



# Mental Health

## **Iowans affected by recent flooding are encouraged to manage stress to reduce injury and further mental distress.**

According to the Iowa Department of Public Health, continued long hours of work, emotional and physical exhaustion, and dealing with losses from damaged property can create a highly stressful, but avoidable, situation.

Taking care of yourself is the right thing to do for yourself and those who count on you.

### **Iowans can reduce their risks of injury and stress in several ways:**

- Watch out for emotional exhaustion or strain. Signs may include:
  - general anxiety or nervousness
  - increased anger
  - feeling numb or having difficulty communicating thoughts/feelings
  - confusion or difficulty concentrating
  - limited attention span
  - becoming easily frustrated or irritable
  - feeling depressed or crying easily
  - poor work performance
  - physical problems like increased heart rate/blood pressure, headaches, stomach problems, or cold/flu symptoms
- Spend time with family and friends. If your normal supports are not available, do not hesitate to turn to:
  - community health centers
  - mental health organizations
  - substance abuse counselors
  - 12-Step or other self-help groups
  - your church, mosque, synagogue, or clergy
  - mental health counselors
  - your local hospital
  - the community mental health unit in your county
- If significant signs of emotional distress or depression are present in a family member or friend, strongly encourage an appointment with a mental health professional.
- Resume a normal sleep schedule as quickly as possible. Get plenty of rest and take frequent rest breaks before exhaustion builds up.
- Remember to eat and eat healthfully during times of stress.
- Pay attention to any change in your use of alcohol and/or drugs. Avoid increasing your use. Continue to take prescription medications as prescribed.
- Set priorities for cleanup and recovery. Pace yourself to avoid physical or mental exhaustion.
- Take advantage of disaster relief programs and services in your community.

Also, children can become fearful following a disaster. The flood is highly publicized and children sense that adults, too, seem to be afraid. It's important to talk openly about what is going on. Give simple, direct answers to questions.



# Environmental Hazards

**When returning to your home after a flood, keep the following safety tips in mind.**

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- Do not return to your home or business until it has been examined and certified as safe by a building inspector or other government authority.
- Do not turn the power back on until electrical equipment has been inspected by a qualified electrician.
- Avoid any downed power lines, particularly those in water.
- Avoid wading in standing water, which also may contain glass or metal fragments.
- Wear rubber boots, waterproof gloves, and eye protection during cleanup.
- Open windows to increase ventilation and fresh air when working inside.
- Prevent carbon monoxide poisoning. Carbon monoxide is an odorless, colorless gas that is produced by many types of equipment and is poisonous to breathe. Don't use a generator, pressure washer, charcoal grill, camp stove, or other gasoline- or charcoal-burning device inside your home, basement, or garage or near a window, door, or vent.
- Be aware of chemical hazards. Flood waters may have buried or moved hazardous containers of solvents or other industrial chemicals from their normal storage places.
- Wear protective clothing and gear (for example, an appropriate, fitted respirator if needed) when handling hazardous materials. Wash skin that may have come in contact with hazardous chemicals with soap and water. Seek medical care if appropriate. Contact local authorities if you are not sure how to handle or get rid of hazardous materials.
- Do not attempt to move any propane tanks (such as from a gas grill or household propane tanks) yourself. These represent a very real danger of fire or explosion. Contact your police or fire department immediately.
- Car batteries, even those in flood water, may still contain an electrical charge and should be removed with extreme caution by using insulated gloves and eye protection. Avoid coming in contact with any acid that may have spilled from a damaged car battery. Rinse immediately with large amounts of clean water if skin comes in contact with acid.
- Flooding may lead to an increase in numbers of mosquitoes, which can carry diseases, such as West Nile virus. To protect yourself from mosquitoes, use screens on dwellings; wear long pants, socks, and long-sleeved shirts; and use insect repellents that contain DEET or Picaridin. To help control mosquito populations, drain all standing water left outdoors in open containers, such as flower pots, tires, pet dishes, or buckets.
- Avoid wild or stray animals. Call local authorities to handle animals.

*Source:* Centers for Disease Control and Prevention, <http://www.bt.cdc.gov/disasters/hurricanes/recovery.asp>

*Resources:* EPA, <http://www.epa.gov/naturalevents/flooding.html>



# Infectious Disease Risks

**The risks of infection related to floods are minimal. Simple precautions can further reduce risks of infection. This is a summary of the most important flood-related infection risks, including a description of typical signs and symptoms of infection and suggestions for avoiding exposures that could lead to infection. If you feel that you are developing one of these problems, you should seek medical care from your local physician or other health care provider.**

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## **SKIN INFECTIONS**

**Where do they come from?** Skin infections may arise as a result of abrasions or puncture wounds suffered while performing cleanup activities or when open sores or cuts in the skin are exposed to bacteria that are present in standing water.

**Signs and symptoms:** Redness, swelling, warmth or drainage of a skin site; a fever (i.e. temperature of more than 100°) may or may not be present

**Avoidance:** Do not participate in activities that can lead to abrasions or puncture wounds. If you have open sores or cuts on your skin, avoid exposure to flood waters. Wear appropriate protective gear if you are involved in flood cleanup activities (e.g. protective boots, waterproof gloves). Thorough and prompt cleansing with soap and water is an important way to prevent infection from occurring if you do experience trauma to the skin or exposure of open lesions to flood waters.

## **TETANUS VACCINATIONS**

If you suffer a cut, puncture wound or abrasion while working in flood waters, you may need a tetanus booster vaccination. Follow these guidelines:

Before you get a tetanus shot, check your vaccination records. If you have had a vaccination within the last five years, you do not need to be re-vaccinated. Your vaccination will keep you protected against tetanus. If you are unsure of your vaccination records, consult with a medical provider.

If you are not working in flood waters, or handling flooded material, you do not need a tetanus vaccination.

## **GASTROINTESTINAL INFECTIONS**

**Where do they come from?** Gastrointestinal infections may result from ingestion of water that has been contaminated with diarrhea-causing microorganisms. Contamination of the water supply is a recognized risk during floods.

**Signs and symptoms:** The most common symptom of gastrointestinal infection is diarrhea. Other symptoms include nausea, vomiting and cramping abdominal pain. Light-headedness and dizziness may occur; fever is uncommon.

**Avoidance:** Do not drink water that is not obtained from a KNOWN safe source. If you develop gastrointestinal problems, including nausea, vomiting, diarrhea, or cramping abdominal pain, go to a medical provider.

For more information about flood-related health issues, visit [www.idph.state.ia.us](http://www.idph.state.ia.us)



# Mold

**Mold is an environmental hazard that can occur in flood-stricken areas. With a little effort you can make yourself safer from its toxic effects.**

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**What is mold?** Molds are a form of fungi that are found everywhere, both inside and outside. Mold grows rapidly in hot and humid conditions but can also grow in cooler climates. Mold is typically found around air conditioners, bathrooms, soil, plants, and damp areas. Mold produces tiny spores that float through the air.

**Where is mold found in flooded areas?** Any damp surface! Porous materials such as wet insulation, carpeting, dry wall, ceiling tiles, curtains, furniture, fabric, paper, wallpaper, stuffed animals, and foods are the big mold threats.

**How does mold enter the body?** By mouth and breathing. People with sensitive skin may react to mold.

**What are the symptoms of mold exposure?** Mold can produce mild to severe health problems. Examples are stuffy nose, itchy eyes, wheezing, difficulty breathing, and rash. Mold often produces strong odors. This may make you feel nauseous or make you gag. **MOLD IS A KNOWN TRIGGER OF ALLERGIES AND ASTHMA.**

**Where does mold harm the body?** Lungs and skin.

**How can you protect yourself while working in a mold contaminated area?** CHILDREN, PREGNANT WOMEN, THE ELDERLY, AND ANYONE WITH AN IMMUNE SYSTEM DISEASE SHOULD NOT BE IN THE AREA WHEN REPAIRS AND CLEANING ARE TAKING PLACE.

- Wear protective clothing, waterproof gloves, protective eyewear, and a disposable shower cap (it is easy for mold to get into your hair!).
- Avoid touching your face, especially your mouth and eyes.
- Use a two-strap, tight-fitting filtering face piece or a N95 respirator when cleaning up mold. A STANDARD DUST MASK OR SURGICAL MASK WILL NOT PROTECT YOU. Ensuring a proper fit and replacement of the mask are necessary to reduce mold exposure.
- Do not attempt to clean large areas of mold. If you start cleaning and your health starts changing, get out! Call a professional.
- Be very cautious when cleaning mold because mold releases spores when it is disturbed. The area should be well ventilated when you clean but do not use a fan. Fans may spread existing mold and send more spores into the air.
- Testing is generally not necessary. Focus on removing water and mold contaminated materials.

# Mold

Continued from front

Porous materials such as wet insulation, carpeting, dry wall, ceiling tiles, curtains, furniture, fabric, wallpaper, and stuffed animals will probably be ruined and will probably have to be thrown away. Precious documents can sometimes be saved by washing the mold off them and then drying them as thoroughly as possible. Photos can be put in a Ziploc bag and frozen until having them professionally restored, but unfortunately this is expensive. Wedding dresses and other special clothing can be hung outside until dry and then sealed in a plastic bag and taken to a dry cleaner.

## **STEPS FOR CLEANING FLOORS, WALLS, AND OTHER HARD SURFACES**

(metal, glass, ceramics, plastic, concrete, and other hard surfaces)

NOTE: All cleaning should be done using wet wiping and wet mopping.

### **Step 1. Before cleaning**

- Remove all wet items. Everything that has been in flood water for more than 48 hours should be thrown out. If you have any doubts, then throw it out!

NOTE: There may be hidden mold in air ducts and behind walls.

### **Step 2: Get supplies**

- You will need a scrub brush, trash bags, sponges and rags, and a non-ammonia cleaning detergent or a pine-based cleaner like Pine-Sol. Read the instructions on the product. Use clean, hot water.

### **Step 3: Cleaning hard surfaces**

- Clean these surfaces with detergent and a scrub brush, sponge, or rag.
- Rinse the surfaces with clean water.
- After the surface is clean you need to disinfect the surface using a solution of 1 cup of bleach in 1 gallon of water.
- The bleach solution should then dry for 6 to 8 hours.
- IMPORTANT! Never mix bleach with ammonia! The fumes are very toxic!
- Put all dirty rags and sponges into a plastic bag and tape the bag closed.

### **Step 4: When you are finished cleaning**

- After working in a moldy area you should shower and thoroughly wash your hair. Clothes that you were working in should be washed separately in a solution of freshly prepared 1/4 cup household bleach in 1 gallon of clean water.
- Keep shoes and work clothes away from living area.

*Source:* Wayne State University Environmental Health Sciences Center, The University of Iowa Environmental Health Sciences Research Center, and the National Institute of Environmental Health Sciences

*Resources:* Iowa Department of Public Health, [http://www.idph.state.ia.us/adper/common/pdf/mold\\_facts.pdf](http://www.idph.state.ia.us/adper/common/pdf/mold_facts.pdf)



# Injury Prevention During Flood Cleanup

**When returning to a home that's been flooded, be aware that your house may present health risks and potential for injury.**

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The Centers for Disease Control and Prevention (CDC) urges precautions to avoid injuries.

- Avoid unstable buildings. Stay away from damaged buildings until they have been certified safe by a government authority. Leave immediately if you hear shifting or unusual noises. Sagging ceilings, wet insulation and pocketed water can cause ceilings to fall.
- Beware of wild or stray animals. Call local authorities to handle animals.
- Prevent carbon monoxide poisoning. Carbon monoxide is an odorless, colorless gas that is produced by many types of equipment and is poisonous to breathe. Equipment typically used during flood cleanup that emit carbon monoxide include power washers, portable generators, and gas powered pumps. Seek prompt medical attention if you suspect carbon monoxide poisoning and are feeling dizzy, light-headed, or nauseated.
- Avoid fire hazards. Use flashlights, instead of lanterns or candles, when entering buildings since flammables may be present.
- Beware of hazardous materials. Wear protective gear when handling hazardous materials. Wash skin that may have come in contact with hazardous chemicals.
- Avoid wading in water. Glass, metal fragments, and other debris may be present. If you must walk into the water, use heavy boots to protect your feet and legs.
- Prevent sprain and strain injuries. Use teams of two or more people to move bulky objects. Avoid lifting any material that weighs more than 50 pounds per person.
- Pace yourself. Be alert to physical and emotional exhaustion or strain. Don't work alone.
- Wear protective gear for cleanup work. Wear hard hats, goggles, heavy work gloves, and watertight boots with steel toes and insoles (not just steel shank). Wear earplugs or protective headphones to reduce risk from equipment noise.

# Injury Prevention During Flood Cleanup continued from front

## **After a flood one must particularly be careful to avoid electrical hazards:**

- Never touch a fallen power line. Report it to the power company.
- Avoid contact with overhead power lines.
- Do not drive through standing water if downed power lines are in the water.
- If electrical circuits and electrical equipment have gotten wet or are in water, turn off the power at the main breaker or service panel. Do not enter standing water to access the main-power switch. Call an electrician to turn it off.
- Never turn power on or off or use an electric appliance while standing in water. Do not turn the power back on until equipment has been inspected by an electrician. All electrical equipment must be completely dry before use.

## **Although water levels are receding, there are still vehicle-related safety risks.**

- Beware of flooding at highway dips, bridges, low areas, and nearby creeks and streams.
- Don't camp or park your vehicle along streams and washes, especially if there are weather-related warnings.
- Don't attempt to drive over a flooded road. The roadway may have collapsed due to erosion, or you may drive into a washout. Six inches of water may cause loss of control. Two feet will sweep most cars off the road.
- Be especially cautious at night when it is harder to recognize flood dangers.
- If vehicle stalls due to water, abandon it and seek higher ground.

### *Sources:*

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Marizen Ramirez, MPH, PhD, Injury Prevention Research Center, [marizen-ramirez@uiowa.edu](mailto:marizen-ramirez@uiowa.edu)

Iowa Department of Public Health, <http://www.idph.state.ia.us/adper/flood.asp>

Centers for Disease Control and Prevention, <http://emergency.cdc.gov/disasters/floods/>

# Water Quality

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## Is water from my well safe?

Access to water that is safe to drink is critical to good health. The recent record-breaking flooding poses a potential health risk to well systems that may have been covered with floodwaters. Floodwater may contain fecal material from overflowing sewage systems, agricultural run-off, and industrial byproducts. Sewage-contaminated floodwater is likely to contain microorganisms that can make people and animals sick, especially if ingested.

To ensure that your water is safe to drink, follow the recommendations outlined below.

## Private well recommendations

- Do not drink water from flooded wells unless it has been properly disinfected and then tested for drinking safety.
- After floodwaters recede, wells must be flushed, shock-chlorinated, and then tested for total coliform bacteria and E.coli.
- Contact your local county health department for free flood sampling containers and advice.
- Shallow wells and sandpoints can become contaminated from nearby flooding. Do not drink water from these wells until the water has been tested for drinking safety.
- To disinfect drinking water, bring the water to a boil, boil for one minute, then cool.

## Hidden concerns

- Discard ice cubes contaminated by floodwaters; disinfect ice cube trays.
- Have water softeners and water treatment systems inspected by professionals.
- Haul and store drinking water in clean containers (not old milk or juice jugs).

## Food safety recommendations

- Discard all containers with signs of leakage or damage.
- Foods in paper, cardboard, or flexible plastic must be thrown away.
- Discard foods in corked bottles, canisters, and screw-capped jars or bottles.
- Canned goods may be sanitized and used if the label is removed, the can is washed in hot, soapy water, and the item is identified with a permanent marking pen.
- Solutions containing chlorine bleach are not recommended for cleaning cans because they accelerate rusting.
- All fresh vegetables and fruits that have come in contact with floodwaters must be discarded
- Leafy vegetables cannot be washed adequately to be eaten raw.
- Thawed foods should not be refrozen.
- Wash hands with soap and water after handling flood-contaminated materials.

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## UHL services to families affected by flooding

- Free private well tests to qualified individuals through county health departments.
- Consultation on disease prevention, water and food safety, and result interpretation.

## For information

- IDPH website at <http://www.idph.state.ia.us>
- University Hygienic Laboratory at <http://www.uhl.uiowa.edu> or call 1- (800) 421-IOWA (4692)
- Centers for Disease Control and Prevention Emergency Preparedness and Response at <http://emergency.cdc.gov/disasters/floods/>