

WATER TREATMENT



Safe Drinking and Washing Water

It is very important to be careful with the water you use during and after a disaster because water supplies could become contaminated and spread sickness. Specific questions about your water should be directed to the **Environmental Health** section of the Bay County Health Department, phone number **872-4660 ext. 237**. Here are some general guidelines to follow.

DO NOT USE water that may be contaminated for drinking, bathing, brushing teeth, washing food, washing dishes, or making ice until it has been tested as safe.

HOWEVER:

If you must use the water, you should disinfect it in one of the following ways:

- **BOILING** - Filter out any particles from the water and bring it to a full boil for at least 1 minute. This will kill most harmful bacteria and parasites.
- **CHEMICAL TREATMENT** - When boiling is not possible, filter out any particles from the water and add eight drops (1/8 teaspoon) of unscented, regular chlorine bleach (5.25% sodium hypochlorite) per gallon of water. Shake thoroughly after mixing and let stand for about thirty minutes.

The containers you use to store disinfected water should first be rinsed with a solution of 1/4 cup of bleach to 1 gallon of water, and allowed to be air dried.

If you are connected to a public water company, you should listen for public service announcements from television or radio to make sure your water is safe.

DISINFECTING WELLS

If you suspect your well is contaminated, contact the **Environmental Health** section of the Bay County Health Department, phone number **872-4660 ext. 237**. Refer to DOH pamphlet – **“PROPER DISINFECTION OF WATER WELLS”**.

PERSONAL CLEANLINESS



Because of the increased risk of disease during and after a disaster, it is critical that everyone practice good cleanliness standards. Always wash your hands:

- before preparing or eating food
- after working on disaster cleanup activities
- after handling articles contaminated with flood water or sewage
- after toilet use
- after changing diapers

Note: Wash water must be disinfected by boiling or chemical means (See column 1-Water Treatment)

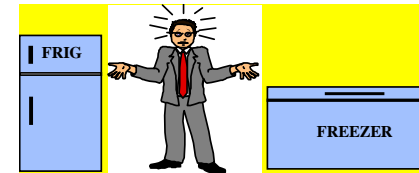
Flood waters may contain waste material from overflowing sewage systems, as well as agricultural or industrial byproducts. Although skin contact with flood water does not, by itself, pose a serious health risk, there is some risk of disease from eating or drinking anything contaminated with flood water. If you have any open cuts or sores that will be exposed to flood water, keep them as clean as possible by washing thoroughly with soap. If a wound develops redness, swelling, or drainage, seek immediate medical attention.

In addition, parents need to help children avoid water-borne illness. Don't allow children to play in flood-water areas, wash children's hands frequently (always before meals), and don't let them play with toys that are contaminated with flood-water. You must clean the toys first using a solution of 1/4 cup of bleach to 1 gallon of water.

FOOD SAFETY



Do not eat any food that may have come into contact with flood water. Any food that doesn't have a waterproof container should be thrown out if there is any chance of contact with flood water. Undamaged, factory canned/bottled foods can be saved if you remove the paper label, thoroughly wash the cans/bottles, and disinfect them with a solution consisting of 1/4 cup of household bleach in 1 gallon of water. Re-label your cans/bottles, including expiration date, with a marker. For infants, use **only** pre-prepared canned baby formula that does not require the addition of water.



FROZEN AND REFRIGERATED FOODS

If your refrigerator or freezer is without power for a long period:

- Connect to an alternate power source – if available (generator)
- Divide your frozen foods among friends' freezers if they have electricity;
- Seek freezer space in a store, church, school, or commercial freezer that has electrical service; or
- **IF AVAILABLE** -Use dry ice - 25 pounds of dry ice will keep a 10-cubic-foot freezer below freezing for 3-4 days (**Be careful** when handling dry ice because it freezes everything it touches. Wear dry, heavy gloves to avoid injury).
- Donate food to a disaster relief station (ie, Red Cross, Salvation Army)

Eat the perishable, edible food from the refrigerator first, then the food from the freezer. Thawed food can usually be eaten or refrozen if it is still “refrigerator cold,” or if it still contains ice crystals. To be safe remember, “When in doubt, throw it out.” Dispose of these foods that have been at room temperature for two hours or more, or have an unusual odor, color, or texture.

Your refrigerator should keep foods cool for about 4 hours without power if it is unopened. Add block or dry ice (if available) to your refrigerator if the electricity will be off longer than 4 hours.

HOME CLEANUP



Walls, hard floors, and many other household surfaces should be cleaned with soap and water and then disinfected with a solution of 1/4 cup of bleach to 1 gallon of water. Be especially careful to thoroughly disinfect surfaces that may come in contact with food, such as counter tops, pantry shelves, refrigerators, etc. Areas where small children play should also be carefully cleaned. Wash all linens and clothing in hot water, or have them dry cleaned. For items that can't be washed or dry cleaned, such as mattresses and upholstered furniture, air dry them in the sun and then spray them thoroughly with a disinfectant. If there has been a backflow of sewage into the house, wear rubber boots and waterproof gloves during cleanup. Remove and dispose of contaminated household materials that can't be disinfected, such as wall coverings, cloth, rugs, carpets and drywall.

GARBAGE DISPOSAL



Food waste should be stored in plastic garbage bags or in waterproof containers which have tight fitting lids.

If your normal waste facility service is not running, listen for public service announcements on radio and television for garbage disposal instructions.



During disasters, many wild and domestic animals are forced from their natural habitats. Take care to avoid these animals, because some may carry rabies. Remember, many of the animals are confused as well as lost. Don't corner them. If an animal must be removed, or a dead carcass disposed of, contact the **Bay County Animal Control Office at 784-4005**.

Rats may be a problem during and after a flood so take care to secure all food supplies.

If you are bitten by any animal, seek immediate medical attention. If you are bitten by a snake, try to accurately identify the type of snake, so that, if poisonous, the correct anti-venom may be administered.

SEPTIC SYSTEMS

1. During flooding septic systems will not accept waste or may drain off slowly. Sewage backup into the building may occur. In this event use alternate facilities; listen to advisements as to the location of available temporary facilities.
2. Do not pump the contents of tank during flooding. The tank will only refill with flood water and may collapse when emptied.
3. When flooding recedes the system (if intact) should function properly.

HARZARDS DURING POWER OUTAGES

- Do not drive over or touch downed power lines. Report them to proper authority.
- If you must use candles, make sure you put them in safe holders away from curtains, paper, or other flammable items. **KEEP THEM OUT OF CHILDREN'S REACH.**
- Use battery powered lanterns and flashlights when possible.

PREVENTING MOSQUITO-BORNE ILLNESS

- Heavy rains and flooding can lead to an increase in mosquitoes. Mosquitoes are most active at sunrise and sunset. Public-health authorities will be working actively to control the spread of any diseases transmitted by mosquitoes.
- To protect against mosquitoes, DOH urges the public to remain diligent in their personal mosquito protection efforts. These should include the 5 D's for prevention:
 - **Dusk and Dawn** -- Avoid being outdoors during the dusk and dawn hours.
 - **Dress** -- Wear clothing that covers skin.
 - **DEET** -- Repellents containing up to 30 % DEET are recommended. (It is not recommended to use DEET on children less than 2 months old). If additional protection is necessary, apply a permethrin repellent directly to your clothing. Always read the manufacturer's directions carefully before you put on a repellent.
 - **Drainage** -- Check your home to rid it of standing water in which mosquitoes can lay their eggs.

Tips on Eliminating Mosquito Breeding Sites

- Clean out eaves, troughs and gutters.
- Remove old tires or drill holes in those used in playgrounds to drain.
- Turn over or remove empty plastic pots.
- Pick up all beverage containers and cups.
- Check tarps on boats or other equipment that may collect water.
- Pump out bilges on boats.
- Replace water in birdbaths and pet or other animal feeding dishes at least once a week.
- Change water in plant trays, including hanging plants, at least once a week.
- Remove vegetation or obstructions in drainage ditches that prevent the flow of water.

HEAT EXHAUSTION

Heat Exhaustion is a milder form of heat-related illness that can develop after several days of exposure to high temperatures and inadequate or unbalanced replacement of fluids. Those most prone to heat exhaustion are elderly people, people with high blood pressure, and people working or exercising in a hot environment.

WARNING SIGNS OF HEAT EXHAUSTION INCLUDE THE FOLLOWING:

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| * Heavy sweating | * Paleness |
| * Muscle cramps | * Tiredness |
| * Weakness | * Dizziness or headache |
| * Nausea or vomiting | * Fainting |

The skin may be cool and moist. The victim's pulse rate will be fast and weak, and breathing will be fast and shallow. If heat exhaustion is untreated, it may progress to heat stroke. Seek medical attention immediately if symptoms are severe or the victim has heart problems or high blood pressure. Otherwise, help the victim to cool off and seek medical attention if symptoms worsen or last longer than one hour.

CARBON MONOXIDE

Carbon monoxide (CO) is an invisible, odorless, and tasteless gas, and is highly poisonous. CO may cause fatigue, weakness, chest pains for those with heart disease, shortness of breath upon exertion, nausea, vomiting, headaches, confusion, lack of coordination, impaired vision, loss of consciousness, and in severe cases, death. DOH recommends the following precautions to help prevent carbon monoxide poisoning:

- Do not burn charcoal or gas grills inside a house, garage, vehicle, tent or fireplace.
- Do not use gas-powered generators or pressure washers indoors, not even in the garage.
- If you suspect you are experiencing any symptoms of CO poisoning open doors and windows, turn off gas appliances and go outside. If symptoms are severe call 911.

DISASTER PREPAREDNESS

"Information Brochure"



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