

## Family Emergency Preparedness

Government agencies are better prepared than ever before in dealing with emergencies and natural disasters after learning from mistakes in the past. The Small Business Administration can issue disaster loans more quickly. The Federal Emergency Management Agency improved its ability to communicate with state and local officials, hired more-experienced managers and found ways to better track its supplies. The American Red Cross stockpiled supplies in preparation for hurricane disasters.

Yet, most Americans have not taken steps to prepare their families and homes from emergency disasters. Less than one-third of all Americans have not taken special steps to prepare for an emergency. The Centers for Disease Control (CDC) reports “Americans are too busy, too distracted or too frightened to plan carefully for a natural disaster, disease outbreak or local catastrophe.” Many people believe they are more prepared than they actually are, leading to what the CDC calls “a crisis of complacency.”

In Kentucky, many people feel sheltered from natural disasters. They don't believe a natural disaster will happen to them. But just ask those who were displaced from the floods and tornadoes of 1997 or the winter ice storm from 2003. Natural disasters like floods, violent tornadoes, winter storms and earthquakes can occur. The disasters that displaced people in the past will do so again, so we need to be ready.

Start your emergency plan by visiting “[Ready.gov](#),” a program maintained through the Department of Homeland Security and [Kentucky Division of Emergency Management](#). Practical advice is given on emergency supply kits, disaster planning, likely local crises and government agency planning.

Three basic steps will prepare you and your family for an emergency.

1. [Get a kit.](#)
2. [Make a plan.](#)
3. [Stay informed.](#)

### **Get a kit.**

When preparing for an emergency, think about the basics of survival, which includes fresh water, food, clean air and warmth. Use the “[Get a Kit](#)” Web site for making an emergency supply kit. They have a comprehensive list of supplies to include in the kit. Place the supplies in a waterproof container like a plastic trash can. Be sure to remember to include things for your pet. You might want to make a list of vets or veterinary hospitals in other cities.

### **Make a plan.**

“Are we prepared?” is the question every family should ask. Family meetings are essential to competently prepare for an emergency. You need to involve everyone in the family including children, the disabled and older adults. In an emergency, your family might be forced to evacuate, so make a plan on where everyone will meet. Designate an out-of-state contact in the case of downed communication lines.

Suggestions and topics for family meetings are provided on the “[Make a Plan](#)” Web site. Special consideration is given to older adults, the disabled and children. Your family may not be together when disaster strikes, so it is important to plan. Discuss (1) how you will contact one another, (2) how you will get back together and (3) what you will do in different situations. Ask your child's school for a copy of their emergency plan for you to keep at home or work. Commit a weekend to

updating telephone numbers, buying emergency supplies and reviewing your emergency plan with everyone.

### **Stay informed.**

One final step to take in preparing for an emergency is to “[stay informed](#).” Be sure to include in your kit a list of emergency contacts and a copy of your local government’s emergency plan. Using the Family Communication Card and Family Communication Plan, you can maintain a list of emergency contacts to keep with your kit. [Download the Family Communication Card and the Family Communication Plan to maintain a list of contacts and medical records.](#)

### **Types of disasters.**

The three-step plan is a simple and effective method to prepare for an emergency. Becoming familiar with the different types of disasters that can happen will enable you to make much more detailed preparations in your home. Each type of disaster will influence the decisions you make and the actions you take. Examine the [different types of emergencies](#) and read about the most appropriate way to prepare and respond.

For example, to prepare for an earthquake, you should make sure the water heater is securely fastened, that heavy objects are stored on lower shelves and utilities (electricity, gas and water) should be turned off quickly. Identify safe places in your home or office where you will ride out an earthquake. The best protection is under heavy furniture where you are protected from falling debris. During or immediately after an earthquake, the best protection is to get under heavy furniture, such as a desk, table or bench, staying away from large windows, mirrors or other glass.

However, to prepare for a flood, make sure the furnace, water heater, and electric panel are elevated, install check valves to prevent floodwater from backing up into the drains and construct barriers to stop floodwater from entering the building. Become familiar with weather terms like flash flood watch and flash flood warning. A “watch” means there is a possibility of flooding or a flash flood in your area. A flash flood “warning” means a flash flood is occurring and you will need to evacuate immediately.

In conclusion, learn about the emergency plans that have been established in your area by your state and local government. You may reach the [Kentucky Division of Emergency Management](#) by phone 24 hours a day by dialing 800-255-2587.

You can get involved by becoming a well-trained, well-prepared community volunteer and get the answers to dozens of questions regarding all emergencies. The [Homeland Security Web site](#) lists the Kentucky Citizen Corps representatives that have details about how to become a community volunteer. Alternatively, visit the [Citizen Corps Web site](#).

One way in which you could help as a Citizen Corps volunteer is to assist elderly people. The elderly face unique challenges and require more assistance than the rest of the adult population. They could use assistance in preparing emergency supply kits because many do not have loved ones or caregivers to advocate on their behalf. The elderly could use assistance during an evacuation because they may become disoriented, confused or require special medical needs. They may have lost their glasses or hearing aids or unable to walk. During Hurricane Katrina of 2005, there were hundreds of delirious elderly people. A team of medical professionals created a one-page screening tool to triage and assess the needs of elderly people displaced by the hurricane. Using the one-page triage tool, volunteer nurses quickly identified the most ill and got them immediate medical attention. Volunteering to help assess the medical needs of the elderly during an evacuation is another way in which you may want to help.

Emergency preparedness is no longer the sole concern of earthquake prone Californians and those who live in the part of the country known as "Tornado Alley." For Americans, preparedness must now account for man-made disasters as well as natural ones. Knowing what to do during an emergency is an important part of being prepared and may make all the difference when seconds count.

## Methods to Disinfection Water in an Emergency

These procedures are for emergency disinfection of water only in order to remove harmful disease-causing bacteria. Use these methods only as a last resort when safe drinking water is not available. In an emergency disaster, the local health department, American Red Cross and other agencies help to make sure people have access to safe drinking water.

When you follow these procedures to disinfect water, be aware that other contaminants may still be present. Be extremely cautious about giving infants water under these conditions when you do not know the nitrate level. High nitrates in water can cause “blue-baby syndrome” and nitrate levels will increase when the water is boiled.

When emergency disinfection of water is necessary, examine the physical condition of the water. Do not drink water that has not been properly disinfected. Floodwater in particular will contain unacceptable levels of bacteria and viruses because it's mixed with raw sewage. Use emergency disinfection only when there is not any other form of safe drinking water available.

Try to avoid water sources that contain floating material or water with a dark color or odor. Disinfectants are less effective in cloudy water. Assess the conditions from where you are obtaining the water. You may be drinking harmful contaminants if you find steel drums or submerged automobiles nearby.

First, filter the water through clean clothes or cheesecloth. If it isn't possible to filter the water, give the water time for sediments to settle. Then, draw off the clearer, settled water to use for disinfection. Water prepared for disinfection should be stored in tightly covered containers not subject to corrosion.

There are two general methods by which small quantities of water can be effectively disinfected. One method is boiling. It is the most positive method by which water can be made safe to drink from harmful disease-causing bacteria. The second method is chemical treatment. If applied with care, certain chemicals will make most water free from harmful bacteria.

### Boiling

Vigorous boiling for one minute will kill any disease-causing bacteria present in water. At altitudes above one mile, boil for three minutes. The flat taste of boiled water can be improved by pouring it back and forth from one disinfected container to another, which is a process called aeration. Allowing the boiled water to stand for a few hours or adding a small pinch of salt for each quart of water will also help improve the flat taste.

### Chemical Treatment:

When boiling is not practical, chemical disinfection is an option. The two chemicals commonly used are chlorine or iodine and are effective at removing harmful pathogens.

Be aware that these disinfectants are not effective or only somewhat effective in controlling *Cryptosporidium* and *Giardia* found in surface water. These two pathogens are only found in water from rivers, lakes and springs. Therefore, chlorine and iodine can be used to safely disinfect well water since these two organisms are unlikely to be found in well water.

Chlorine Bleach: When boiling is not practical, chemical disinfection should be used. Common household bleach contains a chlorine compound that will disinfect water. The procedure to be followed is usually written on the label. When the necessary procedure is not given, find the

percentage of available chlorine on the label and use the information the following tabulation as a guide.

Available Chlorine	Drops per Quart of Clear Water
1%	10
4-6%	2
7-10%	1

If strength (percentage) is unknown, add ten drops per quart of water. Double amount of chlorine for cloudy or colored water or water that is extremely cold.

The treated water should be mixed thoroughly and allowed to stand, preferably covered for 30 minutes. The water should have a slight chlorine odor. If not, repeat the dosage and allow the water to stand for an additional 15 minutes. If the treated water has too strong a chlorine taste, it can be made more pleasing by allowing the water to stand exposed to the air for a few hours or by pouring it from one clean container to another several times.

**Granular Calcium Hypochlorite:** Add and dissolve one heaping teaspoon of high-test granular calcium hypochlorite (approximately  $\frac{1}{4}$  ounce) for each two gallons of water. The mixture will produce a stock chlorine solution of approximately 500 mg/L, since the calcium hypochlorite has an available chlorine equal to 70 percent of its weight. To disinfect water, add the chlorine solution in the ratio of one part of chlorine solution to each 100 parts of water to be treated. This is roughly equal to adding 1 pint (16 ounces) of stock chlorine to each 12.5 gallons of water to be disinfected. To remove any objectionable chlorine odor, aerate the water as described earlier.

**Chlorine tablets:** Chlorine tablets containing the necessary dosage for drinking water disinfection can be purchased in a commercially prepared form. These tablets are available from drug and sporting goods stores and should be used as stated in the instructions. When instructions are not available, use one table for each quart of water to be purified.

**Tincture of Iodine:** Common household iodine from the medicine chest or first aid kit may be used to disinfect water. Add five drops of two percent U.S. Pharmacopoeia (U.S.P.) Tincture of Iodine to each quart of clear water. For cloudy water, add ten drops and let the solution stand for at least 30 minutes.

**Iodine Tablets:** Commercially prepared iodine tablets containing the necessary dosage for drinking water disinfection can be purchased at drug and sporting goods stores. They should be used as stated. When instructions are not available, use one table for each quart of water to be purified.

Water to be used for drinking, cooking, making any prepared drink or brushing the teeth should be properly disinfected.

The information on emergency disinfection of drinking water was prepared through resources provided by the EPA.

## RESOURCES:

American Public Health Association, <http://www.apha.org/>

American Red Cross, <http://www.redcross.org/>

Centers for Disease Control and Prevention, <http://www.cdc.gov/>

Citizens Corp, <http://www.citizencorps.gov/>

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Federal Emergency Management Agency (FEMA), <http://www.fema.gov/>

Kentucky Division of Environmental Management, <http://kyem.ky.gov/>

Kentucky Office of Homeland Security, <http://homelandsecurity.ky.gov>

Local Health Department (Kentucky Cabinet for Health and Family Services),  
<http://chfs.ky.gov/dph/Local+Health+Department.htm>

### DOWNLOAD:

Family Communication Card and the Family Communication Plan:  
<http://homelandsecurity.ky.gov/protectyourfamily/makeaplan.htm>

Family publications: <http://www.ready.gov/america/publications/allpubs.html#general>

Business publications: <http://www.ready.gov/america/publications/allpubs.html#business>.