Avoiding and preparing for chemical exposures

Chemicals are everywhere. A quick inventory of your home can turn up dozens of obvious sources, from insect repellent to batteries to paint stripper. They’re in our food, our shampoos, our clothes — the list is enormous. Much of the time, chemicals help keep us safe and comfortable. Sometimes, however, large-scale chemical exposures can pose serious dangers, and it’s important to take steps to stay safe and prevent chemical accidents.

Assessing the danger

While some chemicals are safe in small doses, the very same chemicals can be toxic in larger quantities. Chemical exposures typically happen in three ways: breathing chemicals; swallowing contaminated food, water or medication; or touching chemicals.

While some chemical emergencies can happen inside the home, others can be the result of an industrial accident, such as the massive oil spill that occurred in the Gulf of Mexico in 2010. Chemicals have also been released in large quantities during fires involving trains or other transportation. And chemicals can also be used in terrorist attacks.

Regardless of how they occur, it’s a good idea to stay away from large-scale chemical exposures and to leave the response to emergency personnel.
Preparing to shelter in place

In the case of a large-scale chemical exposure in your community, going outdoors or evacuating may be too dangerous. In such a situation, emergency officials may instruct you to shelter in place, which means taking immediate shelter wherever you are. Listen to the radio to find out what you should do.

To prepare to shelter in place at home, pick a room with the least number of windows and doors and at the highest level to avoid sinking chemical vapors. Make sure you can access your emergency stockpile kit, which should include a first aid kit, a flashlight, a battery-operated radio, extra batteries, nonperishable food, bottled water and a manual can opener.

Do not drink tap water, as it may have been contaminated. Also include duct tape, scissors, towels and plastic sheeting to help seal any openings that may allow contaminants into your shelter.

As with every disaster, it’s critical to listen to instructions from emergency officials, who will tell you when it’s safe to go outdoors and whether you should evacuate.

If you are exposed to chemicals, be aware of the toxic signs. Symptoms include difficulty breathing, irritation of the eyes, skin or throat, changes in skin color, headache, blurred vision, dizziness, cramps or diarrhea.

If you believe you’ve been exposed to a dangerous chemical, the three most important things you can do are to remove your clothing, wash yourself thoroughly with soap and seal the contaminated clothing in a plastic bag for disposal. Contact local emergency officials or the health department for information on how to best dispose of chemically contaminated items and to report a chemical incident.

Keep this number in an accessible place: 1-800-222-1222. It’s the toll-free line for every poison control center in the United States. If you have to call poison control, follow the emergency operator’s instructions.

See our website for extensive information under the Emergency Preparedness link.