

Sewage Back-Ups: Information for Residents

Background:

Severe rainstorms, floods, and even spring thaws can put a strain on sanitary sewers and septic systems. Large volumes of storm water and ground water entering sewage systems can inundate them, causing back-ups into basements and on to private property. Blockages in sewer systems can also cause back-ups. Your health may be impacted if a sewage back-up occurs in your home. Sewage back-ups can contaminate your private drinking well water. It can also pollute surface water (lakes, ponds, rivers, and streams, and reservoirs used for drinking water).

Can I Get Sick From A Sewage Back-Up In My House?

Sewage contains bacteria, viruses, and other germs that can cause disease and make a contaminated house unfit for living. The health risks around sewage are dependant upon the amount of sewage, the types of germs that are in it, the amount of time it has been in contact with materials in the home, and how much and how long an occupant was exposed. Generally, the more solids (human waste) present in the water, the greater the need for prompt and proper clean-up of materials that came into direct contact with it. The most common illnesses one might acquire are generally gastrointestinal (GI) distress and/or skin rashes/infections. Respiratory infections are uncommon, because fecal microorganisms rarely become airborne when everything is wet, and these bacteria and viruses generally die off after things dry out. If you experience any GI symptoms (nausea, diarrhea, vomiting) after exposure to sewage, contact your doctor.



Potential Health Effects from Contact With Raw Sewage

Disease	Cause
Gastrointestinal illnesses	Accidental ingestion via improperly cleaned hands or food preparation surfaces
Skin infections and rashes	Handling contaminated materials

WHAT TO DO AFTER A SEWAGE BACK-UP

First Things First! Do These Things Right Away.

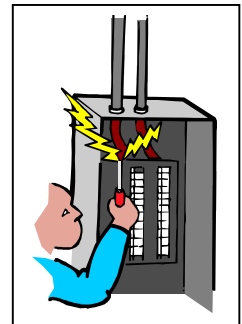
- ◆ If you have a back-up, do not flush the toilets.
- ◆ Keep all children and pets away from the sewage.
- ◆ Wear rubber gloves when handling anything contaminated with sewage. Wash hands immediately afterwards. Never touch raw sewage with bare hands.
- ◆ If your home is served by a municipal sewer system, call your local sewer dept (town public works dept or water pollution control authority) or go to their website. See the reference section of this document.
- ◆ If your home has a septic system, call your local health department for advice about how to dispose of the water/sewage. Then proceed to the next step.
- ◆ Call your homeowner's insurance provider. They may have clean-up companies* on contract who know how to deal with property damage from sewage back-ups.
- ◆ Call a professional water damage restoration company* if your insurance company does not have one.

* See Hiring A Professional vs. Cleaning Up an Overflow Yourself (below)



BE SAFE! Prevent Electrocutation

Turn off the power if there is standing water or the possibility of electrical wires coming into contact with water or soggy materials.



Clean-Up of Building Interiors

The potential for developing illness increases the longer sewage remains in contact with building interiors. Therefore, it is important to dry out the space promptly and discard contaminated porous materials. Other factors that influence the ability of disease causing germs, or pathogens, to survive include: the types of materials or substrates that have become contaminated; high humidity and mild temperatures; whether disinfectants are used; if sunlight is present. Many germs exposed to sunlight die off at a faster rate than those not exposed.

Hiring A Professional vs. Cleaning Up a Sewage Back-Up Yourself

Cleaning up after a sewage back-up is not a pleasant job. The decision whether to hire a professional remediation company or do your own clean-up often comes down to time and money. If your homeowner's insurance policy will pay for a professional to do the clean-up, most people will choose that path. If you do not have insurance, or if your policy does not cover sewage back-ups, you may be faced with hiring a professional on your own for the clean-up, or doing your own clean-up. You may also choose to hire a professional to perform an initial assessment to identify the extent of the damage and develop a scope of work for you to follow when performing the clean-up yourself. This scope of work should include replacement criteria for contaminated floor coverings and wallboard.

The State of Connecticut does not certify clean-up companies. However, there is an organization called the *Institute of Inspection Cleaning and Restoration Certification* (IICRC) that provides education and credentials to contractors performing this work. They also publish a standard called *Standard and Reference Guide for Professional Water Damage Restoration (IICRC S500)*. You may wish to ask your contractor to follow these guidelines. The IICRC offers a list of professional clean-up companies organized by zip code and other useful information on their website: <http://www.iicrc.org/>.

Several scenarios would favor hiring a professional instead of doing the work yourself:

- ◆ When insurance will pay for it
- ◆ When ductwork becomes contaminated with sewage in homes with forced hot air and/or central air conditioning
- ◆ When sewage remains indoors for over 24 hours in a finished living space
- ◆ When the job is just too large or complex for you to do it yourself

If you decide to hire a contractor, you may wish to contact the Connecticut Department of Consumer Protection (DCP). Ask if the contractor has a complaint history file at DCP. Also, if your home has a septic system, your contractor might need a subsurface sewage disposal system installer's or cleaner's license from DPH, depending upon whether or not the septic system needs to be pumped out or repaired.

Doing It Yourself

If you plan on doing any of the clean-up yourself, be sure to protect yourself.

Always Do The Following:

- ◆ Wear protective eyewear, gloves, and boots
- ◆ Wear goggles when hosing off items to prevent eye splash
- ◆ Avoid direct contact with sewage material
- ◆ Wash your hands after cleaning
- ◆ Protect all cuts and scrapes. Immediately wash and disinfect any wound that comes into contact with sewage
- ◆ Never mix bleach with ammonia – it makes a deadly gas!



It's also a good idea to take pictures and make a list of discarded items for insurance purposes.

Follow These Steps To Clean Up Sewage Indoors



1. Dry the space out

- ◆ All standing water needs to be removed. A sump pump, wet vac, or bucket may be used. For municipal sewer systems, call your local water pollution control authority or public works department for advice about pumping out after a back-up.
- ◆ If you have a septic system, call your local health department for advice about possible causes and solutions.
- ◆ Much of the equipment for cleaning and drying out can be rented locally.
- ◆ Establish temperature control to enhance the evaporation rate and effectiveness of ventilation or dehumidification systems in use.
- ◆ All solid waste must be collected and discarded.
- ◆ Use dehumidifiers, fans, window air conditioners and open windows to aid in the drying process when available. Exchange humid air in the area with less humid air from other sources. **Whole house air conditioners or furnace blowers should be used only if standing wastewater did not get into the air ducts.**
- ◆ Remove vinyl covered wallpaper in affected areas, as it slows the drying process.

2. Discard and Disinfect

- ◆ Contaminated carpets, rugs, and upholstered furniture should be discarded.*
- ◆ If you can see a water line or stain on wallboard or paneling from the sewage back-up, the material should be cut out up to several inches above the water line and replaced.
- ◆ Wash the affected area with detergent solution to remove surface dirt and contamination. **Don't skip this step, or the disinfection step will be ineffective!** Allow it to air-dry.
- ◆ Apply a disinfectant labeled as being bactericidal (kills bacteria) or a solution of 1 part bleach + 9 parts water. Disinfectants and/or bleach should remain in contact with the items for 15-20 minutes to be effective. Allow it to air-dry.

*Sort through the remaining contents and determine which items can be salvaged, and which must be discarded.

- ◆ The general rule of thumb is to discard all porous materials that have become contaminated by sewage, especially cardboard boxes, paper items, books and magazines, carpets and rugs, unfinished wood, wallboard, upholstered items, and anything else that is difficult to clean.
- ◆ Sometimes, certain items like clothing may be salvageable if they can be adequately laundered. Consult with a professional water damage restorer or cleaning professional for specifics.

Be Sure To Discard All Contaminated:

- ◆ Cardboard
- ◆ Carpets & carpet pads
- ◆ Cosmetics
- ◆ Food
- ◆ Mattresses & pillows
- ◆ Medicines & medical supplies
- ◆ Stuffed animals & toys
- ◆ Unfinished furniture
- ◆ Upholstered furniture



If Sewage Back-Ups Happen Routinely

If the home is subject to periodic sewage back-ups, pro-active, preventive measures should be taken to reduce the risk of illness from contact with sewage. Also, contact your local municipal sewer authority or local health department to make sure that they are aware of these periodic back-up.

*Preventive actions include:

1. Waterproofing the building foundation and/or sealing cracks in foundation floor or walls;
2. Installation of a check valve or shut-off valve on the building sewer close to where it enters the structure, which will protect your home from sewage back-ups due to surcharging conditions in the municipal sewerage system (*you must check with the proper sewer authority prior to taking this action!!*); and
3. Raising or removing any sink, toilet, washing machine, etc. in the basement that may be subject to overflows when the sewer system backs up.

*Pro-active measures include the following:

1. Ensure that roof gutters and downspouts and sump pumps are not connected to the house sanitary sewer line. They carry clean ground or rain water that can easily overload the capacity of your sanitary sewer pipe.
2. Ensure that gutter downspouts and drains are directed away from the foundation and toward low points away from the home
3. Consider cutting down large trees or bushes near or over your sewer line before the roots plug the lines.
4. Do not use carpet flooring in basements. Carpet must be discarded after a sewage backup. Hard surfaces (tiles, ceramic, wood) can usually be dried out, disinfected and saved..
5. Purchase or install a pump (e.g. sump pump) to pump out water that collects in the low point of the basement or structure;
6. To the extent possible, keep furniture and valuables above flood levels where flooding has previously occurred; and
7. If minor flooding occurs, follow the water to its point-of-entry and seal cracks or defects to the extent possible.



Remember, an ounce of prevention is worth more than a pound of cure. Flood insurance is also vitally important where properties are known to be in floodplains or flood prone areas.

*Information in this section is taken from the Massachusetts Department of Environmental Protection's *Flooding and Sewage Back-ups: Home Care Guide*. <http://www.mass.gov/dep/water/laws/flooding.htm>

Resources for Further Information

First determine whether you have sewers or a septic system

Municipal (Sanitary) Sewer Questions:

- ◆ Call Your Municipal Water Pollution Control Authority
- ◆ CT Department of Environmental Protection, Municipal Facilities Section: 860-424-3704

Subsurface Sewage Disposal System (Septic System) Questions:

- ◆ **Your Local Health Department** (contact information may be found in the blue pages of the telephone book, or on the web at https://www.han.ct.gov/local_health/)
- ◆ CT Department of Public Health, Environmental Engineering Program: 860-509-7296

Hiring Clean-Up Companies and Clean-Up Procedures:

- ◆ Institute of Inspection, Cleaning and Restoration (IICRC)
<http://www.iicrc.org>
Phone: (360) 693-5675
Fax: (360) 693-4858
IICRC Toll-Free Referral Line
(800) 835-4624
- ◆ Connecticut Department of Consumer Protection:
1-800-842-2649
- ◆ Connecticut Department of Public Health, Environmental and Occupational Health Assessment Program: 860-509-7742



Health-Related Questions:

If you develop diarrhea, nausea, vomiting, or other gastrointestinal symptoms, call your doctor. If you have additional health related questions, contact your private physician, your local health department, or:

- ◆ Connecticut Department of Public Health, Epidemiology Program: 860-509-7994.

Additional Information:

- ◆ Local Government Environmental Assistance Network
<http://lgean.org/html/whatsnew.cfm?id=1331>
- ◆ The Metropolitan District Water Supply & Pollution Control
<http://www.themdc.com/emergencies.htm>