Should You Test the Air in Your Home for Mold?

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INTRODUCTION

Molds are microscopic fungi, the very tiny members of the same family that includes mushrooms and yeasts. They grow and reproduce rapidly. Molds can be useful—penicillin comes from one type of mold. Other molds help humans make some foods and beverages.

Mold can also be harmful. It can damage and even ruin materials, such as paper, cardboard and fabrics.

Mold can affect your health and your family's health.

Health experts say that molds can cause allergic reactions and illnesses, depending on the type of mold, the amount and degree of exposure and the health condition of a home's occupants.

Pregnant women, infants, the elderly and people with a respiratory disease or a weakened immune system, are at risk when exposed to mold.

If you suspect there is mold in your home that is causing health problems, you can do a preliminary examination of your home yourself. *The Clean Air Guide* and *Clean-up Procedures for Mold in Houses* have checklists that you can use. You may be able to find the problem yourself. If you are unsure, you may want to hire a professional to help you. You do not want to renovate until you have verified the problem and the causes.

The first thing that comes to people's minds when they suspect mold is to have the air of the house tested. This involves collecting an air sample and sending the sample to a laboratory for analysis.

TESTING FOR MOLD

Canada Mortgage and Housing Corporation (CMHC), the U.S. Environmental Protection Agency (EPA) (http://www.epa.gov/mold/moldresources.html) and the American Industrial Hygiene Association (http://www.aiha.org/Content/AccessInfo/consumer/factsaboutmold.htm) do not recommend testing the air for molds in single-family dwellings and similar buildings as a first step. The recommended first step is having a trained investigator check your house for mold.

CMHC has a program that trains qualified individuals to investigate houses for indoor air quality problems, including mold. An experienced investigator can determine if your house has a mold problem. An investigation starts with your home's background—is there a history of flooding? Has the roof or plumbing leaked? The investigator then checks for visible signs of mold, the presence of moldy odours and other indicators. The inspector determines the extent of the mold. The larger the affected areas, the higher the concentration of mold in the indoor air. The extent of mold is important in assessing risks to health. It determines how the remediation should be done, who should be doing it and what kind of isolation strategies and protective equipment are needed to protect the workers, the occupants and their furnishings.

A thorough investigation based on building-science principles is more helpful than testing the air. An air sample test does not pinpoint sources of moisture, tell you why you have a mold problem or suggest ways to fix it. A trained investigator determines causes and suggests ways to remediate and repair problems.

An investigator who follows the CMHC Residential Indoor Air Quality Investigation Procedure provides you with a written report that includes recommendations.

In the majority of cases, the homeowner has everything needed to proceed to remediate the problem. You don't need to know what kind of mold is growing before making a plan to remove it. The solution is the same whether the mold is a toxic mold or a common type of mold.

There may be some situations where mold testing may be necessary: for instance, you are involved in litigation and your lawyer wants to have the molds identified, or someone in the house is sick and the family physician has asked for mold tests, or you believe the information is essential in making some important decisions.

When the mold is visible or you know where it is hidden, the suggested procedure is to take actual samples of the mold. You see the mold, you sample it and have it identified. It is a straightforward process. Material is scraped from the moldy surface or lifted with a piece of transparent tape or cut from moldy drywall or ceiling. The samples are placed in plastic bags, sealed and labelled carefully and sent to the laboratory for analysis. You also want to document, with photographs, the locations the samples were taken from.

In a few cases, mold is strongly suspected but is not seen and you are not prepared to start taking walls down. The moldy odour may also be occasional and you are unsure whether mold is a problem. Testing the air may be justified.

A trained investigator may advise mold testing after inspecting your house if the investigator couldn't find the mold because it is hidden (for example, in a wall, in the attic or in the crawl space). Or, the investigator may have found mold but isn't sure if it is affecting your family's health.

TESTING THE AIR

If your investigator advises you to test air samples for mold, factors to consider include:

- Ensure that the investigator has the expertise and the proper equipment to perform the testing. For more information, visit the American Industrial Hygiene Association's website (http://www.aiha.org/content/accessinfo/consumer/guidelinesforselectinganindoorairqualityconsultant.htm). If your investigator isn't able to sample the air in your house, ask the investigator to recommend someone who can do the sampling. This individual, not the laboratory, interprets the results.
- Ask the person collecting the samples about the laboratory that will analyse the samples. Be sure that it is recommended by your municipal or regional medical officer of health, your provincial or territorial public health department or is used by the federal government.
- At least two samples at different times (early morning and evening) should be taken for each area of concern in the house.
- Outdoor samples should be taken for comparison. If a significant proportion of the mold or molds found indoors are not found outdoors, this usually means there is an indoor mold source that needs further investigation.
- Spore counts or "colony forming units" alone have little or no value. A laboratory test identifies the types of molds, either by genus (family) or by species. Identification by genus is less expensive but doesn't tell you as much as species identification. For instance, you may be told you have mold of the genus Penicillium, but not which species of Penicillium. This can matter because some species grow on food and others on building materials.

Air sampling alone provides no information about health risk. Decisions cannot be made based on the laboratory results. If there are strong indications that mold is growing in the house, intrusive checking is needed to find the mold.

Removing mold must be done carefully under controlled conditions. For information about removing mold, go to the Health Canada website at http://www.hc-sc.gc.ca/index_e.html and enter "mold" in the search box.

The most important point about removing mold is to fix the underlying moisture problem.

APARTMENTS—A SPECIAL CASE

Large apartment buildings can have complicated mechanical ventilation systems that make them more like office buildings than homes. Mold investigations in such buildings require investigators with different training and skills than investigators who specialize in smaller buildings.

Tenants living in apartments or rental housing who suspect or believe that they have mold problems in their units can ask for assistance from their municipal or regional health departments.

FOR MORE INFORMATION

Websites

American Industrial Hygiene Association (April 2008)
http://www.aiha.org/
Enter "mold" in the search box.

CMHC (April 2008)
http://www.cmhc-schl.gc.ca/en/co/
Enter "mold" in the search box.

Health Canada (April 2008)
http://www.hc-sc.gc.ca/index_e.html
Enter "mold" or "mould" in the search box.

U.S. Environmental Protection Agency (EPA) (April 2008)
http://www.epa.gov/
Enter "mold" in the search box.

To find more About Your House fact sheets plus a wide variety of information products, visit our website at www.cmhc.ca. You can also reach us by telephone at 1-800-668-2642 or by fax at 1-800-245-9274.

Priced Publications

Cleaning Up Your House After a Flood	*Order No. 61094*
A Guide to Fixing Your Damp Basement	*Order No. 65886*
Clean-up Procedures for Mold in Houses	*Order No. 61091*
The Clean Air Guide: How to Identify and Correct Indoor Air Problems in Your Home	*Order No. 61082*

Free Publications

About Your House *fact sheets*

Measuring Humidity in Your Home	*Order No. 62027*
Fighting Mold—The Homeowners' Guide	*Order No. 60516*
The Condominium Owners' Guide to Mold	*Order No. 62341*
The Tenant's Guide to Mold	*Order No. 63902*

About Your Apartment *fact sheets*

The Tenant's Guide to Mold	*Order No. 66002*

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