

## **Damp and mould**

Although less significant statistically in health terms, spores of many moulds and fungi (including timber attacking fungi) can be allergenic. The spores can also be carcinogenic, toxic and cause infections; the potential health effect varying with species. Fungal infection, whilst not common, is usually associated with those vulnerable to infection (such as those on immuno-suppressant drugs). Some fungi, particularly when in very high concentrations, can also colonise the airways of susceptible individuals, particularly asthmatics. Toxins from moulds (mycotoxins) can cause nausea and diarrhoea, can suppress the immune system, and have been implicated in cancers. Although uncommon, these are serious if they occur.

Close to 100,000 mould varieties with scientific names and classifications exist, and as many as 300,000 have yet to be named. Despite these staggering numbers, some mould types are far more common than others, especially when it comes to household moulds. A few specific varieties have the greatest frequency of growth in the average household.

### **Are there different types of mould?**

There are almost 100,000 different kinds of mould. Some of the most common moulds are called Cladosporium, Penicillium and Aspergillus.

Some moulds like Penicillium and Stachybotrys can produce toxins (a chemical substance) which may be harmful to vulnerable people.



### **Stachybotrys**

Stachybotrys goes by many names. Varieties include Stachybotrys chartarum and Stachybotrys atra. Sometimes referred to as black mould, this black and green spore is synonymous with toxic mould. It emits mycotoxins that can contribute to allergies, respiratory problems, infections and possibly even cancer, according to the Environment Protection Agency. Although many moulds produce mycotoxins, Stachybotrys produces a particularly poisonous mycotoxin called Satratoxin H.

### **Aspergillus**

Aspergillus is another common household mould. Though not as dangerous as Stachybotrys, some strains do produce mycotoxins, making it potentially hazardous. Not all varieties are toxic, however. Aspergillus has over 100 recognized species, which vary greatly in colour, consistency and molecular composition.

### **Alternaria**

Alternaria can grow outdoors as well as indoors. It prefers cellulose (plant-based) materials like wood and certain fabrics (such as cotton). Alternaria may cause respiratory symptoms, hypersensitivity pneumonitis (lung inflammation) and allergic reactions.

## **Penicillium**

Like Alternaria, penicillium favours cellulose-based material like gypsum board, wood and fabric. It is considered an allergenic mould, meaning that it has the greatest health impact on people suffering from mould allergies. Some varieties, however, can produce mycotoxins.

## **Cladosporium**

The Centres for Disease Control and Prevention recognize Cladosporium as one of the most common household moulds (along with Penicillium, Aspergillus and Alternaria). In fact, Cladosporium is one of the two most common indoor moulds in the U.S. (along with Alternaria), according to Advanced Mould Inspections. Although Cladosporium can appear black and green like black mould, it is not toxic.

## **What is mould and where is it found?**

Moulds are members of the fungus family. They are present everywhere – indoors and outdoors. There are more than 100,000 species of mould. Moulds grow tiny seeds called “spores” that float in the air like dust. They cannot be seen but can be breathed in. Mould is likely to grow in homes under the right conditions of dampness, darkness and poor ventilation e.g. bathrooms or kitchens, cluttered storage or basement areas, plumbing pipes and outdoors in humid environments.



An important side note is that sometimes what you are looking at is actually efflorescence rather than mould. This is a deposit of white salts, especially on walls where water has penetrated and left a salt deposit on the surface.

## **What makes mould grow?**

In addition to moisture and warmth (2 to 40 °C), moulds require a food supply of organic matter such as clothing, wood, drywall, and mould spores.

## **How can humans be exposed to mould?**

When mouldy material becomes damaged or disturbed, mould spores can be released into the air. Exposure to humans can occur if people inhale the spores, directly handle or accidentally ingest material containing mould.

Some moulds can produce chemicals called mycotoxins. Mycotoxins may cause illness when people inhale them. Significant exposures to mould and more severe illness are typically associated with certain occupations.

## **How can moulds affect my health?**

The most common types of moulds are not generally hazardous to healthy individuals. However, adverse health effects may develop in certain people when they have been breathing the indoor air for a period of time in a mould contaminated building. Breathing fresh air from the outside will reduce or eliminate these effects.

Not all people are adversely affected by mould. However it can emit small particles that cause some people to sneeze. This is not necessarily an allergy it may just be a reaction

to particles in the air, just like dust. Often moulds give off a musty odour which may be disagreeable.

Symptoms caused by mould allergy may include:

- Respiratory illness or asthma
- Watery, itchy, red eyes
- Headaches or migraines
- Rashes (dermatitis)
- Tiredness
- Sinus problems, blocked nose and frequent sneezing

People who have asthma, hay fever, or other allergies are more likely to react to mould. They can get runny noses, eye irritations, coughs, congestion, and asthma attacks.

People who have weakened immune systems may be susceptible to mould infections from breathing mould spores in the air. With long term exposure to certain moulds even healthy people can develop respiratory and flu-like symptoms, headaches, skin problems, and impaired immune functions. Second hand smoke makes mould-related health effects worse.

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