

# Emergency Water Purification

In an emergency, to purify drinking water, two methods are most often used. They are boiling the water and adding chlorine (household bleach, such as Regular Clorox) to it. Most emergency experts and health officials suggest a mixture of 8 drops of bleach to a gallon of generally clear water for best results. Based on environment or cloudiness of the water, you may want to change the quantity of drops to 16 per gallon of cloudy or murky water. Please remember that this is a guideline.

As suggested by the EPA, vigorous boiling for at least one minute (preferably more) will kill any disease causing microorganisms present in water (at altitudes above 5000 feet above sea level, boil for three to five minutes longer). The flat taste of boiled water can be improved by pouring it back and forth from one container to another (called aeration), by allowing it to stand in a closed container for a few hours, or by adding a small pinch of salt for each quart of water boiled. When boiling is not practical, chemical disinfection should be used. Common household bleach contains a chlorine compound that will disinfect water. 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.

## **Boiling Is Best**

Short of using a very high-quality water filter, this is the most reliable method for killing microbes and parasites. Bring water to a rolling boil and keep it simmering for at least several minutes. Add one minute of boiling to the initial 10 minutes for every 1,000 feet above sea level. Cover the pot to shorten boiling time and conserve fuel.

## **Liquid Clorox Bleach**

In an emergency, think of this (one gallon of Regular Clorox Bleach) as 3,800 gallons of drinking water.

Here are the general guidelines.

First let water stand until particles settle. Filter the particles if necessary with layers of cloth, coffee filters, or fine paper towels. Pour the clear water into an uncontaminated container and add Regular Clorox Bleach per the below indicated ratio. Mix well. Wait 30 min. Water should have a slight bleach odor. If not, repeat dose. Wait 15 min. Sniff again. Keep an eyedropper taped to your emergency bottle of Clorox Bleach, since purifying small amounts of water requires only a few drops. Bleach must be fresh for best use and results. See below suggestions

for storage bottle replacement.

Don't pour purified water into contaminated containers. Sanitize water jugs first.

### **Ratio of Clorox Bleach to Water for Purification**

2 drops of Regular Clorox Bleach per quart of water

8 drops of Regular Clorox Bleach per gallon of water

1/2 teaspoon Regular Clorox Bleach per five gallons of water

If water is cloudy, double the recommended dosages of Clorox Bleach.

**Only use Regular Clorox Bleach** (not Fresh Scent or Lemon Fresh, etc). To insure that Clorox Bleach is at its full strength, rotate or replace your storage bottle minimally every three months.

### **Clorox Bleach Sanitizing Solution**

Without running water and electricity, even everyday tasks are tough. In lieu of steaming hot water, sanitize dishes, pots and utensils with a little Clorox Bleach. Just follow the directions below to keep dishes clean.

To sanitize containers and utensils, mix 1 tablespoon Regular Clorox Bleach with one gallon of water. Always wash and rinse items first, then let each item soak in Clorox Bleach Sanitizing Solution for 2 minutes. Drain and air dry.