

Mold Guide

by Ned Riley

“An ounce of Prevention is worth a pound of cure”



Tahoe

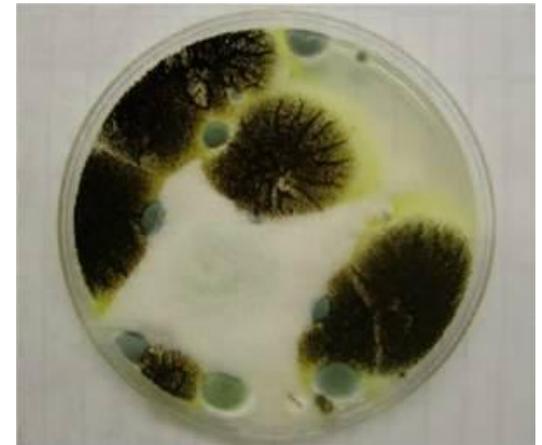
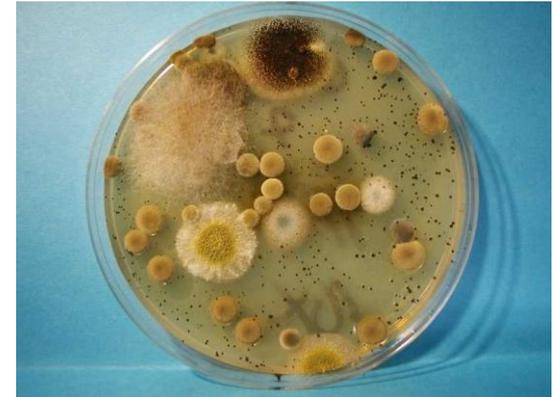
MOLD and
WATER

Remediation & Restoration

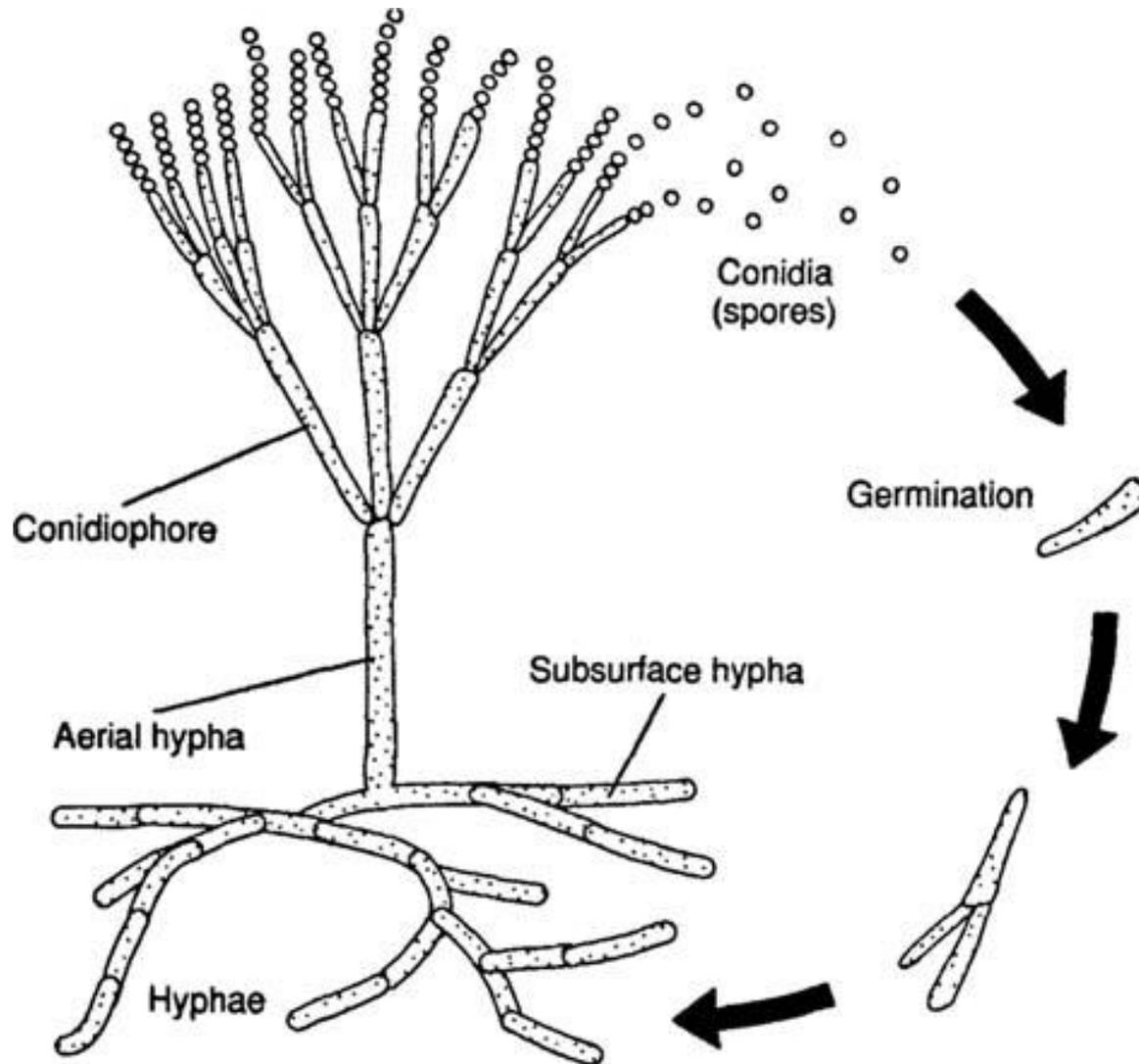
What Is Mold?

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- Molds are fungi that can be found both indoors and outdoors.
- No one knows how many species of fungi exist. Estimates range from tens of thousands to perhaps three hundred thousand, or more.
- Molds grow best in warm, damp, and humid conditions,
- Molds spread and reproduce by making spores.
- Mold spores can survive harsh environmental conditions that do not support normal mold growth.



Mold Anatomy



What Does it Take to grow?

Moisture

- Comes in the form of water
 - New wood framing can have over 30% moisture content.
 - Mold can propagate on wood framing when moisture content is between 18% and 22%.

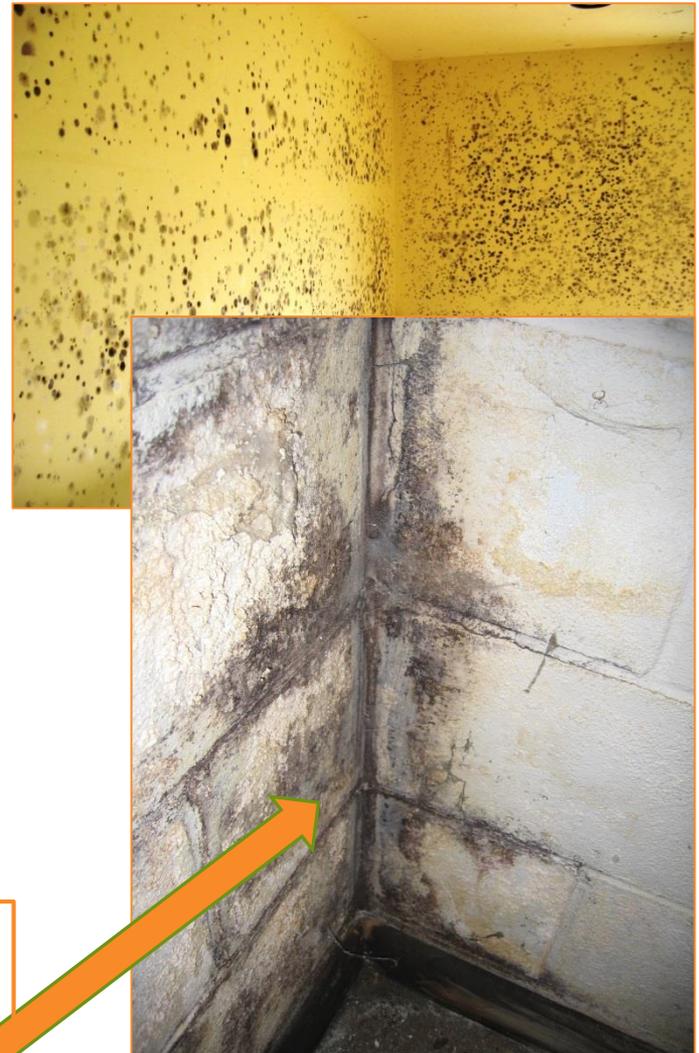
- Comes in the form of vapor
 - When relative humidity is above 60%, otherwise dry materials have the potential to grow molds.
 - When there is elevated water vapor present, cold surfaces can create dew points, allowing condensation and mold growth.



What Does it Take to grow?

- An [organic based food source](#)
 - such as paper, leaves, wood, or dirt
- While mold cannot get nutrients from inorganic material such as concrete, glass and metal, it can grow on other materials present on these surfaces.
- Molds secrete digestive fluids that decompose the substrate, making nutrients available.
- Mold can also digest some synthetic materials such as adhesives, pastes and paints.

A masonry block wall can't allow mold growth unless there is organic based materials present. This includes dirt and even some paints.



What Does it Take to grow?



Adequate temperature.

- Mold typically will not **grow** below 50°F
- Many molds and mold spores can survive cold temperatures even if temperatures are too low for mold to grow.
- Some species of mold will propagate at lower temperatures.
 - *Cladosporium*
 - *Penicillium/Aspergillus*
- Some species of mold need warmer temperatures to propagate and grow.
 - *Stachybotrys* “Black Mold”



What Does it Take to grow?

Adequate Oxygen.

- Some mold spores can survive in space!
- Japan is testing to see how a species of mold survives long exposure to the harsh conditions of space.
- Most molds will not grow unless they have access to some air.
- You may have already grown some mold in an air starved environment!



Molds Effect on People

- We are all exposed to mold in the outside and indoor air.
- Unless exposed to high levels, most people will not be effected by small amounts of mold exposure.
- Exposure symptoms for healthy people exposed to not toxic mold are typically no worse then a cold or allergies.
- Outdoor mold levels in some areas could impact sensitive people.
- People with serious allergies to molds, may have severe reactions including fever and shortness of breath.
- People with chronic lung illnesses, such as obstructive lung disease, may develop mold infections in their lungs.
- People with immune compromised illness can be at additional risk to mold related illness and fungal infections.

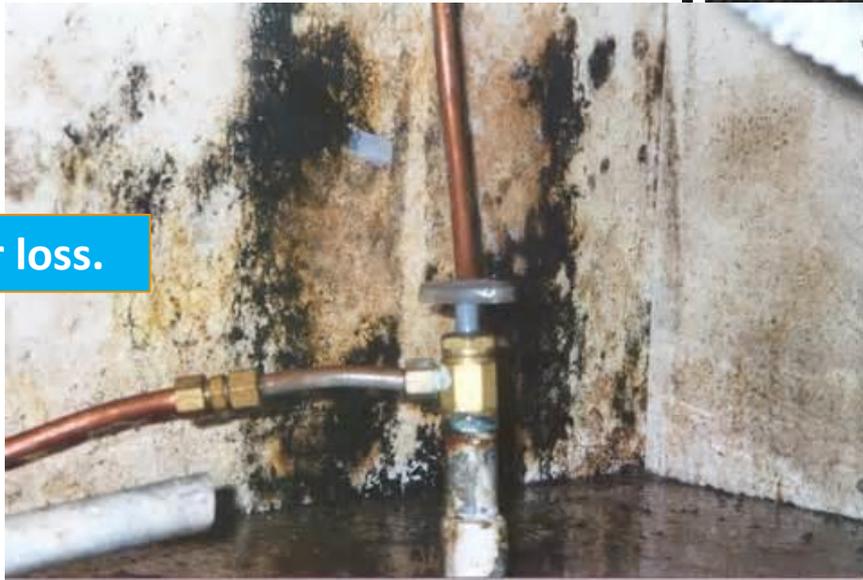
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Is all Black Mold Bad?

- Many of the Thousands of mold species appear black.
- Many of these black molds are common in our environment, and pose no additional danger.
- Stachybotrys is a greenish –black, slimy mold found on cellulose products. Commonly referred to as the “black mold” or “baby killer”.
- In 1994 the CDC investigated whether exposure to Stachybotrys might be related to pulmonary hemorrhage. This was inconclusive.
- Containing mycotoxins, Stachybotrys is thought to present health risks beyond what would be associated with common molds.

Stachybotrys from a hot water loss.



Rash thought to be caused by "Stachy"



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Identify mold as a Problem.

Common Lumber Mold

- Often found on framing lumber
- It is typically isolated to the areas of “sap wood”
- Most lumber molds don't present air quality issues except when the lumber is cut. ***Respiratory and eye protection are recommended if you don't have a good dust containment system on your saw.***
- Large amounts of lumber mold can hide and allow “atypical”, or problem mold to propagate. Often the bad mold is hidden in the common lumber mold.



The Heart wood in the center of the tree is more resistant to molds.



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Learning to identify mold as a Problem.

What is considered bad or atypical mold?

- Excludes common lumber mold.
- Includes most molds that develop after a home is built.
- Includes some molds found on new framing lumber. Typically the result of improper storage.
- Includes molds found in the outside air that are not otherwise known as dangerous.
- Mold does not need to be toxic to be an issue.
- Mold that is growing on sheeting goods including CDX and OSB plywood, as well as engineered lumber.

At Tahoe Mold and Water, we provide consulting, drying, and mold remediation services. If you have concerns about a particular project, or have general questions, we are here to provide you information regarding this common issue found in homes. Contact us for a free evaluation, or to answer general questions you may have.



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