

Environmental Health &
Safety
Muncie, IN 47306

Mold Awareness Program



**BALL STATE
UNIVERSITY**

WE FLY

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Mold Awareness Program

A. Purpose and Policy

The purpose of this program is to provide information about mold, potential health effects associated with exposure, and safety procedures that should be followed to reduce exposure.

Ball State University (BSU) is committed to the responsibility of providing a work environment that is free from recognized hazards for its employees. Consistent with this duty is the Mold Awareness Program, which has been drafted by the Environmental Health and Safety (EHS) Office. The Mold Awareness Program will be evaluated and updated on an as needed basis. This program will be made readily available to employees, union representatives, and any individual representing OSHA.

B. Introduction to Mold

Molds are organisms that can be found in both indoor and outdoor environments and in most known ecological habitats. There are more than 100,000 species of molds and at least 1,000 species of molds are common to the U.S. The most common mold species are Cladosporium, Penicillium, and Aspergillus. Molds play an important role in the environment by breaking down and digesting organic material, such as dead leaves, plants, wood material, and animals. There are several names associated with mold that include: fungi, fungal, and mildew. Molds are part of the kingdom Fungi and are not considered plants or animals.

Fungi or molds are very adaptable microorganisms that make-up approximately 25% of the earth's biomass. Molds can multiply by producing microscopic spores (2 - 100 microns in diameter), which resemble seed pods of plants, which is called hyphal fragmentation. Once these seed pods release the spores, they can be carried great distances by the natural or artificial air currents in the environment.

It is important to remember that mold spore counts can vary greatly depending on the time of the year and day. Mold spores can't be totally eliminated from the indoor environments.

Once a mold spore has found a suitable location, they begin to grow and digest whatever they are growing on. Unchecked mold growth can cause wood rot, damaged drywall, damaged furnishings and even structural damage to building foundations leading to the decay of a structure. It is essential to inspect, investigate, and report any mold growth that is observed at BSU to the EHS Office.

C. Mold Growth

For mold to grow it requires two things: moisture and a food source, with moisture being the major influencing factor for mold. It is important to remember that mold does not need a lot of moisture to start growing. Mold also needs nutrients to grow, which comes from anything that is of an organic nature. Organic materials in buildings consist of but are not limited to paper, cloth, wood, carpet, drywall, ceiling tile, insulation, plants, and soil. Most indoor atmospheres should have a relative humidity (RH) between thirty (30) and fifty (50) percent. It is important to fix any water leaks and dry out or repair any building materials that may be saturated with water within 24 to 48 hours.

D. Mold Exposure and Health Effects

Mold spores are all around us and we are exposed to mold spores every day. However, it is when mold materials are improperly disturbed or damaged that mold spore concentrations can become a problem. Exposure can occur by inhaling the spores through the respiratory tract, skin contact, and by ingestion through the mouth. The most common exposure is by inhaling the mold spores through the nose. If an employee will be working around or disturbing mold spores it is important to protect yourself with appropriate personal protective equipment (PPE).

It is important to remember that mold spores are common and are routinely encountered in our daily activities and have no effects on the human body. However, excessive exposure to mold spores can cause or worsen asthma, hay fever, rashes, and other common allergies. The more common symptoms with overexposure are irritated eyes, cough, congestion, runny nose, and minor skin irritations. Severe reactions to mold are less common, but can occur depending on how an individual's body reacts to the mold spores. Certain mold spores can also produce chemicals known as mycotoxins. Mycotoxins can cause minor to severe illness in individuals who are sensitive to them if they are exposed to a large enough concentration.

E. When Mold has been Discovered

When mold is discovered, first try to inspect the area to determine the amount of mold in the area. EPA recommends that areas of ten (10) square feet or less can usually be cleaned by the individual using water and detergent solution. Once you know the amount of mold in the area try to determine why the mold started growing. Check for signs of high humidity, pooling water, and damp saturated materials within the area. If the moisture source is located, fix the problem immediately. If the moisture source is not corrected and the mold is cleaned-up, it is likely the mold will grow back.

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F. Mold Clean-Up

Mold should be cleaned as soon as it appears to prevent mold spores from multiplying and causing problems for the building occupants. Persons cleaning mold should be free of respiratory symptoms and allergies. Small areas of ten (10) square feet or less should be cleaned using a detergent/soapy solution or an appropriate household cleaner. Protective gloves should be worn during the cleaning process that extend to the middle of the arm. The cleaned area should then be thoroughly dried to prevent any further mold growth. Dispose of any sponges or rags used in the cleaning process in an approved trash receptacle. If the mold returns quickly or spreads then that may indicate an underlying issue such as a water leak. Any underlying water issue must be fixed to successfully eliminate the mold problem. If mold contamination is extensive, a professional abatement company may be warranted. If mold is discovered within a building on the BSU campus, please call the EHS Office at 285-2832.

Personal Protective Equipment

Personal protective equipment (PPE) is an essential part to successfully cleaning up mold from an area. PPE is anything used to protect the body from foreign material or objects including mold spores. It is recommended when cleaning mold or removing moldy objects to wear at a minimum a NIOSH approved N-95 disposable respirator. Gloves and eye protection are also recommended along with other related PPE that makes the individual comfortable. Any employee wearing an N-95 disposable respirator at BSU must contact the EHS Office for proper training and instruction on the use of the disposable respirator.

Protective gloves should be ANSI approved and extend to the middle of the arm. Gloves should be made of rubber, neoprene, nitrile, polyurethane, or PVC. It is also recommended that individuals wear goggles to prevent the entry of dust, mold spores or other small particles from entering the eyes. Regular safety glasses and goggles with open vent holes are not acceptable eye protection when cleaning up mold.

G. Disposal of Protective Clothing

Any PPE that cannot be cleaned and reused should be disposed of in a sealed plastic trash bag and put in an appropriate trash container. Reusable PPE is anything that can be cleaned thoroughly and reused again for its intended purpose. This would include but not limited to

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rubber gloves not intended to be one-time use, hardhats, plastic goggles, and respirators (reusable). It is important to read the manufacturer's directions and recommendations before using and reusing PPE.

H. Mold Wrap Up

Molds play a vital role in the environment we live in and can be found in almost everywhere on earth. It is important that individuals are able to recognize and understand both the good and bad of molds. The key to preventing mold growth is preventing moisture to enter areas where it should not be. If a leak or wet spot is discovered report it immediately so the source can be fixed. For more information or questions about mold contact the EHS Office.

I. Acknowledgements

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