Safer After Sandy

A New Jersey Work Environment Council Factsheet

Mold Removal Workers

What you need to know to protect your health

How does mold affect health?

Most people are not affected by mold. But different people can experience many different problems with their respiratory (breathing) systems. Molds reproduce by releasing millions of spores into the air. Inhalation of spores is the main way people are exposed. Health effects may include allergies, asthma, bronchitis and respiratory infections. Some molds produce toxic chemicals known as mycotoxins that can cause illness if inhaled.

Other potential hazards

There may be other hazards present, such as asbestos (dangerous if water-damaged, loose or crumbling), silica and lead. The least protective respirators recommended for mold (N-95s) are not adequate for any of these. However N-100s and HEPA (high efficiency particulate air) filters can be used. (Ninety-five and 100 refer to the percent of small particles the filter removes. HEPA filters remove 99.95 percent of them.) After a flood, there may also be bacteria and other microorganisms from sewage overflows, as well as toxic chemicals washed in from groundwater and industrial waste sites.

Respirators: The most important protection for mold removal

Respirators are key, but they must be used correctly! It is important to have the right respirator and know how to use it. Proper choice and use of respirators include these measures:

- The respirator chosen should protect you from the hazard – mold. If other hazards are present, such as asbestos or toxic chemicals, **different respirators may be needed**.
- You should be **trained** in proper use, including how to safely **put it on and take it off**.
- You should be **fit-tested** to choose a model and size that can get a tight seal on your face.
- You should **seal-check** a respirator each time you put it on, to be sure you have it on correctly. With a cartridge respirator (see pictures), you can check the fit this way: cover the cartridges completely with your hands or plastic and try to inhale. If the mask fits, you won't be able to inhale. With a disposable mask, cover the whole mask (or the exhalation valve if it has one) and try to exhale. If you can exhale, you don't have a tight face seal.

- Proper cleaning and storage (of non-disposable respirators). If you leave a respirator in a contaminated work area after you take it off, it will get dirty on the inside and will expose you to the contamination. It should be cleaned and stored in a tight container, such as a ziplock bag.
- People with asthma or other respiratory conditions should not do work requiring respirators.

Types of Respirators, from least to most protective

Disposable filter facepiece masks. These are the least protective respirators available because of the difficulty in maintaining a good face seal. They can only protect against particles (not gases, or vapors), unless they contain activated charcoal (in which case they protect against vapors as well as particles). They are intended only for low hazard levels. The commonly used "N-95" filtering mask is shown at right. OSHA allows N-95 respirators for mold, but many experts do not think it gives sufficient protection. The mask at left, above, has an exhalation valve.

Pros: Inexpensive, available in hardware stores, comfortable. Cons: You are unlikely to get a good face seal, and thus some contaminants may enter around the edges.

Chemical Cartridge Respirator. This respirator includes a facepiece or mask, and filter cartridges (if the filter is in a metal shell it is called a "canister"). For mold, the best cartridge is a HEPA filter. You can get more protection from a HEPA filter that also has charcoal for vapors. Charcoal will protect against toxic chemicals given off by some molds.

Pros: More protective than disposable masks. Cons: Can be uncomfortable. Half-face masks may interfere with glasses or goggles. Full-face masks can't be worn over glasses.
Half-face masks cost from about $15 to $40. Full-face masks are in the $150 range.

Powered Air-Purifying Respirator (PAPR). These respirators have a loose fitting hood and a battery pack, a pump and filters, all worn on a belt. Air is pumped through the filters and a flexible tube to the hood.

Pros: Far more protective than the respirators shown above, and comfortable because of the loose fitting hood. Air blowing over your face keeps you cool. *Cons:* They are very expensive, costing roughly $1,000 to $1,500.

Personal Protective Equipment

Protective clothing. While conducting inspections, mucking, gutting and large-scale remediation work (greater than 100 square feet), use breathable, disposable protective clothing with elastic wrists and ankles. Discard disposable clothing at the end of a shift in impermeable bags. It can be discarded as ordinary waste, unless contaminated with asbestos.

Skin and eye protection. Long gloves that extend to the middle of the forearm are recommended. The glove material should be selected based on the type of chemicals to be handled. If you are using a strong disinfectant or cleaning solution (*not* recommended), you should wear gloves made from natural rubber, neoprene, nitrile, polyurethane, or PVC. If you are using a mild detergent or plain water, ordinary household rubber gloves may be used. To protect your eyes, use properly fitted goggles or a full facepiece respirator. Goggles must be designed to prevent the entry of dust and small particles. Safety glasses or goggles with open vent holes are not appropriate in mold remediation.

Foot and head protection. When the work presents a risk of heavy objects falling (such as removing wall or ceiling elements or moving heavy objects), hard hats and steel toed boots are recommended. Shoes should have good tread to avoid slipping.

Training

You should receive training not only in respirator use and the use of protective gear, but in all aspects of carrying out the work safely. If you are working for a private contractor, respirator and protective gear training is required by the Occupational Safety and Health Act (OSHAct).

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The Occupational Safety and Health Act was enacted in 1970 to prevent workers from suffering work-related injury, illness, or death. It created the Occupational Safety and Health Administration (OSHA), which sets health and safety standards and inspects workplaces for violations. In New Jersey, public workplaces are covered by the state's Public Employee Occupational Safety and Health Act (PEOSHA) which provides similar, but not identical, protections. Both laws prohibit any person from discharging or in any other manner retaliating against any worker for exercising their rights under these laws. These rights include raising health and safety concerns with an employer or seeking an inspection by OSHA or PEOSH. For information, go to www.osha.gov. Public employees should go to www. www.state.nj.us/health/peosh/.

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