



Public Health
Prevent. Promote. Protect.

Rock Island County
Health Department

Precautions Against Disease in Flood Areas

Personal Hygiene

Thorough hand washing with soap and water is imperative before preparing or eating food or caring for others after being in floodwaters. If the hand washing water is potentially contaminated, rinse hands in a basin containing 1 cap of household bleach per gallon of water after washing with soap. If clean water is not available, alcohol-based hand sanitizer may be used as a substitute. However, the hands should be free of soil or grime before using hand sanitizer.

Protective Clothing

When entering an area that is or has been flooded, wear rubber boots if possible. The use of rubber gloves is recommended when conducting clean-up operations.

Immunizations

While it is always a good idea to make sure immunizations are up to date, there are no special recommendations for immunizations during flood situations. However, health care providers and first responders should ensure they are up to date with tetanus vaccinations- a Tetanus booster is recommended if no documentation of a booster during the past 10 years. If a person suffers a puncture wound or deep cut while working in a flood area, a tetanus shot may be necessary if it has been 5 or more years since the last tetanus shot.

The following vaccinations are NOT routinely recommended as a protection during flood response/recovery: Hepatitis A, Typhoid, Cholera, Meningococcal and Rabies. Outbreaks of communicable diseases after floods are unusual and it is rare to see an increase in new infectious diseases in the community after a flood.

Drinking and Cooking Water

Water from wells which have been flooded should be considered unsafe to consume until it has been tested and found safe. Polluted water may contain germs capable of producing diarrhea, hepatitis, and other waterborne diseases. In the meantime, the use of bottled water is recommended for drinking, cooking, or other ingestion purposes. Water can also be hauled in sanitary containers from public (city) water supplies not under a boil order. As an alternative, quantities of water can be made safe by boiling vigorously for 3 minutes. Do not make ice from contaminated water, and do not use contaminated water for brushing teeth.

Disinfecting a Well

A contaminated well may be disinfected through a shock chlorination method as follows:

1. Pump from the well as much "dirty" water as possible until the water becomes relatively clear. (For a sandpoint well, continued pumping in this manner is necessary, since they are difficult to chlorinate.) If the well is in a flooded pit, pump out the pit and keep it dry.
2. Obtain either gallon containers of household bleach (5.25% chlorine) or solid chlorine in tablet or granular form (such as "HTH") from a swimming pool supply store. The tablets contain approximately 70% chlorine. For drilled wells of 100 feet or less, pour 1 or 2 pounds of chlorine tablets into a 5-gallon bucket and add water to make a slurry. (**WARNING: When using any chlorine product, strong gases may be released and chemical burns can occur. Do not use in a confined area and do wear rubber gloves and old clothing.**) For each additional 100 feet of depth add 1 pound of tablets. If household bleach is used, provide 2 or 3 gallons for drilled wells of 100 feet or less. Add an extra 1-gallon for each additional 100 feet of depth.
Note: If the well cap has not been covered by water but only surrounded by water, the quantities of chlorine may be cut in half. If you have water conditioning equipment, check with the dealer or manufacturer to assure damage will not be done to the unit.
3. Remove the well cap and pour the proper amount of household bleach or chlorine solution into the well casing.

4. Connect a hose from an outside faucet or the pressure tank and hang the other end into the open well casing. Turn on the faucet, and recirculate the chlorinated water through the system. Wash down the inside surfaces of the casing during this time. After 15-30 minutes, shut off the faucet, remove the hose, and resecure the well cap.
5. Open every faucet (hot and cold) in the system and let each faucet run until the smell of chlorine is detected. Then close all faucets and let the system stand for at least 8 hours, preferably overnight. If a chlorine odor is not detected, add a little more chlorine product.
6. After standing, turn on faucets to eliminate the chlorinated water from the system. This may take several hours and may have to be repeated several times to remove all traces of chlorine. If a septic or aeration system is being used, this water should be drained through a hose so as not to overload the sewage system or impair the bacterial activity. Select a location, which will not be sensitive to a heavy chlorine solution. Water may be used for bathing or washing purposes after chlorine odors have been reduced to low odor levels. However, the water should not be consumed until it is free of all chlorine and been tested satisfactory for coliform bacteria. The Rock Island County Health Department can provide a sterilized bottle upon request after these procedures have been followed.

Food Items

Packaged Foods and Produce: Examine all packaged food items, and discard containers showing signs of leakage, bulging, or spoilage. Discard corked bottles, screw top containers, or other capped or crowned containers which may have been covered by floodwaters. Canned goods may be salvaged by washing the cans in soapy water and then immersing for several minutes in a basin containing $\frac{1}{4}$ cup of bleach per gallon of water. Fresh produce or other foods should be discarded if in contact with floodwaters.

Refrigerated Foods: "*When in doubt, throw it out*" is a good rule to follow in order to avoid a foodborne illness. Refrigerated foods containing meat, eggs or dairy products should be discarded if the inside temperature of the refrigerator has been over 41 degrees F for several or more hours. Thawed but still cool frozen foods should not be refrozen, but used within a short time.

Home Clean-Up

Household bleach is an inexpensive and effective disinfectant. However, some materials may deteriorate or fade in color when exposed to strong bleach solutions.

Dishware, utensils, kitchen counters and appliances, toys: scrub with soapy water and immerse for 1 minute (or rinse) in a solution of 2 capsful of bleach per gallon of water.

Floors, walls, and furniture: Scrub surfaces with soapy water. Rinse in a solution of $\frac{1}{2}$ cup of bleach per gallon of water.

Basements: After pumping out and flushing or removing debris, scrub surfaces with soapy water. Rinse with a solution of $\frac{1}{2}$ cup of bleach per gallon of water.

Clothing: Wash in hot water and use a bleach or laundry sanitizer if possible. Thoroughly dry before wearing.

Carpeting: Steam clean with a disinfectant if salvageable. Consult a professional carpet cleaning service for advice. Thoroughly dry area rugs before reinstallation.

Heating and air conditioning systems: If inundated, the furnace and blower system will need professional reconditioning or replacement. In addition, any submerged ductwork needs to be thoroughly flushed and cleaned with soapy water. A pressure washer or a hose is suitable. Rinse the ductwork with a bleach/water solution using $\frac{1}{2}$ cup bleach per gallon of water. Suck out the water with a pump or wet vac and ventilate to dry out all ductwork before using the system. Basement areas, flooring, wall voids, carpeting, and ductwork can all be breeding areas for mold, fungi, and bacteria. These organisms can become airborne and cause respiratory problems over time.

For additional information, contact the RICHD Division of Environmental Health at 309-558-2840 or www.richd.org.