

Drying Out Waterlogged Homes

By JAY ROMANO

ONE unsettling reminder of last month's devastating assault by Tropical Storm Floyd has been the sight of soggy furniture along curbs and driveways in suburban metropolitan New York neighborhoods rarely touched by flood waters in the past.

Now that the waters have receded and the decision to discard damaged possessions has been grudgingly made, some homeowners may soon discover that their waterlogged walls are incubators for air-contaminating mold, mildew and fungus.

"With so many people having gotten so much water damage, and with the timing of it coming just at the start of the heating season, we believe that many homes are at serious risk of having very poor indoor air quality," said Thomas Peter, an industrial hygienist with the Whitman Companies, an environmental engineering company in East Brunswick, N.J.

Mr. Peter explained that unless all waterlogged materials in a house are dried quickly and thoroughly, it is likely that mold and mildew will eventually appear.

"Moisture in the walls is now the main issue," Mr. Peter said. "And when you're turning on the heat and closing all the windows, you're creating a perfect environment for mold and mildew to grow."

And when mold and mildew are present, he explained, some people have allergic reactions to the airborne spores released by the fungi. They can range from flu-like symptoms of fever, chills, and nasal stuffiness to full-blown respiratory-system infections, Mr. Peter said. Those most susceptible, he continued, are infants and children, the elderly and people of any age who have compromised immune systems.

"That means that there's a large population out there that is highly susceptible to fungus contamination," Mr. Peter said, noting that because mold and mildew thrive in areas where moisture is trapped, the contamination is not always obvious.

"A small dot on the room side of a wall can mean that the inside of the wall is covered with black mold," he said.

Harriet Burge, an associate professor of environmental health at the Harvard School of Public Health in Cambridge, Mass., agreed.

"In flooding conditions, there's usually ample time for fungi to grow," Ms. Burge said. "Within just two weeks you can have a massive problem."

Generally speaking, Ms. Burge said, people who have allergic reactions to mold spores have essentially "acquired" the allergy after having been exposed to spores a number of times. There are cases, however, when even those who are not currently allergic can become so after a brief but intense exposure.

"People who are exposed to a high dose for even a short while can get very sick," Ms. Burge said.

"And that could conceivably happen in some of these houses."

Most contaminated surfaces will eventually dry out, thereby killing any mold or mildew that may have formed. But that does not mean that the homeowner is in the clear.

"You can be affected by mold that's dead," Ms. Burge said. "The mold is still there and the mold allergy doesn't depend on the fungus being alive."

What, then, should a homeowner with a wet basement do?

"Get everything completely dried out," said Jeffrey C. May, a Cambridge indoor air quality consultant, adding that everything means paneling, studs, wallboard and insulation that may have gotten wet.



Tom Bloom

Unless basements and areas behind walls are dried out quickly, mildew and mold may take root.

Mr. May, who is writing a book on household hazards entitled "My House is Killing Me" for Johns Hopkins University Press, said that once mold or mildew has formed on one surface, it can quickly spread to other surfaces.

In fact, he said, once mold or mildew get a foothold, it is possible for the fungus to survive on even relatively dry surfaces if there is an ample supply of humidity in the air — a scenario common in many basements.

Accordingly, he said, once wet wood, wallboard, fabric, paneling and insulation have been removed or dried it is necessary to eradicate any mold or mildew that may have already formed.

That can be done, Mr. May said, by brushing all such surfaces with a solution of laundry detergent and bleach.

"Wash everything down and let it dry completely," he said. "And never use more bleach than you would use for a load of laundry."

Mr. May said that homeowners with forced-air heating systems should make sure that the blower-box — where the ducts are attached to the heater — is clean and dry and that the system's filter is changed. Failure to do so, he said, could result in the distribution of mold spores throughout the house.

Damon Gersh, president of Maxons Restorations, a disaster remediation company in Manhattan, said that one mistake homeowners make after a flood is to start rebuilding before everything has dried.

"Concrete and cinderblock are porous and retain moisture," Mr. Gersh said. "So you want to make sure you dry them out before you start putting things back."

One way to eliminate moisture from a house, he said, is to use a commercial-grade dehumidifier.

"We have units that can pull 60 pints of water out of the air in a day," Mr. Gersh said, noting that such machines can be rented from equipment supply houses for anywhere from \$40 to \$90 a day. When the outside air is dry, he said, it is also possible to dehumidify an area by using an "air mover" to remove moist air from the house while replacing it with dry air from the outside. Such machines can be rented for \$25 to \$35 a day.

And finally, Mr. Gersh said, homeowners who have the time, patience and determination can use an "insider's trick" to rid an area of moisture.

"If you have air-conditioning, you set the thermostat at the coolest level possible and shut the windows and doors," Mr. Gersh said. Then, after the house has been thoroughly chilled, he said, the air-conditioning should be turned off and the heat turned on high.

"As the cool air warms up it acts like a sponge," he said. After the temperature has risen, he added, the heat should be turned off, the windows and doors should be opened and the moist air should be driven out with fans and cross-ventilation. The cycle should be continued, he said, for as long as it takes to rid the house of moisture.

Mr. Gersh pointed out that it is important to make sure that the system is in proper working order before starting, and that the settings are returned to normal when done.

One way to determine whether an area has been adequately dried, he said, is to purchase a temperature-humidity gauge and compare the humidity reading from a room that was not flooded to a reading from a room that was. A higher reading in the flooded area means that there is moisture in the walls or floor.

"You can also use your nose," he said. "If something smells musty, it's probably still wet."

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