

# **Guidance**

Connecticut Department of Public Health Environmental & Occupational Health Assessment Program Environmental Health Section

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# Mold Assessment and Clean-Up: Helpful Tips for Homeowners and Tenants

#### Introduction

This document provides guidelines and helpful tips for homeowners and tenants before they begin a mold clean-up project or hire a professional to evaluate or clean up mold in a home. Included in this document are basic concepts about mold, standard practices for mold assessment and clean up, advice about when to consider hiring a professional and how to find experienced professionals, and tips on how to ensure that mold clean-up is done safely and effectively. At the end of this document, there is an extensive resource list with links to many additional sources of information.

#### Mold Abatement/Remediation

The words abatement and remediation are often used interchangeably - both refer to correcting the problem. Realistic goals for mold abatement should be to eliminate visible mold, reduce hidden mold, and/or reduce the amount and types of mold to what is normally found in similar, non-affected indoor areas. Because mold is carried indoors on clothing, shoes, pets, is blown through open windows and doors, and circulated through heating and cooling vents, it is not possible to make homes totally free from all mold.

Mold needs water to grow. The first step to take when thinking about mold abatement is to look for evidence of water damage, chronic leaks, and/or mold growth. Initially, most people can do this themselves. If you can see that water is getting into the home where it should not be, steps must be taken to stop the water before beginning any mold clean-up activities. If you decide to hire a professional mold abatement contractor, be sure to tell them where you think the water entered the home, even if it was an old leak or moisture problem that has since been repaired. More details about how to hire a professional mold abatement contractor are provided on page 5. If there is no current water damage or moisture problem, it is unlikely that your home has a mold problem.

# **Evaluation and Testing**

#### 1. Who Should Evaluate Mold Problems in a Home?

If the water source causing the mold is straightforward, such as a flood, sump pump failure, hole in the roof, or leaking faucet, you could choose to do the evaluation yourself.

If you choose to hire a professional, a home inspector can look for water damage. Home inspectors should be licensed by the CT Department of Consumer Protection and certified by the American Society of Home Inspectors, National Association of Certified Home Inspectors, or CT Association of Home Inspectors (please see the Resource List at the end of this fact sheet for further information).

In situations where someone living in the home may be more sensitive to mold exposure, there is a concern about hidden mold or the size of the mold growth is very large, you may choose to hire an industrial hygienist (IH) or indoor environmental professional (IEP). IHs and IEPs are trained in indoor mold assessment and credentialed by an independent professional organization to evaluate the situation and design an appropriate remediation plan.

Please note that the State of Connecticut does not license or credential IHs, IEPs or other professionals that conduct mold inspection or mold abatement.

#### 2. What About Testing?

In most instances, the DPH does not recommend testing the air or contaminated surfaces to find out how much or what type of mold is present. If you see or smell mold, or you see evidence of water damage, you do not need to test for mold.

If you can see or smell mold, the next step is to identify the source and then remove it. If you smell a musty odor but cannot see visible growth, mold may be hidden behind wallpaper, paint, inside of wall cavities, or other out of sight locations.

There is little to be gained from air testing in most home and workplace environments, especially if there is a visible source, because:

- Mold is everywhere—if you test the air, you will find some mold.
- There are no health-based standards for "acceptable levels" of mold in indoor environments, because different types of mold vary in ability to produce allergic reactions or illness, *and*, people vary in individual susceptibility/resistance.
- There is poor correlation between airborne concentrations of mold and health outcomes.
- Knowing air test results will not change the abatement strategy eliminating the moisture source and cleaning or removing moldy material is still the recommended course of action.

Sometimes, people may choose to perform testing as part of an investigation to look for hidden mold, or for documentation purposes (i.e., for insurance or litigation). However, testing rarely contributes to understanding what has occurred from a health perspective. For further information about testing, see the DPH guidance, Should I Test My Indoor Air?.

# When to Call a Professional Mold Abatement Contractor

If any of the following conditions apply to your home, you may wish to consider talking to a professional mold abatement contractor.

#### 1. Size of Visual Contamination

If you see more than a few isolated areas of mold, such as mold covering half of the ceiling or wall, you may want to hire professionals to perform the abatement. DPH suggests that you ask your contractor to consider following the <u>Connecticut Guidelines for Mold Abatement Contractors</u>. There is no state enforcement of these Guidelines, but you may request that these guidelines be followed as a condition of payment. Small areas of mold (for example isolated areas less than about 3 feet by 3 feet) can usually be handled safely on your own. Information about how to safely clean up small areas of mold yourself is provided on page 4 of this document

#### 2. Hidden Mold

If you can smell mold or a musty odor but can't find it, it may be in an inaccessible location, such as in a wall cavity, above a suspended ceiling, or underneath wallpaper. It is also not uncommon to find mold underneath vinyl wall coverings, especially in bathrooms and rooms that are air-conditioned or have high humidity. Sometimes, the tip-off is that a household member is experiencing chronic respiratory problems that improve when they leave the home but worsen when they return to the home. If you think you have hidden mold in your home, consider calling a professional mold abatement company.

#### 3. Floods

If water has been standing in an indoor space for longer than 24 hours in hot weather or 48 hours in cold weather, any porous materials that were soaked such as carpets, furnishings, and wallboard should be discarded as there is a strong chance that mold could be growing on these materials. Mold may also grow on the surface of tile floors and sealed wood in these conditions. A professional mold abatement contractor may be needed to perform an assessment to determine the extent of the damage and to perform the abatement in a safe manner according to established guidelines (see <a href="Connecticut Guidelines for Mold Abatement Contractors">Contractors</a>).

#### 4. Sensitive Individuals

Some individuals may have an increased risk of adverse effects from mold exposure. Those individuals may have suppressed or compromised immune systems, asthma, or other breathing difficulties, among other conditions. If mold abatement occurs in the home of a sensitive individual, special set-ups and procedures may be needed related to containment, equipment, and abatement methods. These practices may be similar to abatement protocols used in hospitals and other health care facilities. It is important that you discuss these issues with a professional mold abatement contractor who is accustomed to doing this type of work.

# Additional Information About Mold Abatement That You Should Know Before Getting Started

If you decide to hire a contractor to perform mold abatement, ask if the contractor has received any formal training specifically in mold abatement. DPH does not certify trainings; however, there are several reputable professional organizations that conduct such trainings. See the "Hiring Professionals" section of the Resource List at the end of this fact sheet. In addition, make sure the contractor you select is familiar with the DPH <u>Connecticut Guidelines for Mold Abatement Contractors</u>.

All mold removal projects should include some type of containment or isolation to prevent mold spores from spreading and contaminating other parts of the home. If your home has forced hot air heat or central air-conditioning for cooling and the ducts are contaminated with mold, there are special procedures that should be followed. Lastly, if contractors or consultants suggest the use of chemicals called biocides, it is important for you to understand their pros and cons and whether they are necessary for a particular project.

#### 1. Containment

Containment means taking actions (such as using plastic sheeting) to minimize the release and spread of mold spores throughout a building during remediation activities. For small, localized mold removal, such as cleaning surface mold from a windowsill or a few spots on a bathroom wall, isolation with plastic sheeting is not needed. You can perform these types of clean-up projects yourself. After cleaning (soap and water are effective and is the preferred method), contain the mold spores by disposing of the cleaning materials (paper towels, sponges, etc.) in a sealed zip-lock bag. For larger jobs (see *When to Call a Professional Mold Abatement Contractor* on page 3) the area may need to be cordoned off with plastic sheeting to prevent mold spores from spreading throughout the home. There are specific guidelines for contractors regarding building containments for various scenarios. Make sure the contractor you select is familiar with containment systems and is planning on using one appropriate for your job so that the rest of your home does not become contaminated with mold spores during the abatement process.

#### 2. <u>Heating, Ventilation, and Air-Conditioning (HVAC)</u>

If your home has a forced hot air ventilation system or central air conditioning system that has become contaminated with mold from floods, excessive condensation, or fouled duct liner, these systems should be remediated separately. EPA has special guidelines for the remediation of HVAC equipment. Check with your contractor to see if they will be following these guidelines. See the Resource List at the end of this fact sheet.

#### 3. Biocides

Biocides are chemicals that kill microorganisms. In general, DPH does not recommend biocides for most mold abatement. Biocides are not substitutes for cleaning and following proper abatement procedures. Some contractors have been known to leave mold in place and spray or paint it with a biocide and call that practice "mold abatement". This is not abatement. It is crucial that moldy materials be removed and discarded, and the area thoroughly cleaned. Biocides should be used only for microorganisms for which the product is registered by US EPA. While many biocides are effective against bacteria most are ineffective against mold. Biocides may cause other chemical exposures which should be explained to people living in the home before they are used.

If a professional suggests using a biocide, be sure to ask them what their reasoning is for its use and how this will fit with the mold abatement guidelines that they are following.

# How to Ensure a Job Well Done

Mold abatement is based on removing the source of the problem, preventing it from reoccurring, and cleaning up any residue. Two points to keep in mind are: 1) abatement activities should reduce the mold population to what is normally found in non-affected indoor areas, and 2) abatement will not make an area totally free of all mold.

DPH does not generally advise relying upon air testing to assess whether a mold abatement project is complete (also see *What About Testing?* on page 2). Remember, air testing results do not correlate well with health outcomes. However, if documentation for insurance or litigation purposes is needed, surface testing to verify contractor performance may be more useful than air sampling. It is desirable to do this inside of the containment structure before it is removed.

At the end of a mold abatement project:

- There should be no visible dust, dirt, or debris in the area abated.
- You should not see or smell any mold after the abatement is complete. If you do, consider hidden mold.
- Make sure all porous materials have been removed, discarded, and replaced with clean and dry materials.
- Make sure all non-porous, previously contaminated materials have been cleaned thoroughly.
- Make sure all water leaks and moisture problems have been fixed and water can no longer collect where it's not supposed to collect.

#### Where to Find Contractors

DPH does not keep list of mold abatement contractors on hand. However, there are several websites that offer lists of companies. Some of them enable you to locate a contractor near you by typing in your zip code.

Contractors performing work falling within the definition of "home improvement" (Connecticut General Statute section 20-419) must obtain a certificate of registration from the CT Department of Consumer Protection (CT DCP). This includes abatement contractors if their scope of work includes replacing building materials and/or structural elements such as window casings, sills, frames, sheetrock or plaster walls, studs, beams, etc. If the abatement contractor is solely involved in cleaning and/or demolition, they do not have to register with the CT DCP as a Home Improvement Contractor. If you have additional questions, visit the CT DCP website or call (860) 713-6100.

#### **Resource List**

DPH does not certify or endorse any of the individuals or companies listed by the organizations listed below. Each organization has its own set of requirements for membership, training qualifications, and credentialing. Before you hire someone to perform mold assessment or abatement in your home, you should ask questions about their training, qualifications, experience, and credentials.

# **General Information About Mold and Home Clean-up:**

U.S. Environmental Protection Agency (EPA) *Mold and Your Home* 

National Center for Healthy Housing (NCCH)

A Field Guide for Flooded Home Clean-up

American Industrial Hygiene Association (AIHA) Facts About Mold: A Consumer Focus

Canada Mortgage and Housing Corporation (CMHC)

Mold in Housing: Identify, Prevent and Clean-up Mold in the Home

#### **Guidelines for Mold Remediation/Abatement:**

<u>Connecticut Guidelines for Mold Abatement Contractors</u> (Scroll down to "Remediation/Abatement")

Connecticut Department of Public Health

Guidelines on Assessment and Remediation of Fungi in Indoor Environments

NYC Department of Health & Mental Hygiene

Mold Remediation in Schools and Commercial Buildings

U.S. Environmental Protection Agency (Note - the principles are also useful in residential settings)

Should You Have the Air Ducts in Your Home Cleaned?

U.S. Environmental Protection Agency

# **Hiring Professionals:**

#### **Licensed Home Inspectors**

All home inspectors must be licensed by the CT Department of Consumer Protection (CT DCP), visit their website or call (860) 713-6100 for more information.

Licensed Home Inspectors may be affiliated with one or more of the following organizations:

- American Society of Home Inspectors (ASHI)
- National Association of Certified Home Inspectors (NACHI)
- <u>CT Association of Home Inspectors</u> (CAHI)

#### **Industrial Hygienists**

- American Industrial Hygiene Association (AIHA)
- American Conference of Governmental Industrial Hygienists (ACGIH)
- Board for Global Environmental Health and Safety Credentialing

#### **Indoor Environmental Professionals/Consultants**

American Council for Accredited Certification (ACAC)

#### **Mold Abatement Contractors**

- Institute of Inspection Cleaning and Restoration Certification (IICRC)
- Restoration Industry Association (RIA)

# **Indoor Environmental Quality Testing:**

Should I Test My Indoor Air? (Scroll down to "Mold Testing")
Connecticut Department of Public Health

For more information, contact:

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