

Fungi Hazards and Flood Cleanup

Flood conditions contribute to the growth and transmission of many kinds of fungi, some of which can cause sickness. Cleanup volunteers are at increased risk of exposure to airborne fungi and their spores because they often handle moldy building materials, decaying vegetable matter, rotting waste material, and other fungus-contaminated debris. The fungal material is carried into the respiratory tract when airborne particles are inhaled.



There are many different kinds of fungi, including mildew, molds, rusts, and yeasts. Most of these are harmless, but some can cause respiratory and other disorders when volunteers inhale or come into contact with fungi. Inhalation is the route of exposure of most concern to flood cleanup workers. The recommendations below offer strategies for volunteers renovating flooded buildings, homes, and structures to protect themselves while handling building materials that are visibly contaminated with fungi.

Protect Yourself

In flooded buildings, homes, and other structures, excessive moisture or water accumulation indoors will encourage the growth of the fungi that are already present. Some fungi have the potential to cause adverse health effects such as allergic responses and asthma attacks. Volunteers who are sensitive to molds may have signs and symptoms of allergic reactions such as nasal stuffiness, eye irritation, and wheezing. These volunteers should minimize fungal exposure by wearing respirators, gloves, a Tyvek suit and eye protection. They should also seek to eliminate fungi, as described below. In addition, repeated or prolonged contact of the skin with flood water and continuous sweating can lead to fungal skin infections. These can be minimized or avoided by washing the skin with warm, soapy water and keeping it as dry as possible.

What to Do if Symptoms Develop

If a cleanup volunteer experiences severe allergic or skin symptoms, or severe flu-like symptoms, he or she should seek medical advice. A health care provider can determine whether medication or any other precautions are necessary.

Tips to Remember

For all volunteers who may be exposed to mold and fungi:

- Avoid breathing dust (fungal spores) generated by moldy building materials, crops, and other materials.
- Wear a N-95 NIOSH-approved disposable respirator as a minimum when working with moldy or damp building materials, hay, or compost.
- Consider discarding all water damaged materials. Articles that are visibly contaminated with mold should be discarded. When in doubt, throw it out.
- Surfaces that have a light covering of mold should be scrubbed with warm, soapy water and rinsed with a disinfectant made of 1/2 cup liquid household bleach mixed into one gallon of water. Discarding is still the best option.
- CAUTION: Do not mix bleach with other cleaning products that contain ammonia.
- After working with mold-contaminated materials wash thoroughly, including the hair, scalp, and nails.
- If the safety of food or beverage is questionable, throw it out. Only drink safe drinking water that has been bottled, boiled, or treated until there is confirmation that the community water supply is safe for consumption.



When cleaning up or renovating buildings and homes that have been flooded, consider the following recommendations:

- Always wear a N-95 mask. A NIOSH-approved respirator is available on request, ask your team leader. Also wear gloves, a Tyvek suit, boots, and eye protection.
- Remove building materials and furnishings that are wet and may become contaminated with mold.
- Remove and discard porous organic materials that have become wet or are visibly contaminated (e.g. damp insulation in ventilation system, moldy ceiling tiles, and mildewed carpets). Again, these materials can usually be discarded as ordinary construction waste.
- Clean and disinfect nonporous surfaces where microbial growth has occurred with detergents, chlorine-generating silicide, or other biocides and ensure that these cleaners have been removed before air handling units are turned on. When using a biocide or disinfectant, consult the material safety data sheet (MSDS) or warning label for the appropriate personal protective equipment (PPE) that should be used when handling these chemicals.

This is one in a series of Volunteer Safety Information Fact Sheets highlighting Samaritan's Purse North American Ministries programs, policies, or standards.

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