My house has been flooded!!!

What now?

Caritas

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Introduction

You and your family have been affected by a disaster. Your house has been flooded and damaged. Most probably you lost many of your belongings. It will take some time until your life will get back to normal. In this situation, with this little booklet we would like to support you and to provide you with useful information.

There are many things to be done to recover your home and to restore safe and healthy living conditions in your house. Many of these things should be done as early as possible after the floods, others will take some longer time.

This booklet will give you the necessary information to do the most important recovery works. It explains how to pump out the water from the basement, how to clean and disinfect your home, procedures to dry out the house and how to avoid and fight mold. Finally you will find some instructions on repair works to be done in the house.

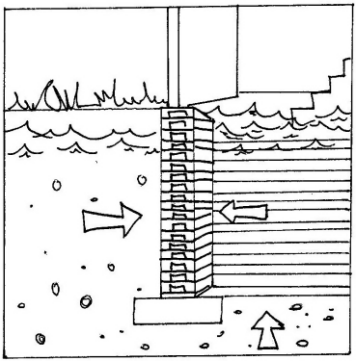
Whenever you are not sure on how to proceed, look out for advice and help from someone experienced like a local craftsman or a construction engineer.

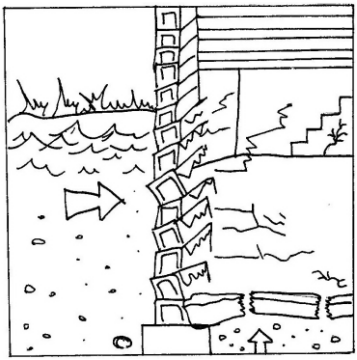
And a last point: Take care of your health and safety! Use protection equipments and do only things, you are sure you can manage.

We wish you much success in restoring your house and hope that soon you will be able, together with your family, to move back to a renovated and healthy home.

The Caritas team

Draining your basement





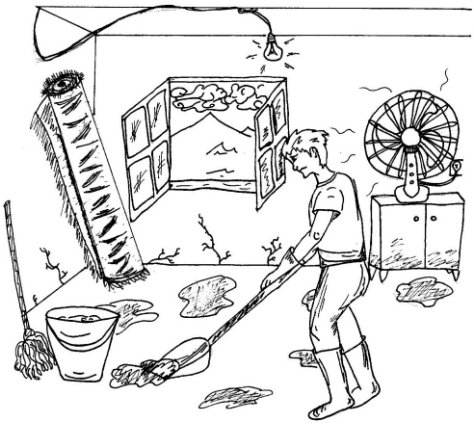
If your basement is flooded, don't be in too big a hurry to pump it out. Here's why. Water in the ground outside your home is pushing hard against the outside of your basement walls. But the water inside your basement is pushing right back.

If you drain your basement too quickly, the pressure outside the walls will be greater than the pressure inside the walls – and that may make the walls and floor crack and collapse, causing serious damage.

To avoid this situation, follow these steps when you pump the water out of your basement:

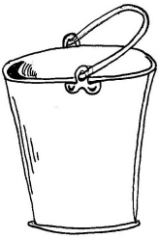
1. After floodwaters are no longer on top of the ground, you can start pumping the water out of the basement. Do not use gasoline-powered pumps or generators indoors because gasoline engines create deadly carbon monoxide exhaust fumes.
2. Pump the water level down 70 to 100 cm. Mark the level and wait overnight.
3. Check the water level the next day. If the water went back up, it's still too early to try to drain the basement. Wait overnight. Then pump the water down 70 to 100 cm again. Check the level the next day.
4. When the water stops going back up, pump down another 70 to 100 cm and wait overnight. Repeat steps 4 and 5 until all water is pumped out of the basement.

Cleaning and disinfection



Bacteria, viruses and fungi must be killed in the cleanup process. The most widely accepted, safe and effective sanitizing agent is hypochlorite in the form of commercial household bleach. Time is an important consideration in cleanup. Pathogenic organisms will not become airborne as long as the surfaces they have contaminated remain wet. Once dried, organisms can be spread on dust particles by air movement. Therefore, it is important to bring all contaminated surfaces into contact with chlorine solution as soon as possible.

120 ml household bleach



1 l water

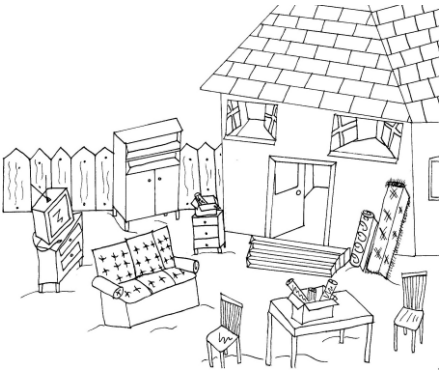
Chlorine solution to be used in disinfection of houses affected by contaminated flood water120 ml

To make chlorine solution, add 120 ml of commercial household bleach solution per liter of water. Immediately following disinfection, dry all surfaces to prevent rotting and decomposition. Determine what items will have to be discarded and remove them for disposal. Generally, cleaning with bleach solution may make that item salvageable. Stuffed furniture, pillows and mattresses will have to be discarded; indoor/outdoor carpeting and rugs may be salvageable. Thoroughly rinse all visible soil from all items to be kept. Rinse the walls at least 15 cm above highest flood level. Allow the bleach solution to remain on all surfaces for at least 15 minutes for adequate kill time.

Drying out a house

After a house has been flooded, hundreds of liters of water may be trapped within the structures of the building generating negative effects like:

- Further deterioration of the building
- Obstruction of repair works
- High humidity in the rooms causing health problems
- Mold and mildew



Removing this moisture is a long-lasting (several month!) process.

First steps:

- Remove all remaining water from the building (also from hidden places, basements, etc.)
- Remove all objects soaked with water, which cannot be restored (carpets, destroyed furniture, etc.)
- Remove everything that prevents the construction from drying out:
  - Floor coverings like carpets, vinyl, tiles, paneling, etc.
  - Low-permeability wall coverings like vinyl wallpapers, tiling, etc.

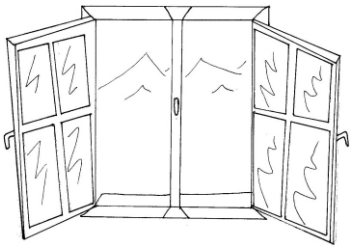
It may also be useful to remove the plaster at least at one side of the walls from the floor up to some centimeters above the highest level of the water. Especially consider removing the plaster if the wall contains wooden elements, which may rot if not dried properly.

Ideal conditions for drying out a building:

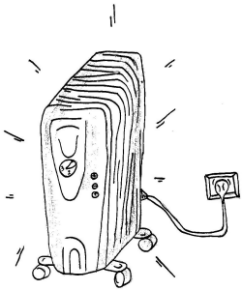
dry, warm and circulating air

Allow the air to circulate freely through all rooms of the building.
Pay special attention to rooms without windows like bathrooms or pantries.

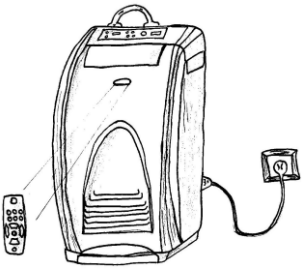
Methods of drying out a house:



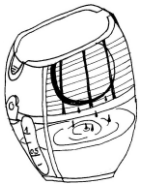
- If the weather outside is warm and dry (especially during summer), open all windows and doors and keep them open to introduce as much warm fresh air as possible.



- During winter, cold air from the outside contains very little moisture. Heat the rooms to at least 20-22°C and repeat short periods of ventilation opening as many windows as possible for 2-3 minutes. In this way the room temperature will stay constant and the dry air will dry out the construction.



- Dehumidifiers ("condense dryers"): These are technical devices which reduce the humidity of the air and contribute to the drying out of buildings. The use of dehumidifiers is indicated, when the methods described above are not efficient. This is the case in periods of wet, not very warm weather (spring and autumn) or in interior rooms, which cannot be ventilated properly. Dehumidifiers are working efficiently only if the room temperature is high enough, at least 20°C. Otherwise they will just consume a lot of electricity without reducing humidity very much. When using a dehumidifier, ALL windows and doors have to be closed!



- Desiccants are materials that absorb moisture (for example Ceresit Stop Humidity). They may be used to dry closets or other small enclosed areas, where air cannot move through.

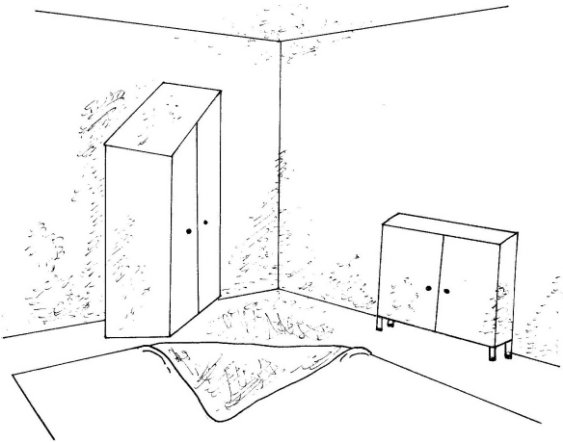
The use of fans makes all methods of drying out the house much more efficient!

Removing mold

Mold is a kind of microscopic fungus. Tiny mold particles are always present in the air, in the form of tiny microscopic cells known as spores. Mold spores can germinate and grow in a moist or damp environment. A home that has been flooded can provide ideal conditions for the growth and proliferation of mold.

Why is mold so dangerous?

Indoor mold can trigger allergies or allergy-like symptoms affecting the upper respiratory system causing nasal and sinus congestion, cough, breathing difficulties, sore throat and skin irritations. These symptoms may lead to upper respiratory infections. The most vulnerable groups are children and the elderly, persons with respiratory conditions (for example asthma) and persons with weakened immune systems.



In addition, mold damages building materials, goods and furniture.

For these reasons, molds should not be allowed to grow and multiply indoors!

How to detect mold:

- Look for visible mold growth.
- Search areas with noticeable mold odors.
- Look for signs of excess moisture or water damage.
- Search behind and underneath materials (carpets, vinyl flooring), furniture or stored items.

How to remove mold:

- Remove and dispose mold-contaminated porous materials and items like gypsum cardboard ("rigips"), insulation materials, chip board, carpets, paper products, etc. Mold is growing also inside these materials, from where it is almost impossible to remove it.
- Clean non-porous or semi-porous items: first remove the visible part of mold and other dirt by scrubbing the items or walls with a sponge or cloth. Then apply chlorine solution (120ml household bleach to 1 liter of water). Do not rinse afterwards, but allow the solution to dry on the surface.

You may also use special solutions to remove mold which can be found in shops for construction materials

Attention:

- Avoid direct contact with mold and chlorine solution. Wear rubber-gloves
- Do not mix bleach with any cleaning solution containing ammonia
- Have the rooms, where you are working with bleach, well ventilated.

Mold will grow again, if you do not succeed to remove the main cause, which is moisture. So after removing mold, allow everything to dry and use the procedures described to dry out your house.

Repair your house

Check for structural damages

Safety hazards such as undermined foundations should be repaired before you proceed any further. The whole construction may be in danger to collapse.

Is there evidence of broken or cracked basement or foundation walls? Are there broken pilings, shifted stairs, or slanted floors or walls? Any of these things could mean that the foundation, floors, or walls will have to be totally rebuilt. If you are not sure, consult with a specialist!

Renovation of the interior

Before starting renovation and repair works in the interior of your house, follow all described steps of cleaning, removing damaged materials and drying out of the house.

Be patient! If you install insulation materials, sheeting, carpets, vinyl-flooring, etc. on walls and floors that have not dried out completely…

- there will be a high risk of mold
- the new materials may be affected and even destroyed
- walls and floors will be sealed so that they cannot dry out any more.

This will happen also, if wall paint (dispersion paint) is used too early. The paint will blister and fall off!

Burnt lime may be used earlier. It allows the wall to dry out and prevents mold to grow on the walls.

Security first!

- Do not enter a building which is at risk to collapse.
- Electricity represents a high risk in case of floods. So disconnect your home´s power supply and reconnect it only when you know that the installations are not exposed to water and moisture any more. If you are not sure, call a specialist.
- Be aware of toxic substances that may have mixed with flood water (oil, petrol, chemicals used in agriculture).
- Consider the risk of leaking gas pipes.

Sources:

- Repairing Your Flooded Home, published by the American Red Cross and FEMA.
- Post Flood Emergency Health Precautions, published by the Academy for Disaster Management Education, Planning and Training
- Restoring your home after a flood, published by The Office of Public Works, Irland
- Dealing with Mold Problems After a Flood, published by the Minnesota Department of Health

Contact information:

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