

Dealing with Flood & Sewer Waters in Your Home

Safety Measures to Protect your Family from Diseases Related to Flood Waters.

The following safety measures will help reduce the risk of your family and pets contracting diseases associated with sewage-contaminated flood waters.

- Avoid direct contact with flood or back-up water when possible. Children and pet should not play or come in contact with flood water.
- When cleaning up flooded areas, wear protective clothing and gear, such as latex gloves and waterproof, impenetrable rubber boots to prevent exposure to sewage. Contact the Department of Public Health to receive protective rubber gloves.
- Use a disinfectant solution of laundry bleach (5.25% hypochlorite) for clean-up. You can make this disinfectant solution by mixing one part laundry bleach, such as Clorox, with nine parts water.
- After cleaning up, make sure to do the following *before* removing protective latex gloves.
 - Sanitize or dispose of aprons and other clothing worn during the clean-up
 - Disinfect rubber foot-wear in a bucket using the bleach disinfectant described above
 - Disinfect buckets and other such materials used in the clean-up, before storing them
- Remove latex gloves from the inside-out and wash hands for at least two minutes with warm water and a disinfectant soap to assure all skin surfaces are clean of contaminants.
- Place disposables in a sealed plastic bag for garbage collection.

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Health Risks Associated with Sewage-Contaminated Flood Waters

Bacterial or viral pathogens may be present in sewage-contaminated flood waters. The primary means by which people and animals may contract diseases from contaminated flood water is by fecal-oral transmission. Fecal-oral transmission occurs by either directly touching sewage or touching an object which has been in contact with sewage and then touching either the mouth, eyes, ears, or nose. Exposure can also occur by handling food products with sewage-contaminated objects, including improperly washed hands. Pregnant women, children, elderly persons, and those who are immune-compromised may be at higher risk. Following is a list of the most common fecal-oral transmitted diseases for this region and their symptoms.

- **Amebiasis** (Amebic Dysentery): intestinal disease with fever, chills and bloody or mucoid diarrhea.

- **Epidemic Viral Gastroenteritis** (Viral Diarrhea): nausea, vomiting, diarrhea, abdominal pain, myalgia, malaise, low-grade fever, or a combination of these symptoms usually lasting 24-48 hours.
- **Giardiasis** (Giardia Enteritis): chronic diarrhea, abdominal cramps, bloating, frequent loose, pale greasy stools, fatigue and weight loss.
- **Viral Hepatitis A**: fever, malaise, anorexia, nausea and abdominal discomfort followed within a few days by jaundice.
- **Salmonellosis**: fever, headache, abdominal pain, diarrhea, nausea, and sometimes vomiting.
- **Shigellosis**: diarrhea accompanied by fever, nausea and sometimes toxemia, vomiting, cramps.
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How to Clean Buildings

Structures that have been flooded should be examined carefully before being used for living quarters to ensure that they are safe and will not collapse. Buildings should also be thoroughly cleaned as follows.

- **Buildings**: Loose plaster should be removed from walls and ceilings. Doors and window sashes, should be removed and allowed to dry thoroughly. If water remains in the basement, it should be drained or pumped out as soon as possible. As the water is being removed, the mud should be stirred and carried away with it. After the basement has been allowed to dry thoroughly, wash the floors and walls with the chlorine disinfectant solution. Keep windows open for ventilation. Chlorine solutions are corrosive, so use plastic containers to store and do not apply the disinfectant to metal surfaces.
- **Walls, Woodwork & Floors**: The walls and woodwork, while still damp, should be thoroughly scrubbed with a stiff fiber brush and water to remove all mud and silt. Particular attention should be given to all corners and cracks. Floors should be cleansed of all mud and dirt and allowed to dry thoroughly. Rugs that require shampooing should be washed with commercial rug shampoo products or with a mild soap jelly. Rugs and carpets should be stretched out on a flat surface and allowed to dry thoroughly to prevent molding, then subjected to beating, sweeping, or vacuum cleaning.
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Salvaging Household Items

Most household items need to be inspected, cleaned, and dried before being reused.

- **Furnaces & Appliances**: Furnace and chimney pipe should be inspected and cleaned, if necessary, and furnace doors or covers left open to ventilate the system. All parts of the heating system that have been submerged, including the burners, need to be cleaned thoroughly to prevent clogging and dried well to prevent rusting. Stoves and other metal fixtures should first have all the mud and silt removed. They should then be wiped with an oiled rag, then polished and painted.
- **Furniture**: Furniture should be removed to the sunshine and fresh air and all the drawer slides and other working parts stacked separately. All of the mud and silt

should then be removed. Care should be exercised to remove the furniture from direct sun before it warps.

- **Books:** Books should be allowed to dry carefully and slowly with alternate exposing to air and pressing. Toward the end of this treatment, the books may be subjected to small amounts of heat.
- **Clothing & Bedding:** Flood-soiled clothing and bedding require considerable care to obtain satisfactory results. All loose dirt should be brushed off, followed by laundering or dry cleaning in the usual manner. Lightweight comforters may be laundered in the same manner as blankets. Heavy comforters should be taken apart to be cleaned. Mattresses and pillows that are badly soiled may not be fit to reclaim; however, those of good quality may be reconditioned by a professional.

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Salvaging Food Items

After flooding, *all food items which have been submerged need to be destroyed*, unless they are stored in hermetically sealed, metal cans. Foods which are not stored in cans and have been exposed to sewage-contaminated flood waters cannot be cleaned well enough to be consumed. This includes any foods which were stored in plastic or glass bottles. The contaminated food is very dangerous.

Food which is stored in metal cans can be cleaned and salvaged for consumption. First, remove labels and thoroughly wash cans in soapy water by scrubbing with a brush. Immerse containers in strong chlorine solution (1 oz. chlorine bleach to 1 gallon clean water) for 15 minutes. Dry containers to prevent rusting.