

Key Messages:

- Excessive moisture and humidity can cause problems for children with asthma by helping mold, dust mites and cockroaches grow and multiply.
- Exposure to some molds, such as fungus or mildew, dust mites and roaches can cause asthma or can trigger asthma attacks.
- There are simple things that you can every day do to reduce the moisture level in your home.

CAS/CHW Assessment:

The Home Environmental Checklist (HEC) detects the five key moisture-related problems; 1) condensation 2) ventilation issues 3) mold 4) water leaks and 5) water damage.

- Assess prior education received by client and client's knowledge.

Conduct the remainder of the protocol only for homes with moisture-related problems.

- Assess the participant's readiness to approach mold and moisture management.

CAS/CHW Actions:

- Work with the participant to help them take actions needed to reduce moisture and mold in the home as noted in their action plans.
- To improve ventilation, advise the participant that opening painted-shut windows would be helpful. If the house was built before 1978, lead paint will be present. If this is the case, give the participant the handout on safely working when lead paint is present.

- Help the participant identify and remove water-damaged objects.
- Demonstrate how to mix up bleach solution and how to clean up mold on surfaces and in window tracks, as described in following background information.
 - If the participant is a tenant:
 - Identify actions that the landlord should take, such as the installation of fans, venting of dryers to the outside, removal of water-damaged carpet, the installation of a vapor barrier under all carpet placed over a cement floor, and the installation of a vapor barrier in crawl spaces.
 - Discuss with the participant the best way to approach the landlord.

CAS/CHW Actions: Future Visits

- Assess if the participant has been able to perform needed actions. Address problems by giving assistance on a case by case basis.
- If flooding or a leak dampens the carpet or other fabric, help the participant dry out those items. Air blowers may need to be rented for difficult situations. In such cases, consult with the project manager to make necessary arrangements.

Client Actions:

- Use available ventilation, such as fans and opening windows, especially when cooking or showering and for 15 minutes after you are done.
 - If the kitchen or a bathroom does not have a fan, one should be installed.
- Clothes dryer should be vented to the outside, not into the attic or crawl space.
- Open all windows for 3 to 5 minutes to ventilate the home and remove stale air without cooling down the house. This should be done in the morning and the evening, if possible.

- Discontinue the use of humidifiers in all rooms, especially in the child's bedroom.
- In instances where an asthmatic child's bedroom has moderate to severe mold growth that cannot be controlled, move the child to another room.
 - If this is not possible, a room air filter (HEPA) should be used and left on all of the time, with the door to the room closed.
- Heat rooms to a minimum of 65° during the heating season. Try to keep all rooms within 2-3 degrees of each other.
- In cases of mild mold, clean the site weekly with bleach solution after the initial cleaning as described in the following background information.
- If you have a flooding problem or leak and carpet or other fabric gets wet, dry out immediately and call your outreach worker right away for help.
 - Remove moldy or water-damaged materials and objects from the home, such as fabric-covered furnishings.
- If you are a tenant:
 - Identify actions that the landlord should take, such as the installation of fans, venting of dryers to the outside, removal of water-damaged carpet, the installation of a vapor barrier under all carpet placed over a cement floor, and the installation of a vapor barrier in crawl spaces.
 - If mold is moderate to severe, work with the landlord (a Public Health Environmental Inspector may be able to help you) to have this fixed.
- Homeowners should prioritize the above projects that they may wish to undertake.

Background Information:

- Common sources of moisture in homes include:
 - Condensation on windows and walls
 - Plumbing leaks (under kitchen sink or in bathroom)

- Bathrooms and kitchens without adequate ventilation
 - Dryers not vented to the outside
 - Leaks in the roof, walls or windows
 - Dampness from crawl spaces
- If the kitchen or a bathroom does not have a fan or a window, a fan should be installed.
 - If possible, the fan should have a relative humidity rheostat switch, which is a switch that turns on the fan when the humidity goes above a set level.
 - Timers can be used with bathroom fans but not with kitchen fans.
 - Another option for bathroom fans is to use a fan that is always on at a low and quiet flow rate.
 - To further reduce moisture allowed into the home, a vapor barrier should cover the entire crawl space.
 - Crawl spaces should be ventilated.
 - Any holes between the crawl space and home should be plugged (using steel wool and Easyfoam).
 - A concrete floor can wick up water from the dirt beneath it. If the floor is to be covered with carpeting, a vapor barrier (non-porous plastic sheeting) should be placed between the carpet and concrete to prevent moisture from entering the carpet, making the carpet damp and encouraging mold growth.

□ **CLEANING MILD CASES OF MOLD AND MILDEW: CLEANABLE SURFACES:**

- Wash with a detergent-bleach solution. To make a solution for cleaning up mold, mix:
 - 1 cup of bleach and
 - 1/4 tablespoon of liquid dish soap
 - 4 cups of water
 - **OR** 1 quart of bleach + 1 tablespoon of soap + 4 quarts of water

- After cleaning, let the solution that is left on the surface air dry. Do not rinse with plain water after cleaning with the bleach solution.
- Wear gloves when cleaning, and ventilate the area by opening the windows and turning on fans.
 - If there are on fans or windows in the area, keep the doors open and open other windows in the home.

MATTRESSES: MILD CASES OF MOLD AND MILDEW:

- Wipe down the mattress with the above mixture, let dry and then encase the mattress in a zippered allergy control mattress cover.

WINDOW FRAME TRACKS: MILD CASES OF MOLD AND MILDEW:

- Use a “toothbrush” or grout brush to scrub as much mildew from the tracks as possible.
- Then use a scraper or butter knife to push a cloth into the track and move it back and forth.
- Use a spray cleaner to help flush the loosened “stuff” out. Be sure the tracks don’t overflow onto the wall.
- Most windows have small drainage holes to the outer side, which often get clogged. Try to unclog the drain holes with a pin.
- After cleaning, apply a layer of the bleach solution and let it dry there to help keep the mold from coming back.
- Clean bathroom, kitchen, or other surfaces at risk for mold growth (such as surfaces where mold has been removed or those that are damp) weekly with bleach-detergent solution. This can prevent mold problems from starting or returning.

FLOODED AND FLOORS, WALLS AND OTHER ITEMS:

- Immediately dry all wet objects.
- Dry carpet by lifting it off of the floor and drying the underlying surface if possible.

- Turn up the heat in the room. If possible, use air blowers to circulate air until all dampness is gone.
- Work with your landlord to have a hard surface floor installed (this is best) or to replace water-damaged carpeting if the carpet has not dried out within 48 hours.
- If items stay wet for more than 48 hours, water damage is probable. Get rid of all moldy and water damaged materials from the home, especially carpeting and fabric-covered furnishings.

Supplies:

- Bleach
- Gloves
- Brush to clean window tracks, if needed

Education Handouts:

- Moisture and Air – Householder’s Guide; Problems and Remedies
CMHC-SCHL Home to Canadians
- “Lead Paint Can Poison: Protect Your Family When You Repair or Remodel”
Lead Safe America: U.S. Department of Housing & Urban Development

Referrals:

- Refer to Public Health - Seattle & King County Environmental Health staff for significant mold problems where:
 - area of mold is greater than 10 sq. ft. (any intensity) **OR**
 - area of mold is greater than 5 sq. ft. but less than 10 sq. ft. and of high (3) intensity