dust Mites

**Triggers:** Body parts and droppings.

**Where Found:** Mattresses, bedding, carpeting, curtains, upholstered furniture, and stuffed toys. Dust mites are too small to be seen with the naked eye. They can survive in a range of climates, but they prefer high humidity.

### Mold

**Triggers:** Mold spores, fragments, and odors.

**Where Found:** Indoor mold growth is often found in areas with more moisture such as kitchens, bathrooms, and basements, or areas where water damage has occurred. There are many types of mold and they can be found in any climate.

### Pests

**Triggers:** Cockroaches—Body parts and droppings. Rodents—Fur, skin flakes, and urine.

**Where Found:** Areas with food and water such as kitchens, bathrooms, and basements.

### Pets with fur

**Triggers:** Fur, skin flakes, and saliva.

**Where Found:** Throughout entire home.

### Secondhand Smoke

**Triggers:** Mix of smoke from the burning end of a cigarette, pipe, or cigar and the smoke exhaled by a smoker.

**Where Found:** Anywhere that smoking is allowed.

### Volatile organic compounds (VOCs)

**Triggers:** Chemical vapors that come from household items.

**Where Found:** Products such as cleaning agents, deodorizers, air fresheners, perfumes, paints, nail polish, and nail polish remover.



# CORE ASSESSMENT



## Building Information

### Checklist Questions

### Potential Action Steps

#### Are your living quarters in a:

- One-unit building, detached from any other building?
- One-unit building, attached to one or more buildings?
- Building with two or more apartments?
- Manufactured/Mobile Home?

#### Is your home:

- Owned?
- Rented?
- Occupied without payment of rent?

- If you live in a rental home, you might need to ask permission to make any changes, even minor repairs to the home. Renters often are protected under tenant's rights laws. Contact local social services agencies if you need their help.

#### How many stories are there in your home including attics and basements?

No. of Stories: \_\_\_\_\_

## Home Interior

### HEATING and COOLING

### Checklist Questions

### Potential Action Steps

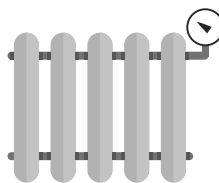
#### During the winter, what is the primary way your home is heated?

- Radiators
- Baseboard heater
- Forced hot air (vents)
- Space heater
- Fireplace/wood-burning stove
- Other: \_\_\_\_\_
- N/A

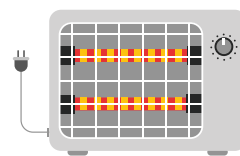
- Properly ventilate the room where a fuel-burning appliance is used and consider using appliances that vent to the outside whenever possible.
- Never use a gas-cooking appliance as a heating source.
- If using a fireplace, make sure it is properly vented to help ensure smoke escapes through the chimney.
- If using a wood-burning stove, make sure that doors are tight-fitting. Use aged or cured wood only and follow the manufacturer's instructions for starting, stoking, and putting out the fire.
- If using an unvented kerosene or gas space heater, follow the manufacturer's instructions for proper fuel to use and keep the heater properly adjusted.

#### In addition to the main source of heat, do you use any other source(s)?

- Radiators
- Baseboard heater
- Forced hot air (vents)
- Space heater
- Fireplace/wood-burning stove
- Other: \_\_\_\_\_
- N/A



Radiator



Space Heater



Baseboard Heater

## Core Assessment *(continued)*

### HEATING and COOLING

#### Checklist Questions

**How do you cool your home?  
(check all that apply)**

- Central A/C
- Window A/C (or portable free-standing unit)
- Fans
- Evaporative cooler
- Other: \_\_\_\_\_
- N/A

#### Potential Action Steps

##### Central A/C units

- Replace the filters every 3 months or as recommended by the manufacturer.
- Use filters with higher efficiency than standard furnace filters, such as upgraded pleated filters, if heating or cooling system manufacturer's specifications allow.
- The Heating Ventilation and Air Conditioning (HVAC) system should have a professional inspection annually.
- Promptly repair damaged parts.

##### Window A/C units

- Keep drip pans clean and the drain lines flowing properly.
- Follow the manufacturer's instructions for cleaning or replacing filters.

##### Evaporative coolers (often used in very dry climates)

- Follow the manufacturer's instructions for cleaning.

### COOKING

#### Checklist Questions

**What type of stove do you have?**

- Gas
- Electric
- N/A

**Do you use an exhaust fan when cooking on your stove?**

- Yes
- No
- N/A

**Does the fan exhaust to the outside?**

- Yes
- No
- Don't know
- N/A

#### Potential Action Steps

- Use your exhaust fan (if it exhausts to the outside) or open a window when cooking.

### SMOKING

#### Checklist Questions

**Do any members of your household smoke tobacco inside your home?**

- Yes
- No

**Do any visitors to your household smoke tobacco inside your home?**

- Yes
- No

#### Potential Action Steps

- Make your home a smoke-free zone.
- Encourage household member(s) to stop smoking.

**Regarding eCigarettes:** eCigarette vapor can still contain toxic chemicals. Secondhand vapor might be a risk factor for triggering asthma symptoms.

## Core Assessment *(continued)*

### SMOKING

#### Checklist Questions

**In the last 12 months, how often has secondhand tobacco smoke entered inside your home from somewhere else in or around the building?**

- Daily
- Weekly
- Monthly
- A few times a year
- Never

#### Potential Action Steps

- Work with the building owner/manager and other occupants to start a smoke-free policy throughout the building.
- Use a portable air cleaner that is rated to remove tobacco smoke.

### PETS

#### Checklist Questions

**Do you have any pets in your home?**

- Yes
- No

#### Potential Action Steps

**If Yes, please check all that apply:**

- Cat(s)
- Dog(s)
- Bird(s)
- Other furry pets (e.g., rabbits, guinea pigs, hamsters, mice)
- Other non-furry pets

Talk to your healthcare provider to see if testing for allergy to your pets might be helpful for you.

- If you are allergic to pets, the best way to decrease asthma symptoms is to remove the pet from the home and thoroughly clean all surfaces in the home.
- If you are allergic, and cannot remove the pet from your home, you can decrease exposure, but it might not be enough to decrease symptoms. The best way to decrease symptoms is to do all of these things:
  - » Keep pets out of your bedroom,
  - » Wash your furry pets,
  - » Use an air cleaner with HEPA filter,
  - » Use allergen-proof mattress & pillow covers.

### PESTS

#### Checklist Questions

**In the last 12 months, have you seen cockroaches inside your home?**

- Yes
- No
- Don't know

#### Potential Action Steps

Use integrated pest management (IPM) described below. For those with asthma, especially avoid the use of sprays and foggers.

#### IPM concepts include:

- Keep counters, sinks, tables, and floors clean and free of clutter.
- Clean dishes, crumbs, and spills right away.
- Store food in airtight containers. This also applies to pet food.
- Seal cracks or openings in cabinets, walls, baseboards, and around plumbing.
- Keep trash in a closed container.
- Use pesticide baits and traps in areas away from children and pets. Follow manufacturer's instructions for correct use.

## Core Assessment *(continued)*

### PESTS

#### Checklist Questions

#### Potential Action Steps

**If Yes, in the last 12 months, how often have you seen cockroaches inside your home?**

- Daily
- Weekly
- Monthly
- A few times a year

**In the last 12 months, have you or an exterminator used any pest control measures (pesticides, traps, etc.) to control cockroaches in your home?**

- Yes
- No
- Don't know



**In the last 12 months, have you or an exterminator used any pest control measures (pesticides, traps, etc.) to control other insects in your home?**

- Yes
- No
- Don't know



**In the last 12 months, have you seen evidence of mice or rats inside your home?**

- Yes
- No
- Don't know



**If Yes, in the last 12 months, how often have you seen evidence of mice or rats inside your home?**

- Daily
- Weekly
- Monthly
- A few times a year

**In the last 12 months, have you or an exterminator used any pest control measures (pesticides, traps, etc.) to control mice or rats in your home?**

- Yes
- No
- Don't know

- Use integrated pest management (IPM) described above.

- Use IPM methods as described above.
- Use snap traps in areas away from children and pets.

## Core Assessment *(continued)*

### MOISTURE and MOLD

#### Checklist Questions

**Is there evidence of water damage, moisture, or leaks (such as damp carpet or leaky plumbing)?**

- Yes       Don't know  
 No

**In the last 12 months, how often have you noticed any moldy/musty smells inside your home?**

- Daily       Monthly  
 Weekly       A few times a year

**In the last 12 months, was there mold covering an area greater than or equal to the size of an 8" x 11" piece of paper in your home?**

- Yes       Don't know  
 No

**Do you use a dehumidifier?**

- Yes       N/A  
 No

**Do you use a humidifier?**

- Yes       N/A  
 No

#### Potential Action Steps

- Dry damp or wet items within 24-48 hours to avoid mold growth.
  - Fix water leaks (such as leaky plumbing) as soon as possible.
  - Replace absorbent materials, such as ceiling tiles and carpet, if mold is present.
  - Use air conditioner or dehumidifier to maintain low indoor humidity.
  - Scrub mold off hard surfaces with detergent and water. Dry completely.
  - Empty and clean refrigerator and air conditioner drip pans regularly.
  - Run the bathroom exhaust fan or open the window when showering.
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- Keep relative humidity levels in your home around 30–50%.
  - Follow manufacturer's instructions and clean devices regularly to prevent mold growth.

## Core Assessment *(continued)*

### Key Points

**Volatile organic compounds (VOCs):** These chemicals are commonly found in cleaning products, perfumes, paints, and other household items. They can be harmful to all people with asthma.

- Limit exposure as much as possible by minimizing product use, using products only when person with asthma is not present, or trying alternative products.
- If products are used, carefully follow manufacturer's instructions on the label and make sure the area is well-ventilated.

**Other safety hazards:** Smoke and carbon monoxide can be deadly.

- Use smoke detectors and carbon monoxide alarms in the home. Follow manufacturer's instructions. For more information, go to [www.nfpa.org/public-education/resources/safety-tip-sheets](http://www.nfpa.org/public-education/resources/safety-tip-sheets)\*

**Outdoor air:** Outdoor air pollutants and pollen can trigger asthma.

- Air pollutants and pollen can enter homes through open doors, windows, and other cracks or openings in the building.
- For current information about outdoor air quality, go to [www.epa.gov/airnow](http://www.epa.gov/airnow)

*\*The Centers for Disease Control and Prevention (CDC), the US Environmental Protection Agency (EPA) and the US Department of Housing and Urban Development (HUD) do not endorse the National Fire Protection Association. The National Fire Protection Association's website is suggested for informational purposes only.*

### Other Resources About Asthma

**CDC:** [www.cdc.gov/asthma/triggers.html](http://www.cdc.gov/asthma/triggers.html)

**EPA:** [www.epa.gov/asthma/asthma-triggers-gain-control](http://www.epa.gov/asthma/asthma-triggers-gain-control)

**HUD:** [www.hud.gov/program\\_offices/healthy\\_homes/healthyhomes/asthma](http://www.hud.gov/program_offices/healthy_homes/healthyhomes/asthma)

### Summary Notes:

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# DUST MITE MODULE

Answers in the **red checkboxes** (the first column) are associated with dust mites. The more checkmarks you have in the red column, the more likely you have high dust mite levels in your home. You can take actions shown at the end of this list.

## Building

Are all your windows sealed shut or don't open?  Yes  No

Is any part of your living area below ground level?  Yes  No

If YES, does this area ever get wet or stay wet for long periods (more than 1 week)?  Yes  No

## Heating, Ventilation, and Cooling

During winter, are some outside walls cold?  Yes  No  Don't know

Does your air conditioner ever leak water onto walls or carpeting?  Yes  No  N/A (no A/C)

Does your home sometimes smell "stuffy," "stale," or "musty?"  Yes  No  Don't know

## Bedroom Characteristics of Person with Asthma

Do you have upholstered furniture in the bedroom of the person with asthma?  Yes  No

Do you allow children to have stuffed animals/toys in the room?  Yes  No

## Dust Reservoirs (overall home)

Do you have cloth sofa or chairs?  Yes  No

Do you have cloth curtains?  Yes  No

Can you see dust or dirt on your furniture, walls, ceiling, and curtains?  Yes  No

Do you have wall-to-wall carpeting in more than half of the rooms in your home?  Yes  No

Do you have wall-to-wall carpeting in your kitchen or bathrooms?  Yes  No

Do you vacuum less than once a week?  Yes  No

## Dampness

In the last 12 months, have you noticed condensation on windows in your home?  Yes  No  Don't know

If YES, does moisture regularly build-up on your windows/walls?  Yes  No

In the last 12 months, have you had any water leaks?  Yes  No  Don't know

Do you use a dehumidifier regularly?\*  Yes  No  N/A

\*Regular use of dehumidifiers may suggest that a home is humid (dust mites prefer humid environments).



## Action Steps to Decrease Dust Mites

Talk to your healthcare provider to see if testing for dust mite allergy might be helpful for you.



**If you are allergic to dust mites, you need to:**

- Use a device to measure relative humidity in your home. Keep relative humidity levels in your home around 30- 50%.
- Cover mattresses and pillows in special allergen-proof covers. Clean these according to manufacturer's instructions.
- Use washable bedding.
- Wash bedding weekly and dry completely
- Vacuum carpets, area rugs, and floors regularly. If possible, the person with asthma should stay out of rooms while they are vacuumed, swept, or dusted.

## Summary Notes:

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# MOLD AND MOISTURE MODULE

Answers in a **red checkbox** (first column) are associated with moisture and potentially mold. A **yellow checkbox** (second column) indicates medium potential for concern, and a **green checkbox** (third column) indicates low potential for concern.

**The more checkmarks you have in red checkboxes, the more likely it is that you have moisture and mold in your home.** You can take actions shown at the end of this list.

## Building

**Is there a crawlspace under the building?**  Yes  No  Don't know

**Are any of the bedrooms in the basement**  Yes  No

NOTE: Many crawl spaces and basements are damp and may have mold that can enter the home.

## Heating , Ventilation and Cooling

**In the bathroom where you shower or bathe, does the exhaust fan work?**  No  Don't know  Yes  
 N/A

**If YES, how frequently do you use it when showering or bathing?**  Never  Sometimes  All the time  N/A

**Does your kitchen vent exhaust outdoors?**  No  Don't know  Yes  
 N/A

**Does your clothes dryer exhaust outdoors?**  No  Don't know  Yes  N/A

NOTE: Properly maintained exhaust fans that vent to the outdoors can reduce humidity levels. If there are no exhaust fans or the exhaust fans do not work or do not vent outside, high humidity can develop in the home and can lead to mold growth.

## Carpet

**Do you have wall-to-wall carpeting in your kitchen or bathrooms?**  Yes  No

**What kind of floor covering is in the bedroom?**  Wall-to-wall carpeting  Some carpeting  All smooth floor

NOTE: Carpeting in areas that are prone to water spills can be hard to dry. Damp carpeting can lead to mold growth and create a place where dust mites can thrive.

## Dampness

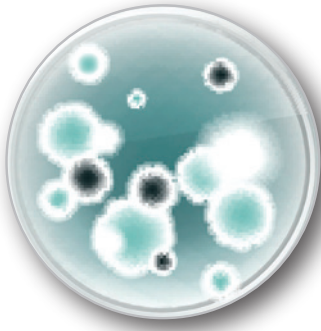
**In the last 12 months, have you noticed condensation on windows in your home?**  Yes  No

NOTE: Condensation (water droplets) on windows is a sign that moisture you may not see is forming on other surfaces. Even though you can't see this moisture, it can lead to mold growth.

**Have any of your furnishings, clothes, possessions been in a building that had water damage?**  Yes  Don't know  No

NOTE: Anything that was water-damaged could have mold. Bringing those items into a new home could lead to more mold in the new home.

## Action Steps to Decrease Moisture and Mold



- Dry damp or wet items within 24-48 hours.
- Fix water leaks (such as leaky plumbing) as soon as possible.
- Replace absorbent materials, such as ceiling tiles and carpet, if mold is present.
- Use an air conditioner or a dehumidifier to maintain 30-50% relative humidity indoors.
- Scrub mold off hard surfaces with detergent and water. Dry completely.
- Empty and clean refrigerator and air conditioner drip pans regularly.
- Use the bathroom exhaust fan or open the window when showering.

### Summary Notes:

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**For more information please contact**

Centers for Disease Control and Prevention, 1600 Clifton Road NE, Atlanta, GA 33029-4027

Telephone: 1-800-CDC-INFO (232-4636) / TTY: 1-888-232-6348

E-mail: [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov)

Web: [www.cdc.gov/asthma](http://www.cdc.gov/asthma)

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