

Controlling Mold and Moisture

Household Mold Guidance for Local Health Professionals



Indoor Air and Radon Program

Division of Public Health | Bureau of Environmental and Occupational Health

dhs.wisconsin.gov/mold | dhsenvhealth@wi.gov | P-02069 (1/2018)



Introduction

Controlling Mold and Moisture Toolkit



Background

Indoor mold is a challenge experienced by families, homeowners, renters, and landlords everywhere. Local public health professionals are often an initial source for responding to questions and concerns when mold appears inside someone's home. Although each situation is unique, there is one consistent message: **the solution to mold control is moisture control.**

This toolkit is designed to assist local public health professionals respond to questions about mold. The toolkit is centered around five key messages for responding to mold situations. These five messages, along with the additional resources included, will provide a solid foundation for responding to mold situations.

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Responding to Mold Concerns

Controlling Mold and Moisture Toolkit



Key Messages

Mold concerns can be complex and difficult to handle. These five key messages are designed to provide a solid foundation when responding to these concerns over the phone or in-person. You can rely on these messages and build on them with the additional information found throughout this toolkit.

5 Key Messages When Responding to Mold Situations

- 1. Moisture control is key—find the source of moisture, repair, and clean the mold.
- 2. Testing is usually not necessary. If you can see or smell mold, it is present.
- 3. Most people do not react to mold, but people with allergies, respiratory conditions, or weakened immune systems can experience health effects.
- 4. Tenant and landlord resources are available to help navigate conflict, repair, and cleaning issues.
- 5. Additional information and resources can be found by visiting the <u>DHS mold webpages</u> or by calling a mold contractor, building inspector, or indoor air consultant.

The remaining sections build on these five key messages and contain in-depth information on each topics.

For fact sheets on these topics that you can hand out to the public, see Appendix D.

When Should I Refer Residents to DHS?

Please do not immediately refer citizens with mold concerns to DHS. If you are contacted by a resident with a difficult case, collect as much information as possible and then call DHS directly to consult on how to handle the situation. This process will keep residents from being bounced around and will provide continuity with handling mold concerns throughout the state.

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Helpful Resources When Responding to Mold Concerns



Wisconsin DHS Mold Webpages

- **Great reference for residents**: If residents have questions or need guidance, this is an easy and useful resource you can refer them to.
- **User-friendly**: The DHS mold pages have a user-friendly interface that makes it easy for users to find the information they need.
- Wisconsin-specific information: Residents will find information related to cleaning indoor mold, controlling mold, Wisconsin tenant and landlord information, health guidance, and the Wisconsin mold contractors list.



Environmental Law Institute: Indoor Air Quality Guide for Tenants

Tenant-specific resource: The Indoor Air Quality Guide for Tenants offers a starting point
for tenants and public health professionals to learn more about indoor air quality. It
describes common indoor air problems, explains what laws might apply to indoor air
problems in rental properties, and suggests where to look for more information in
resolving these issues.

EPA's Mold Webpages

- **General and comprehensive resource:** Useful for both residents and public health professionals.
- Information in Spanish: Find publications, fact sheets, and mold information in Spanish.

CDC: Mold After a Disaster

• Mold-specific guidance after flooding: Guidance, fact sheets, and infographics on how to handle indoor mold growth after a flooding event.

Wisconsin Flood Toolkit

• **Flood response guidance:** Wisconsin-specific information for local governments, health departments, and residents about preparing for and responding to flood events, which includes addressing issues related to mold.

Finding the Moisture Source

Identify the Source, Repair, and Clean



Tiny mold spores are all around us, both indoors and outdoors. These tiny mold spores travel easily through the air and begin to grow indoors when moisture is present. A building will never be completely free of mold spores; however, indoor mold growth can be prevented and controlled.

Identify and Fix Any Moisture Source in the Home

With any mold issue, the first recommendation should be to find and fix the moisture source. Since moisture is essential for mold growth, residents should quickly identify and fix any source causing excess moisture indoors. Household problems that can lead to indoor moisture problems include:

- Roof leaks
- Leaking pipes or plumbing fixtures
- High indoor humidity
- Damp basement

- Condensation due to high humidity
- Flooding
- Sprinkler system failure
- Water drainage problems

After all water problems have been fixed, residents should clean the moldy area and keep the area dry (more information on mold cleanup can be found on page six).

Complex Situations

If the resident cannot identify the moisture source, or if you sense there is a large water problem, recommend a professional home inspection. This can be done by a housing or building inspector, mold remediation contractor, or an indoor air consultant.

- Housing or building inspector: Building inspectors are experts on issues related to building
 codes and potential building code violations. While they are not experts in mold
 remediation, they can often times point to structural issues or building code violations that
 could be leading to indoor mold problems.
- **Mold remediation contractor:** These contractors are experts in mold cleanup or the removal of contaminated building materials.
- Indoor air consultant: These consultants are experts in evaluating more complex indoor air problems, explaining causes to a homeowner, designing solutions, and overseeing cleanup work, if necessary.

The Wisconsin Department of Health Services maintains a list of Wisconsin <u>mold remediation</u> <u>contractors</u> and <u>indoor air consultants</u>. This list is a useful resource that can be used to help point residents in a helpful direction.

Contact information for housing or building inspectors in your area can usually be found through a basic internet search.

Testing for Mold

The Wisconsin Department of Health Services does not recommend testing for mold. This is one of the most frequently asked questions when dealing with mold concerns. If you see or smell mold, there is mold present. Other reasons testing is not advised include:



- Federal standards or limits for airborne mold concentrations or mold spores do not exist.
- Mold spores are everywhere around us, indoors and outdoors.
- Mold testing can be expensive.

If a resident asks about testing for mold, recommend that they first identify and fix any moisture problems, and clean and dry the moldy area.

How to Respond When Test Results are Provided

While DHS doesn't recommend testing for mold, it is common to receive mold test results from residents. As no health-based standards exist, it can be hard to know how to interpret the results. When this happens, please call DHS to discuss the results.

Important reminders:

- Never make recommendations based on test results alone. Always follow-up test result
 analysis with a visual inspection to identify the source and determine any health
 implications.
- Indoor mold test results should always have a comparison. Compare results from moldy areas to non-moldy areas or inside to outside samples.
- The amount and types of airborne mold vary greatly by season.
- Mold test results are usually shown in spores per cubic meter (spore/m³).

Mold Prevention Tips for Residents

Important actions can be taken to prevent indoor mold from becoming a problem:

- Keep indoor spaces well ventilated and dry; air conditioners and dehumidifiers help.
- Keep indoor humidity levels below 50%.
- Clean bathrooms often and keep surfaces dry; run the bathroom ventilation fan during and after showers.
- Promptly fix water leaks.
- Clean up and dry your home fully and quickly (within 24-48 hours) after any flooding event.

Cleaning Indoor Mold

Clean What You Can



Before Cleaning

Residents should find and fix any moisture source within their home before cleaning since mold can return if the moisture source is not addressed. Important reminders for cleaning indoor mold:

- **Do not mix ammonia or bleach with other household cleaners.** Some household cleaners contain ammonia. If ammonia is mixed with chlorine bleach, a toxic gas can form, causing serious injury or death.
- Ensure rooms being cleaned are well-ventilated. Breathing fumes from cleaning solutions can be harmful.
- Discard materials that are wet and cannot be thoroughly cleaned and dried within 24 to 48 hours, as they can remain a source of microbial and mold growth.
- Use personal protective equipment when cleaning mold:

Those with respiratory conditions, allergies, or weakened immune systems should avoid mold cleanup if possible.









Small Scale Mold Cleanup

Mold that is found in the bathroom, on the windowsill, shower curtain, or wall can be wiped off the surface with a damp cloth or scrub brush and a cleaning agent (e.g., window or bathroom cleaner).

Large Scale Mold Cleanup

For situations that have mold covering more than 10 square feet (about 3 feet by 3 feet), a mold remediation contractor should be recommended. These situations are usually a result of flooding, leaking pipes, structural issues, and other major moisture issues.¹

If a resident decides to do large-scale mold cleanup themselves, refer to Appendix A for guidance on how they should conduct this cleanup.

Important Note on Ozone Air Cleaners

Residents should not use ozone air cleaners to kill mold. Ozone air cleaners generate ozone, a known respiratory irritant. The U.S. Environmental Protection Agency does not recommend using ozone generating air cleaners. If a contractor recommends the use of an ozone air cleaner to treat mold problems in a home, residents should file a complaint with the Department of Agriculture, Trade and Consumer Protection at 1-800-422-7128.

Indoor Mold and Health

Know the Facts



Anyone with questions or concerns about how mold is affecting their health should discuss those concerns with their doctor. Being around mold does not always mean there is an immediate health problem; however, some people are more sensitive to mold. Below is general health information on how mold can impact health.

Mold Affects Everyone Differently

Most people do not experience major health effects from mold. For most people, being around mold causes nothing more than itchy eyes, coughing, or sneezing. For others, it can have more serious effects like an asthma attack or lung problems. Groups of people that could be more sensitive to mold include:

Residents should talk with their doctor about any specific health concerns. Only doctors and health care professionals should make a medical diagnosis.

- Children and adults who suffer from allergies or asthma.
- People with existing respiratory conditions or a weakened immune system (for example, those undergoing chemotherapy or who have HIV/AIDS).

Those with asthma, respiratory conditions, or weakened immune systems should stay away from areas with mold and should avoid mold cleanup areas.²

Common Symptoms

Allergic reactions to mold are common. Symptoms of mold sensitivity may include:

- Nasal stuffiness
- Headache
- Wheezing
- Irritation to the eyes, skin, nose, throat, or lungs

Mold can cause asthma attacks in those with asthma and who are allergic to mold.

Medical and public health professionals can find more guidance about this topic on the <u>DHS Mold and Health Guidance webpage</u>.

Other Potential Sources of Allergens

When discussing mold symptoms and allergens with residents, other potential indoor sources of allergens should be reviewed. These could include: tobacco smoke, pet allergens, and dust mites.

When is Mold a Health Hazard?

Regulatory or health-based standards for human exposure to mold do not exist.

No specific number has been identified that defines mold exposure as safe or unsafe. Since mold spores are found everywhere in the air—both indoors and outdoors—it is not practical to develop a health-based standard. You can consider these guidelines when making decisions to determine if a certain situation should be deemed a health hazard:

- Emphasize moisture control and mold cleanup.
- If moisture is controlled and mold is cleaned, sampling or testing for mold is not necessary.
 - If samples were taken, compare results from moldy areas to non-moldy areas and outside samples.
- Determine if children or adults with asthma, weakened immune systems, or respiratory conditions are living in the home.
 - If so, and if these individuals are experiencing health effects, recommend that they leave the area and quickly contact a mold remediation professional to fix the problem.

Consider these guidelines and review your county or city ordinances to make a final decision whether or not a mold-related health hazard exists.

Toxic or Black Mold

To date, no scientific evidence exists to positively link residential exposure to mold with specific toxic effects.³ The majority of human exposures to mold toxins have occurred from ingesting moldy food. Some workers, such as farmers and people who work in greenhouses where high levels of mold can be found, may have additional risk of breathing in mold.

According to the Centers for Disease Control and Prevention, the term "toxic mold" is not accurate. While certain molds are toxigenic, meaning they can produce toxins, the molds themselves are not toxic or poisonous. Reports of toxigenic molds causing health problems are very rare, and scientists have not found a link between toxigenic mold and major health effects.⁴

The terms "black" or "toxic" mold can cause fear and panic in homeowners and renters. Black mold (known by its scientific name *Stachybotrys*) while not rare, is less common than other indoor molds. The most common indoor molds are *Penicillium*, *Aspergillus*, *Cladosporium*, and *Alternaria*. **Black mold is the same as other molds in your home and should be treated the same.**

While there is no scientific evidence linking home exposure to specific toxic effects, indoor mold can still affect children and adults with asthma, weakened immune systems, and/or respiratory conditions.

Tenant and Landlord Information

Guidance for Renters



When moisture problems occur in rental properties, it may be unclear how to get them fixed. The tenant should always give the landlord the opportunity to correct building defects and should immediately notify the landlord when a moisture problem arises. The tenant has the responsibility to immediately repair moisture problems for which they are responsible.

Before Signing a Lease

- It is important that renters inspect the apartment for evidence of moisture problems. Look for stained carpeting or water stains on the walls or ceiling.
- Pay close attention to plumbing locations and take note of musty odors.
- Anyone who has asthma or other respiratory conditions may want to avoid units with
 evidence of water damage, older carpeting, smoking, and slab-on-grade or below-grade
 (i.e., garden view) units that have higher humidity levels.

Resolving Conflict

Landlords have a duty to keep the property in a reasonable state of repair and to make necessary structural repairs. Tenants have certain rights where conditions in the property affect the health or safety of the tenant (Wis. Stat. ch. 704 Landlord and Tenant).

- **Step #1:** The tenant should always contact their landlord and describe any environmental concerns. The tenant should document in writing the detailed condition of the property, including photos, date, time, who was notified, and when you notified them.
- Step #2: If the concerns are not resolved, the tenant can contact their local building
 inspector or a mold remediation contractor to describe the mold or moisture problem.
 Either authority may be able to help confirm the problem and recommend an appropriate
 solution. Local building inspectors who are familiar with local building codes can often
 times investigate building code violations involving indoor moisture.

If No Resolution

If a mold or moisture issue has been verified and a landlord fails to correct it, the tenant may file a complaint with the <u>Department of Agriculture Trade and Consumer Protection</u> (DATCP). DATCP can be reached at 800-422-7128.

Tenants can visit <u>www.judicare.org</u>, <u>www.legalaction.org</u>, or <u>www.wisbar.org/lawyersearch</u> to seek legal assistance. It is wise to do this before they take any action on the lease or withhold rent.

Hiring a Mold Contractor

What You Should Know



When to Recommend Hiring a Contractor or Consultant

You should always recommend that the resident perform a personal inspection to find and fix a moisture problem. However, certain situations might require you to recommend a professional mold contractor or indoor air consultant. These situations include:

- When there is a problem with high indoor humidity or stagnant water within the home.
- When the moisture source can't be found through a personal inspection.
- When mold covers an area larger that 10 square feet or is causing structural damage to the home

Indoor air consultants can conduct indoor air quality investigations and determine when mold is causing structural issues. They can also understand why mold is growing and what actions need to be taken to prevent mold growth.

DHS Consultants and Contractors List

The Wisconsin Department of Health Services website contains a list of indoor air consultants and mold remediation contractors around the state. These are listed by county:

- Indoor Air Quality Consultants
- Mold Remediation Contractors

DHS does not endorse any company listed on its webpages, nor does it imply preference over other companies not listed. The list is a resource to those interested in obtaining these specialized services.

Tips and Recommendations on Hiring a Contractor

Below are important reminders you can offer to residents regarding steps they can take to ensure they hire a reputable consultant or contractor.

- Get more than one estimate. Make sure that the contractor comes to the job site rather than giving a telephone estimate. Be leery of extremely low estimates.
- Ask for the names of recent customers and call to see if they are satisfied.
- Get a written inspection report.
- Avoid contractors who claim to remove all mold from your building. A building cannot be made mold-free.
- Find out if complaints have been filed against the contractor by calling the Department of Agriculture, Trade and Consumer Protection (DATCP), Bureau of Consumer Protection, 800 -422-7128.

Frequently Asked Questions



Responding to Questions from the Public

What can we do if we have mold?

First, find the moisture source and fix it. Moisture is what allows mold to grow. Once the moisture problem is fixed, clean what you can and keep the area dry. Remove and throw out any porous materials that are wet or cannot be thoroughly cleaned within 24 to 48 hours.

How can I tell if I have mold?

If you can see or smell mold, there is mold present. Look for discoloration or previous water damage around the home to identify potential locations for mold growth. Visible mold growth can also be found underneath materials where water has damaged surfaces or behind walls. Testing is not necessary to identify mold.

Should I test my home for mold?

We do not recommend testing to determine if there is a mold problem. If you see or smell mold, there is mold present. Testing for mold can be expensive. Air standards for indoor mold levels do not exist. The first step should be to find the moisture source, fix it, and then clean the area.

We have toxic black mold! What should we do?

The term "toxic black mold" is not accurate and often makes people feel scared or panicked. Certain molds are can produce toxins, but the molds themselves are not toxic or poisonous. Mold that is toxic and causes health problems is very rare. Scientists have not found a link between inhaled mold and major health problems.

It is important to note that black mold is like other molds in your home and should be treated the same. The most important thing you can do is to find the moisture source, fix it, and clean what you can. Remove and throw out any porous materials—like furniture, carpet, and drywall— that are wet or cannot be thoroughly cleaned within 24 to 48 hours.

Is mold making me sick?

Not everyone is affected by mold. Some people might have allergic reactions to mold, while others do not. Those who are sensitive to mold might typically experience nasal stuffiness, eye irritation, wheezing, or skin irritation. Mold can cause asthma attacks so anyone who has asthma or trouble breathing should stay away from moldy areas.

Are my kids in danger?

Not everyone is affected by mold. However, infants and children that have asthma, or have problems breathing should be kept away from moldy areas. If you have special concerns about this, you should talk with your doctor, especially if anyone is having health problems.



I feel sick and would like someone to come inspect my home. What can I do?

First, make sure you've fixed any leaks or water problems and cleaned what you can. If doing this doesn't solve the problem, you can call a mold remediation contractor or indoor air consultant. These professionals can help identify the problem and/or design a cleanup plan. As a reminder, we do not recommend testing for mold. If you would like to talk more about any health related problems, the best thing you can do is to discuss them with your doctor.

Important Questions to Ask Residents Dealing with Mold Concerns

Handling any mold situation requires the responder to ask important questions and gather some important pieces of information. The following suggestions are questions you should consider asking residents as you answer their questions and make suggestions:

- Can you see mold growing on any surfaces?
- Has there been any flooding or water leaks within your home?
- Have you discussed this with your landlord or property owner?
- What steps have you (or your landlord) already taken to try and fix the problem?
- If there are comments of sick individuals: Do you/they feel better being away from home for a while? Could you/they be getting sick from day care, school, or work?
 Could there be something else causing allergic reactions, such as tobacco smoke or pet dander?
- Have you discussed these health concerns with your doctor?

Appendix A

Large Scale Mold Cleanup



The following guidance is for cleanup of mold covering more than 10 square feet (about 3 feet by 3 feet). These situations are usually a result of flooding, leaking pipes, structural issues, and other major moisture issues.

If a resident decides to do large scale mold cleanup themselves, you can refer to these suggestions on how to conduct this cleanup.

Step I: Gather Materials

Gather the following items:

- Personal protective equipment: protective gloves (non-latex, vinyl, nitrile, or rubber), goggles, and at least an N-95 respirator to protect your nose and mouth.
- Three spray bottles and three buckets that will hold at least a gallon of water.
- Paper towels, disposable rags, heavy-duty garbage bags, and plastic to seal off room.
- General household cleaner (only use cleaners without ammonia).
- Regular household bleach (between 1% and 5% chlorine). Please note: bleach is typically
 not necessary to clean up mold, unless a sewage release occurred. In this case, both mold
 and bacteria can be reduced using a bleach solution as a final disinfecting rinse.
- Commercial grade HEPA vacuum. Do not use a home vacuum since it is not designed for this type of work. Local health departments can provide information on where to rent a HEPA-Vacuum in your area.
- Dehumidifier. Do not use a fan since it can cause mold spores to be released.

Step 2: Organize Materials

WARNING: Do not mix bleach with other household cleaners. Some household cleaners contain ammonia. If ammonia is mixed with chlorine bleach, a toxic gas can form, causing serious injury or death.

- **Spray bottle #1:** Mix general household cleaner and water in a bucket. Transfer to spray bottle.
- **Spray bottle #2:** Using gloves and goggles, add 1 cup bleach for every gallon of tap water in a bucket, then transfer to spray bottle. Bleach is necessary when there has been a gray or black water release (from sewage or laundry).
- Spray bottle #3: Clean, warm water for rinsing.

Step 3: Apply the Solution, Clean the Area

Caution: The bleach solution is irritating and harmful to the skin, eyes, and clothing. Avoid direct contact with the bleach by wearing rubber gloves, respirator, and goggles during the entire mixing and cleaning process.



Prepare the work area:

- Seal off the room from the rest of the house with the plastic and tape.
- Keep children and animals out of the work area during the cleaning procedure.
- Do not eat, drink, chew gum or tobacco, or smoke at any time during the cleaning.
- Use a dehumidifier prior to, during, and after the clean-up to keep areas dry and prevent mold from reoccurring.

Remove the mold:

- If there is no water release involved (from sewage or laundry), spray the mold with general household cleaner (spray bottle #1). Scrub from the top and work down, changing towels frequently. Discard towels in a plastic bag. Rinse the same area with clean water on a damp towel or lightly spray with warm rinse water in a spray bottle (spray bottle #3) and wipe with a clean towel. Repeat until all visible mold is gone.
 - ♦ If the surface with mold growth is rough, scrub the surface with a stiff brush.
- If water release is involved (from sewage or laundry), spray with bleach solution (spray bottle #2), wipe affected area of mold, and let stand for 15 minutes. Rinse the area with a damp towel using clean warm water or by lightly spraying with warm rinse water in a spray bottle (spray bottle #3) and wipe with a clean towel.

Step 4: Clean Up the Work Area

- Allow the surface to dry to the touch.
- Use the HEPA vacuum to remove allergens. Place the HEPA vacuum bag into a garbage bag and dispose of it with the normal garbage.
- Flush wastewater down the toilet, utility sink, or floor drain.
- Change out of your cleaning clothes and wash them separate from your family's laundry.
- Wash hands and face.

At this point, the resident can apply paint or other coating to the surface if desired. A paint or coating that contains a fungicide is best to prevent future mold growth. Residents should be sure to follow the manufacturer's instructions and recommendations when using any mold-resistant paint or paint additive. These products are also pesticides and may have adverse health effects on some people.

Appendix B

Flood Recovery and Mold Talking Points



Wisconsin DHS Flood Toolkit

For detailed information on preparing for and responding to flood events, refer to <u>Wisconsin's Flood Toolkit</u>. The toolkit focuses on providing practical guidance, strategies, media releases, additional talking points, and useful references during a flooding event, which often includes addressing issues related to mold.

There is mold in my home after flooding. What should I do?

- Do not allow people with breathing conditions such as asthma to enter areas where mold is likely or suspected.
- Wear an N-95 mask for cleanup (available at hardware stores), gloves, and boots. Once damaged materials have been removed, use a one cup bleach to one gallon of water solution to thoroughly clean all surfaces touched by flood waters, as well as any exhibiting signs of mold.
- Do not mix products containing ammonia—which can be found in many cleaners—with bleach, as a harmful gas will be formed and can cause serious injury.
- Dry out water-damaged areas thoroughly, and keep ventilating (open windows, use fans, etc.) during cleaning.
- Remove and throw out damaged or wet flooring, carpeting, furniture, drywall, insulation, books, children's stuffed animals, etc., to prevent mold growth.

Where can I find additional resources on flooding?

- Wisconsin Flood Toolkit
- Mold specific guidance
- Recommendations for Private Wells Inundated by Flooding

Key Reminders:

- Mold testing. Testing for mold is not necessary. If you see or smell mold, it is present.
- Protect yourself. Always use protective equipment when performing cleanup or other activities in buildings after a flood.
- Generators. Keep portable generators 20 feet away from your home when in use, venting away from other people and homes.

Appendix C

Social Media Post Templates



Social media is a great way to get information out to the public on how to effectively manage and prevent mold problems. Below are some suggestions that you can use, especially during the spring and summer months.

Social Media Post	Notes
Have mold? Moisture control is the key. Find the water source, fix it, and clean what you can. Check out the DHS website for more information on mold.	Photo: leaky pipe, icon of broken pipe, mold in house.
Dealing with mold after a flood? Damaged or wet items like furniture or children's stuffed animals should be removed and disposed of to prevent mold growth. Learn more about cleaning mold after a flood.	Photo: wet items, rubber gloves for cleaning Note: Can be used after heavy rains or flooding
The key to mold is moisture control! Identify and fix any moisture source like leaky pipes. Learn more about moisture control!	Photo: leaky pipes, icon of broken pipe
Food, temperature, moisture. The three things mold needs to grow. Learn how to keep your home mold-free!	Embed link to website or factsheet
Spring cleaning! Time to check your home for common issues such as leaking roofs, pipes, or plumbing fixtures and flooding, as these issues can lead to mold growth if not fixed.	Photo: Spring cleaning picture

Additional Social Media Resources

Social Media at CDC—Learn more about social media and sharing public health information.

Free Stock Photos (No Citation Needed)

The following websites contain free stock photos that can be used in social media posts or other settings:

- Public Health Image Library (PHIL)
- Pixabay.com
- Pexels.com

Appendix D

Fact Sheets for Public Distribution



Mold Basics

Molds are simple, tiny organisms found everywhere around us, both indoors and outdoors.

Tiny mold spores travel easily through the air. When the situation is just right, mold spores can grow indoors.

By taking important steps, you can prevent and control mold growth inside your home.

How Mold Grows

Mold spores need three things to grow:







Moisture



The right temperature

The Key to Mold Control is Moisture Control



Moisture, or water, is essential for mold to grow. Common household problems that can lead to mold growth include leaking roofs, pipes, or plumbing fixtures, and flooding.

Three steps for dealing with mold:

- 1. Quickly identify and fix the moisture source. Mold testing is not necessary; if you see or smell mold, mold is present. All mold should be treated the same.
- 2. Clean as much of the moldy area as possible.
- 3. Keep the area dry through good ventilation and/or a dehumidifier.

Mold and Your Health

Discuss any concerns you have about mold and your health with your doctor.

Mold affects everyone differently. Being around mold does not mean there is an immediate health concern.

Some people experience allergy-type reactions such as nasal stuffiness, wheezing, or itchy eyes.

Some people can have stronger reactions and should avoid moldy areas. These people include:

- People with asthma
- Children and the elderly
- Those with breathing problems or weakened immune systems (like those with cancer)

Who to Call

Mold remediation contractors and indoor air consultants can help fix mold problems. A list of these Wisconsin professionals can be found at:

www.dhs.wisconsin.gov/mold

You will find detailed information on hiring a contractor. These professionals can help fix the problem.

Remember, the key to mold control is moisture control.

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Cleaning Indoor Mold

Who Should Clean?

Those with breathing problems, allergies, or weakened immune systems should avoid mold cleanup.

If the moldy area is smaller than a 3 feet by 3 feet patch, you can usually clean the mold yourself. This might include mold spots in or above your shower.

For larger mold problems (patches covering more than 3 feet by 3 feet), consider calling a remediation contractor.

Who to Call?

If you need professional mold cleanup, remediation contractors and indoor air consultants are available. A list of these Wisconsin professionals can be found at:

www.dhs.wisconsin.gov/mold

You will find helpful tips on hiring a contractor. These professionals can help fix the problem. *The Wisconsin Department of Health Services (DHS) does not endorse any company listed.*

Before You Clean

- Always find and fix the problem causing the mold growth. Find and fix plumbing leaks, roof leaks, and other water problems before trying to clean. Mold can return if the water source is not fixed, even after a good cleaning.
- **Never mix ammonia or bleach with other household cleaners.** If you mix ammonia with chlorine bleach, a toxic gas can form, causing serious injury or death.
- Always ventilate rooms being cleaned with an open window or fan and always use proper personal protective equipment when cleaning mold. This equipment is available at most hardware stores.



N-95 Mask



Gloves



Rubber Boots



Goggles

Cleaning Phase

- 1. Add one cup of bleach for one gallon of water.
- Using the water and bleach solution, scrub mold off hard surfaces. Rinse the area with a clean towel.
- 3. Keep the area dry and well ventilated.
- After cleaning, throw away all cleaning materials, flush wastewater down the toilet, and wash your hands and face.
- 5. For more detailed cleaning instructions, visit:

www.dhs.wisconsin.gov/mold

Important Reminders

- 1. The key to mold control is moisture control. Find and fix any moisture problems to control mold.
- 2. Keep children and pets out of the cleanup area.
- 3. Do not use ozone air cleaners to kill mold.
- 4. Moldy, absorbent materials such as ceiling tiles, carpet, and furniture should be thrown away.

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Preventing Problems

Before signing a lease, carefully inspect the residence for evidence of moisture problems: stained carpets, water stains on ceiling, or water marks around plumbing locations. Take note of musty smells.

Run the bathroom ventilation fan after showers.

Maintain humidity below 50% by using air conditioning or a dehumidifier to help.

Notify your landlord early and in writing of any problems. Work with your landlord to fix building issues.

Make sure leaks and repairs are fixed properly.

Housing Code Violations

Many jurisdictions have housing, building, or property maintenance codes.

If a building has structural issues or code violations causing excess indoor moisture, inspection agencies can often times order the owner to fix the problem.

If this situation applies to you, learn more by contacting the following professionals:

- Local or county building inspector
- Local code enforcement office
- Local public health department

Resolving Conflict

Landlords have a duty to keep the property in a reasonable state of repair and to make necessary structural repairs. Tenants have certain rights when conditions on the property materially affect health or safety of the tenant.

- **Step 1:** Contact your landlord and describe your mold concerns. In writing, document the condition in detail, including photos, date, time, who was notified, and when.
- **Step 2:** Contact your local building inspector or health department to describe the mold or moisture concern. Either authority may be able to help confirm the problem and recommend how to fix it. Local building inspectors who are familiar with local building codes can often investigate building code violations involving indoor moisture.

If a landlord fails to fix a verified mold or moisture problem, you may file a complaint with the Department of Agriculture, Trade and Consumer Protection (DATCP) by contacting the Consumer Protection Hotline at 800-422-7128.

Other Helpful Resources

Legal Action of Wisconsin: Free legal services to low-income people throughout central and southern Wisconsin, related to housing law. *www.legalaction.org*

Judicare: Nonprofit law firm dedicated to providing equal access to justice for residents throughout northern Wisconsin. *www.judicare.org*



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References



- 1. Environmental Protection Agency: A Brief Guide to Mold, Moisture, and Your Home. https://www.epa.gov/sites/production/files/2016-10/documents/moldguide12.pdf
- 2. Environmental Protection Agency: Mold and Health. https://www.epa.gov/mold/mold-and-health
- 3. Indoor fungal infestations and mycotoxicity: guidance for public health professional and industrial hygienists. Robert Thiboldeaux, PH.D., Toxicologist, Wisconsin Bureau of Environmental and Occupational Health. https://www.dhs.wisconsin.gov/publications/p4/p45074.pdf
- 4. Centers for Disease Control and Prevention: Facts about Stachybotrys chartarum and Other Molds. https://www.cdc.gov/mold/stachy.htm#Q1
- 5. Icons from The Noun Project

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