



# ILLNESS PREVENTION AFTER A HURRICANE

---



## WOUND INFECTIONS

Open wounds and rashes exposed to flood waters can become infected.

To protect yourself and your family:

- Avoid contact with flood waters if you have an open wound.
- Keep open wounds as clean as possible by washing well with soap and clean water.
- Seek immediate medical care if a wound develops redness, swelling, oozing, or if you have other signs of infection such as fever, increasing pain, shortness of breath, confusion, disorientation or high heart rate.

The risk for injury during and after a hurricane, flooding, and other natural disasters is high. Prompt first aid can help heal small wounds and prevent infection. Wash your hands with soap and water before and after providing first aid for a wound to help prevent infection.

Use an alcohol-based hand sanitizer that contains at least 60% alcohol if soap and water are not available. Tetanus, other bacterial infections, and fungal infections are potential health threats for persons who have open wounds.

## SEEK MEDICAL ATTENTION AS SOON AS POSSIBLE IF:

- There is a foreign object (soil, wood, metal, or other objects) embedded in the wound;
- A wound is a result of an animal bite;
- A wound is the result of a puncture by a dirty object;
- The wound is infected (increased pain and soreness, swelling, redness, draining, or you develop a fever);
- You have signs of sepsis such as confusion or disorientation, shortness of breath, high heart rate, fever or shivering, extreme pain or discomfort, clammy or sweaty skin.

## WOUND CARE

- Wash your hands thoroughly with soap and clean water, if possible.
- Avoid touching the wound with your fingers while treating it (if possible, use disposable gloves).
- Remove obstructive jewelry and clothing from the injured body part.
- Apply direct pressure to any bleeding wound to control bleeding.
- Clean the wound after bleeding has stopped.
  - » Examine wounds for dirt and foreign objects.
  - » Gently flood the wound with bottled water or clean running water (if available, saline solution is preferred).
  - » Gently clean around the wound with soap and clean water.
  - » Pat dry and apply an adhesive bandage or dry clean cloth.
- Leave unclean wounds, bites, and punctures open. Wounds that are not cleaned correctly can trap bacteria and result in infection.
- Provide pain relievers when possible.
- Check on wound every 24 hours.

## ADDITIONAL WOUND INFECTION CONSIDERATIONS

- Expect a variety of infection types from wounds exposed to standing water, sea life, and ocean water.
- Wounds in contact with soil and sand can become infected.
- Puncture wounds can carry bits of clothing and dirt into wounds and result in infection
- Crush injuries are more likely to become infected than wounds from cuts.
- Take steps to prevent tetanus.

## FOOD & WATER SAFETY AFTER A STORM

Food may not be safe to eat during and after an emergency. Safe water for drinking, cooking, and personal hygiene includes bottled, boiled, or treated water. Your local health department can make specific recommendations for boiling or treating water in your area.

Throw away food that may have come in contact with flood or storm water, perishable foods, and those with an unusual odor, color, or texture. When in doubt, throw it out.

Do not use water you suspect or have been told is contaminated to wash dishes, brush your teeth, wash and prepare food, wash your hands, make ice, or make baby formula.

## FOOD

Foodborne illness, or food poisoning, is a risk from food contaminated from flood water and from perishable food not held at a safe temperature due to power outages. If foods of animal origin, especially raw meat and poultry, have not been held at a safe temperature, germs already present can grow to high numbers. Other foods not held at the right temperature can also spoil.

**Do the following with food and containers that may have had contact with flood or storm water.**

### THROW AWAY THE FOLLOWING FOODS:

- Food that has an unusual odor, color, or texture. When in doubt, throw it out.
- Perishable foods (including meat, poultry, fish, eggs and leftovers) in your refrigerator when the power has been off for 4 hours or more.
- Canned foods or food containers that are bulging, opened, or damaged. Throw away the food if the container spurts liquid or foam when you open it or the food inside is discolored, moldy, or smells bad.
- Food not in packages or cans.
- Packaged food — throw away food containers with screw-caps, snap-lids, crimped caps, twist caps, flip tops, and snap-open tops, as well as home-canned foods because they cannot be disinfected. Throw away food in cardboard containers, including juice, milk, or baby formula boxes.

## HOW TO REUSE COMMERCIALY PREPARED CANS & RETORT POUCHES

(like flexible, shelf-stable juice and seafood packages)

- Remove labels if they are removable.
- Brush or wipe away dirt or silt.
- Wash cans and pouches with soap and water, using hot water if available.

## MOSQUITOES & HURRICANES

- Adult mosquitoes do not generally survive high winds during a hurricane.
- Immediately following a hurricane, flooding may occur. Mosquito eggs laid in the soil by flood water mosquitoes during previous rain or floods hatch. This results in very large populations of flood water mosquitoes. Most of these mosquitoes are considered nuisance mosquitoes.
- In general, nuisance mosquitoes do not spread viruses that make people sick. The types of mosquitoes that can spread viruses may increase 2 weeks to 2 months after a hurricane, especially in areas that did not flood but received more rainfall than usual.
- In areas with *Aedes aegypti* mosquitoes and local spread of Zika, chikungunya, or dengue, increased rainfall may result in increased hatching of *Ae. aegypti* eggs from water-holding containers. People may be at more risk of getting infected with these viruses, and they should take steps to protect themselves from mosquito bites.
- Because people spend more time outside cleaning up after a hurricane or flood, they are more likely to be bitten by nuisance mosquitoes.
- Large numbers of nuisance mosquitoes can affect recovery efforts. For this reason, local mosquito control experts will often take steps to control these mosquitoes.

## PREVENT MOSQUITO BITES

The best way to prevent diseases spread by mosquitoes is to protect yourself and your family from mosquito bites.

- Wear long-sleeved shirts and long pants.
- Stay in places with air conditioning and window and door screens to keep mosquitoes outside.
- Treat your clothing and gear with permethrin or buy pre-treated items
- Use Environmental Protection Agency (EPA)-registered insect repellents on exposed skin. Use a repellent with one of the following active ingredients: DEET, picaridin, IR3535, oil of lemon, eucalyptus, para-menthane-diol, or 2-undecanone.
  - » Always follow the product label instructions.
  - » Reapply insect repellent as directed.
  - » Do not spray repellent on the skin under clothing.
  - » If you are also using sunscreen, apply sunscreen first and insect repellent second.

## FOR BABIES AND CHILDREN

- Dress your child in clothing that covers arms and legs.
- Cover crib, stroller, and baby carrier with mosquito netting.

## TAKE STEPS TO CONTROL MOSQUITOES INSIDE & OUTSIDE YOUR HOME

- After a hurricane or flood, the health department or mosquito control district will often take steps to reduce the mosquito population.
- Residents can take steps to help control mosquitoes in and around their homes to prevent mosquito bites.

## WEST NILE

- West Nile is a virus most commonly spread to people by mosquito bites.
- There are no vaccines to prevent or medications to treat WNV. Fortunately, most people infected with WNV do not have symptoms.
- About 1 in 5 people who are infected develop a fever and other symptoms.
- About 1 out of 150 infected people develop a serious, sometimes fatal, illness.

## DENGUE

- Dengue is a disease caused by any one of four closely related dengue viruses (DENV 1, DENV 2, DENV 3, or DENV 4).
- The viruses are spread to people through the bite of an infected mosquito.
- It is estimated that there are over 100 million cases of dengue worldwide each year.

## ZIKA

- Zika is a virus spread mostly by the bite of an infected *Aedes* species mosquito (*Ae. aegypti* and *Ae. albopictus*).
- It can also be passed through sex without a condom with an infected person, even if that person does not show symptoms.
- If a pregnant woman is infected with Zika virus, it can be passed to her fetus and potentially cause birth defects, including microcephaly and other severe fetal brain defects.
- Many people infected with Zika virus won't have symptoms or will only have mild symptoms. For those who do have symptoms, they are usually mild and last for several days to a week.
- Signs and symptoms of Zika virus infection include fever, rash, headache, joint pain, conjunctivitis (red eyes), and muscle pain.
- No specific treatment is available for Zika virus disease.
- The best way to prevent Zika and other viruses spread by mosquitoes is to prevent mosquito bites.
- Condoms can reduce the chance of getting Zika from sex.