

How to Handle Mold in Crawl Space: A Practical Guide for Homeowners

If you own a home in Detroit or anywhere with cold winters and humid summers, you have probably worried about what is happening under your feet. Out of sight often means out of mind, but crawl spaces are one of the most neglected areas in a house. And when moisture sneaks in, so does trouble. Mold in crawl space is not just a cosmetic problem. It can affect the air you breathe inside your living rooms and bedrooms, and it can weaken the wood framing that holds up your floors.

I have spent years working with property owners who discovered black mold or mildew growing under their homes. Some noticed a musty smell that got worse after rain. Others started having allergy symptoms that seemed to come from nowhere. In almost every case, the root cause was trapped moisture in the crawl space. The good news is that this problem is fixable, but you need to understand why it happens and what actually works.

Why Crawl Spaces Are Prone to Mold

A crawl space sits close to the ground. The soil underneath holds moisture, and that moisture evaporates upward into the enclosed area. If there is no vapor barrier on the dirt floor, the dampness rises into the air and condenses on cold surfaces like pipes, ductwork, and insulation. Over time, that condensation feeds fungus and mold spores. The same thing happens if you have leaky plumbing, poor drainage around the foundation, or hydrostatic pressure pushing groundwater through the walls.

Detroit homes are especially vulnerable because of freeze-thaw cycles. In winter, the ground freezes and expands. In spring, it thaws and releases a lot of water. If your gutters are clogged or the grading around your house slopes toward the foundation, that water finds its way into the crawl space. Once the moisture level stays above about 60 percent relative humidity for a few days, mold starts to grow.

Health and Structural Concerns

[Mold in crawl space](#) does not stay put. Mold spores are light and float upward through gaps in the subfloor, around pipes, and along electrical penetrations. They mix with the indoor air quality of your home. For people with asthma, allergies, or compromised immune systems, this can cause coughing, sneezing, watery eyes, and even more serious respiratory issues. Even healthy individuals may notice a musty odor or feel stuffy indoors.



Beyond health, the fungus itself breaks down organic material. It eats the cellulose in wood and paper. If you have fiberglass insulation with a paper facing, mold can rot that facing and ruin the insulation value. Over years, the wood joists and floor beams can lose strength. I have seen crawl spaces where the floor felt springy because the wood had softened from mold damage. That is not something you want to ignore.

First Steps: Inspection and Assessment

Before you start any work, you need to see what you are dealing with. Put on a respirator, gloves, and coveralls. Crawl spaces are dark and tight, and disturbing mold can release a cloud of spores. Take a flashlight and look at the insulation, the wood framing, and the dirt floor. Look for standing water, wet spots, or white salt deposits on concrete walls, which indicate past moisture. Smell the air. If it smells like wet earth or a basement, you have a moisture problem.

Check the crawl space ventilation. Many older homes have vents in the foundation walls. The idea was to let outside air dry out the space, but in humid climates that often backfires. Warm moist air from outside enters and condenses on cooler surfaces inside. In Detroit summers, open vents can actually increase humidity. You may need to close them or install a controlled system.

Moisture Control: The Foundation of a Fix

You cannot get rid of mold in crawl space without controlling moisture. Killing mold with bleach or a spray will not work if the dampness comes back. The most effective approach is a

combination of drainage, sealing, and dehumidification.

Improve Drainage Outside

Start outside the house. Make sure rain gutters are clean and downspouts extend at least four feet away from the foundation. Regrade the soil so it slopes away from the house. If you have a basement waterproofing system, check that it is working. Hydrostatic pressure can push water through foundation cracks, so fixing the exterior grade is a big step.

Install a Vapor Barrier

Inside the crawl space, lay a heavy-duty vapor barrier over the entire dirt floor. This is a thick polyethylene sheet, usually 6 to 20 mils thick, that stops ground moisture from evaporating into the air. Overlap the seams by at least 12 inches and tape them. Extend the barrier up the foundation walls a few inches and seal it. This alone can drop the humidity level significantly.



Seal and Insulate

Once the floor is covered, you can close the crawl space vents and seal the access door. This creates a conditioned crawl space that stays dry. Instead of venting to the outdoors, you control the air inside. Some people also choose to encapsulate the crawl space, which means covering the walls with a vapor barrier as well and insulating the walls instead of the floor. This keeps the pipes warmer in winter and reduces the chance of condensation.

Dehumidifiers and Sump Pumps

Even with a vapor barrier, a crawl space can still collect moisture from humidity that enters through the house above. A dehumidifier designed for crawl spaces can keep the relative humidity below 50 percent, which stops mold growth. Look for one with a built-in pump so it can drain automatically. If you have standing water or a high water table, a sump pump in a sealed pit will remove liquid water before it becomes a problem.

Removing Existing Mold

Once you have the moisture under control, you can tackle the mold that is already there. For small areas, you can scrub non-porous surfaces with a mild detergent and water. For porous materials like wood, you may need to sand or replace affected sections. If the mold covers more than about 10 square feet, you should consider professional mold remediation. They have commercial-grade HEPA filter vacuums and negative air machines that capture mold spores and prevent them from spreading through the house.

Never use bleach on mold on wood. Bleach is mostly water, and the water soaks into the wood and feeds the roots of the fungus. The surface may look clean, but the mold grows back deeper. Use a product that is specifically made for mold removal on wood, or consult a professional.

Prevention Over the Long Term

After you clean and dry the crawl space, you need to keep it that way. Check the vapor barrier every year for tears. Make sure the dehumidifier is working and the drain line is clear. Inspect the sump pump and test it. Keep the crawl space access door sealed and insulated. If you have fiberglass insulation that got wet, replace it with rigid foam board or closed-cell spray foam, which does not absorb moisture.

I also recommend monitoring the humidity. A simple digital hygrometer costs about ten dollars and will tell you if the crawl space is staying dry. If you see the humidity creeping up, you can catch it early before mold starts again.



When to Call the Pros

Some jobs are doable by a handy homeowner, but mold in crawl space can be dangerous if the infestation is large or the space is very tight. If you have black mold that covers a large area, if you suspect hidden mold behind insulation or in ductwork, or if you have health concerns, bring in a certified mold remediation company. They will test the air, contain the area, and clean it properly. They can also help with moisture control and indoor air quality improvements.

In Detroit, many older homes have crawl spaces that were never designed to be dry. With good drainage, a vapor barrier, proper insulation, and a dehumidifier, you can turn a damp, moldy crawl space into a clean, dry part of your home. That means better indoor air quality, a more comfortable house, and peace of mind knowing your family is not breathing mold spores every day.