

So, You've Got Mold...

NOW WHAT?

A Complete Guide to Understanding
and Correcting Mold in Your Home

Featuring BioBlaster High-Output Ozone Generators

by Charles Boday

Mold Remediation Expert
Certified Ozone Professional

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4456 N. Abbe Rd #103

Sheffield Village, OH 44054

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Table of Contents

Introduction: Overview of the Mold Problem	4
Chapter 1: The Kingdom of Fungi	6
Chapter 2: Water Problems Create Mold Problems	10
Chapter 3: How Mold Affects Your Health	14
Chapter 4: The Good News About Mold Solutions	20
Chapter 5: Mold in Your Attic	26
Chapter 6: How to Treat Attic Mold	32
Chapter 7: Mold in HVAC Systems	38
Chapter 8: Mold in the Basement	42
Chapter 9: Proper Mold Cleanup Procedures	50
Chapter 10: OZONE - The Final Step	56
Chapter 11: Using Your BioBlaster Ozone Generator	64

Introduction

Overview of the Mold Problem

We live in a world full of microorganisms—bacteria, fungi, spores, and other tiny creatures invisible to the naked eye. Many of these are beneficial: they help decay leaves and grass, create compost, and assist digestion in our bodies. However, many microorganisms cause disease in humans, animals, and plants.

This is particularly true of molds, which can be dangerous and life-threatening when they invade our living spaces—in attics, basements, and behind walls. This guide will help you understand how molds invade homes and what you can do about it.

Effects of Mold on Health

Molds commonly found growing in large numbers in homes can cause a wide variety of health effects. These vary depending on the individual's age, health status, and sensitivity. Effects are typically more severe in young children, the elderly, and anyone with serious health conditions like asthma, COPD, heart disease, or those on immunosuppressive therapy.

Common mold-related symptoms include:

- Coughing and sore throats
- Frequent sneezing and itchy eyes
- Headaches and dizziness
- Difficulty breathing
- Flu-like symptoms and chronic fatigue
- Allergic reactions

The Real Solution

Many mold remediation contractors simply clean visible mold with commercial cleaners, making the problem "go away" temporarily. It's like cleaning moldy grout in your bathtub—the cleaner makes the color disappear, but in days or weeks the mold returns. Why? Because you haven't gotten rid of ALL the mold.

The solution to totally eradicate molds requires a multi-step process that includes identifying where mold is hiding and finishing with High Ozone Shock Treatment using professional-grade equipment like the BioBlaster ozone generator.

Chapter 1

The Kingdom of Fungi

Mold is everywhere. There is no escape from the spores that infiltrate every breath you take. Spores freely blow around in even the slightest wind, traveling great distances to settle in new environments. Mold is as essential as oxygen and as destructive as our worst biological nightmare.

Mold refers to all species of fungi that are multicellular in nature. Their multi-celled structure allows them to form spores. From the very beginning of life on Earth, mold has been present—its function is vital to the overall survival of our planet and its inhabitants. However, problems arise when mold makes our homes, workplaces, and recreational areas sites of sickness.

How Mold Works

Mold consists of microscopic fungi that release spores to float with the wind until they contact warm, wet surfaces. These surfaces are called substrates. Mold will happily grow on a wide variety of substrates as long as water and warmth are present.

Common substrates include:

- Wood and paper products
- Carpet and fabrics
- Drywall and insulation
- Food items
- Leather goods

The "Big Three" Dangerous Molds

While there are hundreds of mold species, three are particularly dangerous when they invade your home:

1. **Aspergillus**

An opportunistic pathogenic mold—meaning it causes disease especially when your immune resistance is lowered. Aspergillus is often the cause behind asthma, nerve damage, liver disease, lung disease, heart disease, and severe eye damage. This fungus produces mycotoxins so deadly they've been used as biological weapons. Many homes have this mold growing in wall cavities and HVAC systems.

2. **Stachybotrys ("Black Mold")**

Another deadly toxin-forming mold that can be lethal to animals and children. It grows on wet cellulose-containing materials like drywall and prefers dark places like behind

wallpaper and in wall cavities. Symptoms include difficulty breathing, dizziness, memory loss, depression, headaches, skin rashes, and chronic fatigue.

3. Penicillium

A disease-causing mold responsible for many infections. All Penicillium species form mycotoxins, including nerve toxins and carcinogens (cancer-causing agents). These are especially dangerous for people with suppressed immune systems. Penicillium usually appears as a blue or grayish fungus and can occur anywhere water is present.

Chapter 2

Water Problems Create Mold Problems

Have you noticed a strange musty odor in your basement or attic? An odor you can't recall being there before? Maybe it's in a closet. You've cleaned the house top to bottom, yet that alien odor remains.

The answer is usually water. Wet, wild, and sometimes extremely shy—water is the causative factor for why mold exists in homes. We say "shy" because water likes to hide: inside walls, in the back of closets, among the rafters of attics.

Why Water Means Mold

Molds produce tiny, microscopic spores to reproduce. When you see that "fuzzy" stuff on food in your refrigerator, those are mold spores—millions of them in bunches. Spores are so light they float through indoor and outdoor air continuously.

When spores land on a damp surface conducive to growth, they begin digesting whatever material they've landed on and multiply. Their main goal is to reproduce. As moisture accumulates indoors, mold can grow exponentially—especially if the moisture problem remains hidden.

Common Water Entry Points

- Roof leaks and damaged flashing
- Plumbing leaks (often hidden in walls)
- Window and door leaks
- Foundation cracks
- Condensation from HVAC systems
- Basement seepage
- Poor drainage around the foundation

The Hidden Mold Problem

Mold can grow behind walls due to condensation. One of the worst places for mold to grow undetected is in HVAC systems. Due to warmth and moisture requirements, what better place could mold find to hide and be nurtured? The inside of these units can't readily be seen, so contamination can occur and continue to grow over time.

When your heating or cooling system runs, spores from the mold are picked up and sent throughout the entire house or building. Because parts of these systems are hard to reach, they're particularly difficult to remediate effectively—which is why ozone treatment is so valuable.

Chapter 3

How Mold Affects Your Health

Molds can grow in homes anywhere in the country. Because moisture and water are the "enablers" of mold growth, no area is immune. In the South, it's the long, humid summers; in the North, it's the cold, wet winters. In many modern homes, energy conservation has made houses so tight that moisture cannot escape once it gets inside.

Signs Your Home May Be Making You Sick

A good indicator that your home could be dangerous to your health is if it has experienced recent water damage. Wet or even damp basements can be great sources of mold growth that you might not be aware of.

Watch for these warning signs:

- Symptoms that improve when you leave the building
- Multiple family members experiencing similar symptoms
- Musty or moldy odors
- Visible water stains or damage
- Recent flooding or plumbing leaks
- Persistent humidity problems

Health Effects by Population

Children:

Children are particularly vulnerable to mold exposure. Their developing immune and respiratory systems make them more susceptible to mold-related illnesses, including asthma and recurring respiratory infections.

Elderly:

Older adults often have compromised immune systems and may already have respiratory conditions that mold exposure can worsen significantly.

Immunocompromised Individuals:

Those with HIV/AIDS, cancer patients on chemotherapy, transplant recipients, and others with suppressed immune systems are at extreme risk from mold exposure and may develop serious, even life-threatening infections.

Chapter 4

The Good News About Mold Solutions

Now for the good news: mold problems CAN be solved permanently. The key lies in using a comprehensive, multi-step approach that addresses both the visible mold AND the hidden spores.

The Multi-Step Approach

Effective mold remediation requires:

1. Identifying and eliminating the water source
2. Proper containment to prevent cross-contamination
3. Physical removal of contaminated materials
4. Treatment of remaining surfaces with safe, effective products
5. Application of mold inhibitors to prevent regrowth
6. High Ozone Shock Treatment to kill remaining spores

Why Chemical Cleaners Alone Don't Work

Many chemicals used by mold remediation contractors simply don't work on porous surfaces—which is about EVERY surface where mold grows in your house. Most chemical cleaners contain no ingredients that actually KILL mold spores, which are the hardest things to kill.

Worse, many chemical cleaners leave behind residual toxic poisons. In some cases, these chemicals are WORSE than the poisonous toxins the mold produces!

The Safe Solution: Sodium Borate + Ozone

The most effective approach uses sodium borate (borax) preparations for surface treatment combined with high-output ozone shock treatment for complete spore elimination. Sodium borate is:

- Highly effective at killing mold
- Safe for humans and pets after drying
- Leaves no toxic residue
- Provides long-lasting protection against regrowth

When combined with ozone treatment, this approach destroys mold at the molecular level AND eliminates the invisible spores that surface treatments cannot reach.

Chapter 5

Mold in Your Attic

"My attic has black mold—do I really need to tear off my roof?" This is a question homeowners frequently ask after discovering mold on their attic sheathing.

Many people have been told that tearing off the old roof shingles and sheathing is the only way to truly fix attic mold. Roofers especially recommend this remedy—obviously, it means more work (money) for them, and they don't have to solve the actual mold problem.

In most cases, the answer is: NO, you do NOT need to replace your roof!

Don't Be Fooled by Color

The media has hyped "Black Mold" out of proportion. What makes a black mold black is melanin—the same chemical that gives your skin a suntan. Melanin itself is not poisonous.

The truth is: there are toxic molds that are white, green, gray, brown, red, AND black. Even non-toxic molds can become opportunistic pathogens capable of causing infections when conditions are right.

Three Causes of Attic Mold

7. Inadequate ventilation or air circulation
8. Existing or past roof or flashing leaks
9. Ice damming from inadequate insulation

How Attic Mold Grows

In almost all attics, mold does NOT grow in the summertime—attics are far too warm. Mold generally only grows between 40 and 90 degrees Fahrenheit.

As winter approaches and weather gets cold, we heat our homes. Some heat is lost up into the unheated attic space. If the attic is not properly vented, this warm air collides with cold roof surfaces, creating condensation. This condensation provides the moisture mold spores need to grow.

Chapter 6

How to Treat Attic Mold

Mold can be safely treated with permanent results. The key lies in both destroying the spores AND destroying the mold roots.

Check for Rot First

Check your roof sheathing for rot by scratching the surface with a flat screwdriver. If you can push the screwdriver into the wood easily or if wood scrapes off the surface easily, the wood has rotted and needs replacement. But if the boards are structurally sound, replacing the roof is unnecessary—and expensive!

Why Roof Replacement Often Makes Things Worse

When a roofer rips boards off rafters during re-sheathing, spores are literally spread everywhere—all over the attic, in the insulation, on the rafters. This is like planting a new mold crop, just waiting for moisture to bloom again.

Additionally, today's plywood is much softer than older wood because it comes from planted forests. Softer wood is easier for mold to colonize. New attics can develop more mold in one winter than old attics had in twenty years!

The Effective Treatment Protocol

1. Remove stains with safe cleaning products
2. Apply sodium borate mold inhibitor to all surfaces
3. Correct ventilation problems
4. Perform High Ozone Shock Treatment with BioBlaster
5. Improve insulation if needed

Chapter 7

Mold in HVAC Systems

Your heating, ventilation, and air conditioning (HVAC) system is one of the most critical—and most overlooked—areas for mold growth. When mold colonizes your HVAC system, every time it runs, it distributes spores throughout your entire home.

Why HVAC Systems Are Mold Magnets

- Condensation forms on cooling coils
- Drip pans collect standing water
- Filters trap organic debris that mold feeds on
- Ductwork provides dark, hidden spaces
- Temperature changes create ideal growing conditions

Signs of HVAC Mold Contamination

- Musty smell when system runs
- Visible mold around vents or registers
- Black dust or debris from vents
- Symptoms that worsen when heating or cooling is on
- Discolored or black filter

Treating HVAC Mold

HVAC systems present a unique challenge: you can't manually clean every surface inside the ductwork. This is where ozone treatment becomes essential. Ozone gas can penetrate every inch of your ductwork, killing mold spores throughout the entire system.

BioBlaster treatment protocol for HVAC systems:

6. Replace filters and clean accessible components
7. Clean drip pan and drain line
8. Place BioBlaster at return air intake
9. Run system on fan mode for 4-6 hours during treatment
10. Allow 2-4 hours for ozone to dissipate

Chapter 8

Mold in the Basement

Basements are prime territory for mold growth. Below-grade construction, proximity to groundwater, condensation, and limited ventilation create ideal conditions for mold to thrive.

Damp Proofing vs. Waterproofing

Many homeowners confuse damp proofing with waterproofing. Damp proofing is a coating applied during construction to resist moisture vapor—it was never designed to hold back liquid water. True waterproofing involves membrane systems and drainage that actively prevent water entry.

If your basement has water problems, damp proofing repairs won't solve them. You need proper waterproofing and drainage solutions.

Common Basement Water Sources

- Hydrostatic pressure from groundwater
- Failed or inadequate waterproofing
- Plumbing leaks
- Condensation from humidity
- Poor grading directing water toward foundation
- Clogged or missing gutters and downspouts

Basement Mold Treatment

11. Identify and eliminate water source
12. Remove heavily contaminated materials (drywall, carpet, etc.)
13. Clean structural surfaces with borax solution
14. Apply mold inhibitor to all surfaces
15. Perform High Ozone Shock Treatment
16. Install dehumidifier to maintain proper humidity levels

Chapter 9

Proper Mold Cleanup Procedures

Understanding proper cleanup procedures is essential for effective mold remediation. Many contractors take shortcuts that leave your home contaminated.

What Most Contractors Do Wrong

- Spray chemicals without proper containment
- Use toxic products that leave residues
- Fail to remove contaminated materials
- Skip the crucial ozone treatment step
- Don't address the underlying moisture problem

The Complete Remediation Process

Step 1: Assessment

Thoroughly inspect the property to identify all affected areas and the water source. Testing may be necessary to identify mold species.

Step 2: Containment

Seal off the work area with plastic sheeting to prevent spores from spreading to unaffected areas during cleanup.

Step 3: Air Filtration

Use HEPA air scrubbers and establish negative air pressure within the containment area.

Step 4: Removal

Remove and discard contaminated porous materials. Non-porous materials can be cleaned and treated.

Step 5: Cleaning

Clean all surfaces with appropriate products. HEPA vacuum all surfaces to remove loose spores.

Step 6: Treatment

Apply mold inhibitor (sodium borate) to prevent regrowth.

Step 7: Ozone Shock Treatment

This is the crucial final step that ensures complete decontamination by killing spores that surface treatments cannot reach.

Chapter 10

OZONE: The Final Step

Have you been told you can complete thorough mold remediation without High Ozone Shock Treatment? Think again. Research conducted at Los Alamos National Laboratory proves it's practically impossible to achieve complete decontamination without it.

Ozone Myths vs. Reality

Some contractors make outrageous claims about ozone, like "our machines will turn mold to ash" or "they'll literally vaporize mold." These are lies.

The truth: Ozone alone is never a complete treatment for mold.

Mold roots penetrate deep within substrates—up to 1/2 inch. Dead mold is still allergenic. You must physically remove mold material AND treat with ozone. Using ozone as a shortcut to skip physical remediation will fail.

Why Ozone IS Essential

However, ozone is a powerful gas that WILL destroy mold spores and the microbial Volatile Organic Compounds (mVOCs) that cause sickness in mold-infected buildings.

According to Los Alamos National Laboratory research, to truly decontaminate a building contaminated with a spore-based pathogen like mold, it is absolutely vital to complete decontamination with a gas treatment.

The reason: A building has so many nooks, crannies, crevices, and inaccessible spaces where spores can hide, untouched by liquid disinfectants. No amount of HEPA vacuuming, air-scrubbing, or manual cleanup can achieve true decontamination without a gas treatment.

The winner among all gases considered: OZONE—hands down!

How Ozone Kills Mold

Ozone is lethal to virtually all pathogens. Ozone is O₃—pure oxygen (O₂) plus a free-radical oxygen molecule. The single oxygen atom can only last for a split second before bonding with other molecules.

With mold, bacteria, and viruses, ozone punches a hole directly into the cell wall and destroys the contents. It's like shooting a "silver bullet" right into the mold cell.

When O₃ breaks down, what's left behind is pure oxygen (O₂)—safe and healthy. You breathe it every day.

Ozone vs. Chlorine

- Ozone's sterilization ability is 600-3,000 times stronger than chlorine
- Ozone kills E. coli 3,000 times faster than chlorine bleach
- Ozone converts back to pure oxygen—no harmful residue
- Ozone penetrates porous materials where liquid cleaners cannot reach

Chapter 11

Using Your BioBlaster Ozone Generator

BioBlaster commercial-grade ozone generators are chosen by professionals for serious mold, mildew, odor, and pollutant removal in homes, offices, basements, vehicles, and for fire, flood, and restoration cleanup.

High Ozone Shock Treatment Protocol

The only way for ozone treatment to be effective is to fully isolate the treatment area so a high enough concentration of gas can accumulate. Then use your BioBlaster to generate ozone at very high levels for a predetermined period.

CRITICAL: No people, plants, animals, or fish can be present during treatment!

Treatment Guidelines by Area

Standard Rooms (up to 400 sq ft):

- Treatment time: 2-4 hours
- Close all windows and doors
- Place generator in center of room

Large Rooms (400-800 sq ft):

- Treatment time: 4-6 hours
- Use fan to circulate ozone

Whole House Treatment:

- Treatment time: 6-8 hours
- Treat HVAC system simultaneously
- Consider multiple units for large homes

HVAC System Treatment:

- Place generator at return air intake
- Run system on fan mode (not heat or cool)
- Treatment time: 4-6 hours

Vehicles:

- Treatment time: 1-2 hours
- Close all windows and doors
- Run vehicle ventilation on recirculate

After Treatment

- Allow 2-4 hours for ozone to dissipate to safe levels
- Open windows and doors to ventilate before re-entry
- Ozone has a distinctive fresh smell—when it's gone, the area is safe
- For severe contamination, repeat treatment may be necessary

Safety Reminders

- Never occupy a space during ozone treatment
- Remove all pets, plants, and aquariums
- Cover or remove rubber items (ozone can degrade rubber)
- Post warning signs on all entrances during treatment
- Use a timer to control treatment duration

About BioBlaster Ozone Generators

BioBlaster Ozone Generators are professional-grade, high-output ozone generators designed for effective mold remediation, odor elimination, and indoor air quality improvement.

Our units produce the high concentrations of ozone necessary to penetrate porous materials and reach areas impossible to clean manually—killing mold spores, bacteria, viruses, and odor-causing compounds at the molecular level.

Contact Us

BioBlaster Ozone Generators
4456 N. Abbe Rd #103
Sheffield Village, OH 44054

Remember: If a competitor offers you mold cleanup without High Ozone Shock Treatment—they don't understand mold or how to perform complete, thorough remediation!

Thank you for choosing BioBlaster!