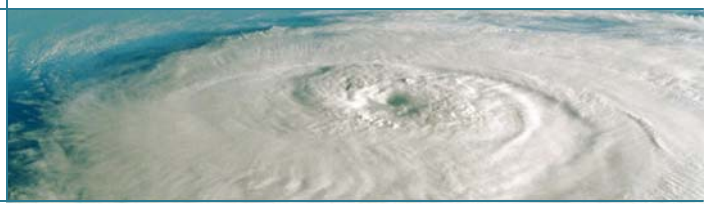
After a Hurricane: Key Facts about Infectious Disease



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Although infectious diseases are a frightening prospect, widespread outbreaks of infectious disease after hurricanes are not common in the United States. Rare and deadly exotic diseases, such as cholera or typhoid, do not suddenly break out after hurricanes and floods in areas where such diseases do not naturally occur.

Communicable disease outbreaks of diarrhea and respiratory illness can occur when water and sewage systems are not working and personal hygiene is hard to maintain as a result of a disaster. However, no disease outbreaks have been reported as of this morning in areas affected by Hurricane Katrina.

- **Decaying bodies create very little risk for major disease outbreaks.**
- **Outbreaks of infectious diseases following hurricanes are rare** in developed countries (such as the United States) and only slightly more common in the developing world.
- Numbers of short-term, self-limiting gastrointestinal illnesses and respiratory infections sometimes increase in developed countries. However, numbers of communicable diseases (including gastrointestinal and respiratory illnesses as well as cholera and typhoid) more typically **do not increase** in either developed or developing countries.
- **Because cholera and typhoid are not commonly found in the U.S. Gulf States area, it is very unlikely that they would occur after Hurricane Katrina.**
- Communicable disease outbreaks can occur when sanitation and hygiene are compromised as a result of a disaster.
- As has been the case in past hurricanes, the U.S. Department of Health and Human Services quickly sets up tracking systems that monitor illnesses in hurricane-affected areas. In the unlikely event that a disease outbreak occurs, these systems provide an early warning that enables prompt public health response.

The Quick and Dirty - Preventing Illness from Sewage

If there is flooding along with a hurricane, the waters may contain fecal material from overflowing sewage systems and agricultural and industrial waste. Although skin contact with floodwater does not, by itself, pose a serious health risk, there is risk of disease from eating or drinking anything contaminated with floodwater.

- **Wear rubber boots and waterproof gloves if you are involved in cleanup operations.**
- If you have any open cuts or sores that will be exposed to floodwater, keep them as clean as possible by washing them with soap and applying an antibiotic ointment to discourage infection.

- Wash clothes contaminated with flood or sewage water in hot water and detergent and separately from uncontaminated clothes.

- **Hand Hygiene in Emergency Situations**. After an emergency, it can be difficult to find running water. However, it is still important to wash your hands to avoid illness. It is best to wash your hands with soap and water but when water isn't available, you can use alcohol-based products made for washing hands. Below are some tips for washing your hands with soap and water and with alcohol-based products. **A handout on proper hand hygiene** can be found at the CDC website at http://www.bt.cdc.gov/disasters/hurricanes/handwashing.asp

Controlling and Preventing Diarrhea

Increased incidence of acute diarrhea may occur in post-disaster situations where access to electricity, clean water, and sanitary facilities are limited. In addition, usual hygiene practices may be disrupted and healthcare seeking behaviors may be altered.

Diarrhea may be caused by a temporary problem, like an infection, or a chronic problem, like an intestinal disease. Possible causes of diarrhea after a diaster can be:

- Bacterial infections. Several types of bacteria, consumed through contaminated food or water, can cause diarrhea. Common culprits include Lepospira, Campylobacter, Salmonella, Shigella, and Escherichia coli.

- Viral infections. Many viruses cause diarrhea, including rotavirus, Norwalk virus, cytomegalovirus, herpes simplex virus, and viral hepatitis.

- Food intolerances. Some people are unable to digest some component of food, such as lactose, the sugar found in milk.

- Parasites. Parasites can enter the body through food or water and settle in the digestive system. Parasites that cause diarrhea include Giardia lamblia, Entamoeba histolytica, and Cryptosporidium.

- Reaction to medicines, such as antibiotics, blood pressure medications, and antacids containing magnesium.

- Intestinal disease, like inflammatory bowel disease or celiac disease.

- Functional bowel disorders, such as irritable bowel syndrome, in which the intestines do not work normally.

Diarrhea caused by infections can be prevented by proper hygiene and good hand washing. If you get diarrhea don't panic -- most diarrhea is self–limiting and does not need to be treated. **Diarrhea SHOULD NOT be treated with antibiotics without being evalated by a health care provider.**

Preventing Diarrhea in the Field

Diarrhea caused by bacteria, viruses or parasites happens when you consume contaminated food or water. You can take the following precautions to prevent this type of diarrhea:

- Do not drink from any unsafe water sources, not even when brushing your teeth.
- Do not use ice made from unsafe water sources.
- Avoid all raw fruits and vegetables (including lettuce and fruit salad) in the impacted area unless they can be washed and peeled and you wash and peel them yourself.
- Do not eat raw or rare meat and fish.
- Do not eat meat or shellfish that is not hot when served to you.
- Do not eat food from street vendors.
- You can safely drink bottled water (if you are the one to break the seal), carbonated soft drinks, and hot drinks like coffee or tea.

When Should I See a Health Care Provider If I Have Diarrhea?

Diarrhea should be evaluated by a health care provider if you have any of the following condtions:

- History of chronic medical conditions or concurrent illness
- Fever (> 102 degrees)
- Visble blood in stool
- High output diarrhea - including frequent and substantial volumes of stool
- persitent vomiting
- Signs of Dehyrdation (thirst, decrease urine output, dark urine, lightheadness on standing, dry mucus memebranes, etc.)

Self-Treating Diarrhea in the Field

Most diarrhea is self-limiting and will resolve in 2-3 days. The first treatment for diarrhea is to prevent dehydration. Although water is extremely important in preventing dehydration, it does not contain all the necessary electrolytes you may loss during a bout of diarrhea.

To maintain electrolyte levels, replace your fluids with broth or soups, which contain sodium, and fruit juices, soft fruits, or vegetables, which contain potassium.

Avoid self treatment with antidiarrheal medications (Imodium or Lomotil). These medicaton may reduce the diarrheal output and cramps but may lengthen your illness.

Tips About Food when you have Diarrhea

Until diarrhea subsides, try to avoid milk products and foods that are greasy, high-fiber, or very sweet. These foods tend to aggravate diarrhea.

As you improve, you can add soft, bland foods to your diet, including bananas, plain rice, boiled potatoes, toast, crackers, cooked carrots, and baked chicken without the skin or fat.