

Residential Mold Clean Up Guidelines

This document provides information and guidance for property owners and tenants on how to clean up residential mold problems and prevent mold growth. The guide is divided into two parts—“Mold Clean up” for homes built in 1978 or later, and “Mold with Lead Paint Clean up” for homes built before 1978. A resource section is also provided for more information.

You may be able to do a small Clean up job of less than 10 square feet of light to moderate growth yourself, or a larger area of light growth. It does not matter what kind of mold is present—only that it is cleaned-up in a safe and effective manner. *Sensitive individuals should not clean mold or be near areas being cleaned.* If you have asthma, mold allergies, lung disease or illness, or conditions or diseases that impair the immune system, then you should have a friend or professional clean up for you. A professional should do all large jobs and jobs of moderate to heavy growth.

Keep in mind these key steps when dealing with mold:

Prevent Exposure

If you are experiencing adverse health symptoms that may be caused by mold, avoid use of the room that is contaminated with mold until clean up can be finished.

Control Moisture and Mold Growth

1. Dry all materials and surfaces within 24 to 48 hours of leaks or flooding to prevent mold growth - professional assistance may be necessary.
2. Fix all moisture sources before clean up is begun—Mold will only grow if there is moisture.
3. Remove or dry all wet materials (do not take moldy items to a clean area of the home).

Common indoor moisture sources include:

1. Flooding
2. Condensation (caused by indoor humidity that is too high or surfaces that are too cold)
3. Movement through basement walls and slab
4. Failing or clogged rain gutters
5. Poor drainage around the house
6. Roof leaks
7. Plumbing leaks
8. Overflow from tubs, sinks, or toilets
9. Firewood stored indoors
10. Humidifier use
11. Inadequate venting of kitchen and bath humidity
12. Improper venting of combustion appliances
13. Failure to vent clothes dryer exhaust outdoors (including electric dryers)
14. Line drying laundry indoors

Mold Clean Up

Mold Clean Up Safety Precautions:

If your residence was built before 1978 you must only follow the steps under “Mold with Lead Paint Clean up” in the next section.

- Wear eye protection, rubber gloves, washable or disposable clothing, including: long pants, high collared shirt, or disposable painter’s jump suit; socks and closed-toe shoes.

- ☑ N-95 mask/respirator available at hardware stores for about \$7 (exhalation valve may make it easier to use); make sure it is tight and form fitting
 - A HEPA respirator may also be used.
 - those with beards and facial deformities will not be able to wear a face mask and should contract with a professional.
- ☑ Ventilate space if using a disinfectant such as bleach
- ☑ Limit air travel to other areas of the house by closing doors or sealing open areas with plastic sheeting.
- ☑ Take breaks in fresh air often.
- ☑ Change your clothes and shoes before leaving the work area, take off your mask after removing your outer clothing, and place all work clothes in a bag and wash separately from other laundry.
- ☑ Shower and wash your hair right after finishing work.
- ☑ Stop cleaning if you experience health effects and consider asking a family member or friend to finish for you or contract with a professional.

Protect yourself and others while cleaning

How to Clean Up Mold:

1. The moisture source that has caused the mold growth must be corrected to prevent future mold growth.
2. Turn off ventilation system.
3. Close all windows and doors in the contaminated room except for the nearest window and place a box or window fan in it to blow inside air to the outdoors.
4. All porous, non-structural materials contaminated with mold should be removed and discarded (such as wall board/dry wall, insulation, wood firing strips, wood molding, ceiling tiles, etc.).

Exception to removing porous materials: small, above-ground areas of contamination measuring less than 10 square feet. Specifically:

- This does not apply to insulating materials or wall areas below ground level.
- The square footage estimate must include all mold growth in a room and include mold that has spread to another adjoining surface or surface in an adjoining room.
- Surfaces must be intact and sound.
- The contaminated area must be cleaned, dried, and painted with a paint or sealant that includes a fungicide.
- If mold contamination grows back on cleaned surfaces, then porous materials must be removed and moisture control must be re-evaluated.
- The work area should be unoccupied. Vacating people from spaces adjacent to the work area is not necessary but is recommended in the presence of infants (less than 12 months old), persons recovering from recent surgery, immune suppressed people, or people with chronic inflammatory lung diseases (e.g., asthma, hypersensitivity pneumonitis, and severe allergies). These individuals may also be sensitive to chemical odors; the work area may need additional ventilation for 2-to-3 days following chemical applications such as painting.

5. Place all moldy materials in extra strength garbage bag or wrap and seal in plastic sheeting. Large amounts of materials must be taken to a landfill.
6. With a scrub brush and household non-ammonia based soap or detergent, remove all visible mold on non-porous surfaces and undamaged structural surfaces (cement, stone, metal, plastic, wood studs, load bearing wood).

7. Visible mold on semi-porous surfaces such as structurally sound, load bearing, wood-framing members must be scrubbed off and surfaces sealed.
8. Wipe clean all scrubbed surfaces.
9. Spot check for any missed mold and clean.
10. Optional Disinfection Step:
 - a. Ventilate area with fresh air.
 - b. Wipe all moldy surfaces with a mixed solution of 1-cup bleach to 1 gallon of water (enough to enter pores of surface).
 - c. Do not mix bleach with any other product, especially those that contain ammonia.
 - d. Let bleach solution sit on surface for 20 minutes.
11. Wipe down any wet surfaces to remove excess moisture.
12. Let air circulate until space is dry—do not enclose space until completely dry (fans and/or dehumidifier will help speed the drying process).

Bleaching, painting over mold growth, or not correcting moisture sources does not correct unsanitary conditions or potential health hazard from mold growth. Bleaching and painting may occur following removal of mold growth listed here.

Mold with Lead Paint Clean Up

Homes built before 1978 may contain lead paint and important steps must be followed to prevent lead poisoning. Assume that all surfaces painted before 1978 contain lead paint unless a professional has confirmed your home does not have lead paint. Large areas with lead paint should be cleaned by a professional.*

Refer to Reducing Lead Hazards When Remodeling Your Home (listed under “Mold and Lead Paint Resources” on Page 4) for work other than removing surface mold such as sanding, patching, scraping, or tearing down walls, removing or replacing windows, baseboards, doors, plumbing fixtures, heating and ventilation ducts, or electrical systems.

Mold with Lead Paint Clean Up Safety Precautions:

- Do not eat, drink, chew gum or tobacco, or smoke in work areas.
- Take breaks in fresh air often.
- Wear eye protection, rubber gloves, washable or disposable clothing, including: long pants, high collared shirt, or disposable painter’s jump suit, socks, and closed-toe shoes.
- Wear a respirator (mask) that is NIOSH approved and equipped with a HEPA cartridge (The cartridges are usually purple and say HEPA or VEPA on them).
 - A paper or cotton mask will not protect you against lead dust or fumes.
 - Those with beards and facial deformities will not be able to wear a face mask and should contract with a professional;
- Remove furnishings and area rugs from the room (clean or dispose of if moldy).
- Close all doors to the work area.
- Dispose of dirty water often, and only in a utility sink or toilet.
- Do not use a fan for ventilation during clean up—a fan or open window should be used during optional disinfection in Step 7 below.
- Cover the entire floor with a six-millimeter thick polyethylene plastic sheet leaving no floor space uncovered, and attach at the base of the wall with masking tape. Tape down

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plastic sheet covers on furnishings in the room that cannot be moved out of the room such as countertops and shelves.

How to Clean up Mold with Lead Paint:

1. The moisture source that has caused the mold growth must be corrected to prevent future mold growth.
2. Turn off ventilation system.
3. Control dust by wetting all work surfaces before and during work process (use a spray bottle of water or water based detergent solution). Place a fan in nearest window to blow inside air to the outdoors.
4. All porous, non-structural materials contaminated with mold should be removed and discarded (such as wall board, insulation, wood firing strips, wood molding, ceiling tiles, etc.)
 - Place all moldy materials in extra strength garbage bag or wrap and seal in plastic sheeting. Large amounts of materials must be taken to a landfill.
5. With a scrub brush and household non-ammonia based soap or detergent, remove all visible mold.
6. Wipe clean all scrubbed surfaces.
7. Spot check for any missed mold and clean.
8. Optional Disinfection Step:
 - a. Ventilate area with fresh air.
 - b. Do not mix bleach with any other product, especially those that contain ammonia.
 - c. Wipe all moldy surfaces with a mixed solution of 1-cup bleach to 1 gallon of water (enough to enter pores of surface).
 - d. Let bleach solution sit on surface for 20 minutes.
9. Wipe down any wet surfaces to remove excess moisture.
10. Carefully fold-in plastic sheeting, seal with tape, and place for regular curbside pick-up.
11. Carefully pick-up any remaining paint chips and dispose of in a doubled zip lock bag, and place for regular curbside pick-up.
12. Wet mop all surfaces starting with the ceiling (may be combined with Optional Step 7 under “How to Clean up Mold”), changing water often, or vacuum with a HEPA filtered vacuum only. Dispose of dirty water only in a utility sink or toilet. A HEPA vacuum cleaner may be borrowed from the Columbus Health Department Lead Poisoning Prevention Program, Ph. 724-6000.
13. HEPA vacuum dust from work clothing.
14. Change your clothes and shoes before leaving the work area, take off your mask after removing your outer clothing, and place all work clothes in a bag and wash separately from other laundry.
15. Shower and wash hair.
16. Stop cleaning if you are too tired or ill. Have a friend to finish for you.
17. Let air circulate until dry and/or dehumidified.

*Note: The Ohio Department of Health has a list of lead paint contractors at Ph. (877) 668-6666 or www.odh.state.oh.us/ODHP

NOTE: Compiled by the Columbus Health Department Healthy Homes Program. While the information and recommendations contained in these guidelines have been compiled from sources that are known to be reliable, the Columbus Health Department makes no guarantee as to the completeness of information provided. *Each clean up situation is unique and additional safety measures may be required.* When in doubt, use caution and consult an experienced mold remediator. Complete remediation information is provided in the manual *Mold Remediation in Schools and Commercial Buildings* listed under Resources above. Last Updated: 8/26/03

How to choose a mold remediation professional:

Get estimates from three companies. You may find companies under Disaster, Environmental, or Restoration Services, or Mold Remediation in the Yellow Pages. When choosing a company, ask:

- what qualifications they have
- what courses they have taken
- what mold remediation certification(s) the manager has
- if a manager who is certified will be on the job site at all times when work is being done.

Choose someone that has taken a mold remediation course that provides certification recognized by a professional association and has relevant work experience. A written agreement should be provided by anyone you hire. It should state in detail the work to be done, the materials to be used, and the price breakdown for both labor and materials. Review it carefully before signing. Never pay for all repairs in advance, and don't pay cash.

Mold and Lead Paint Resources:

- **Alliance to End Childhood Lead Poisoning.** Lead information clearinghouse for landlords, tenants, and homeowners. Available online at www.aeclp.org
- **Columbus Health Department Healthy Homes Program,** Ph. 645-8191, provides advice and information on preventable indoor hazards, including mold and other asthma triggers.
- **Columbus Health Department Lead Information Hotline,** Ph. 724-6000, answers questions and provides free child blood lead poisoning screening and prevention information.
- **Mold in Homes.** Minnesota Department of Health's very informative web site on mold, health effects, and options for homeowners and tenants. Available online at www.health.state.mn.us/divs/eh/indoorair/mold/index.html.
- **Mold Remediation in Schools and Commercial Buildings.** Provides technical guidance on how to clean up mold in school commercial, and residential buildings. EPA# 402-K-01-001. March 2001. Available online at www.epa.gov/iaq or by calling the IAQ Clearinghouse at (800) 438-4318.
- **Reducing Lead Hazards When Remodeling Your Home.** EPA 747-K-97-001. September 1997. Available online at www.epa.gov/lead/leadpbed.htm. Call 800-424-LEAD (5323) to receive a free copy of this or other lead documents, or to speak with an information specialist. Bilingual (English/Spanish) staff members are available Monday through Friday, 8:30am to 6pm.