

Water: Top Priority



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Storing water reserves and learning how to purify contaminated water should be a top priority for emergency preparation. Ideally, you should store a two week supply of water for each member of your family, but the minimal three day supply is essential.

Everyone's needs vary, depending upon age, physical condition, level of activity, diet and climate. Normally, an active person need to drink at least two quarts of water per day. Activity in hot environments may require twice that amount. Children, nursing mothers and ill persons will need additional water. Food preparation and hygiene requires additional water. Remember, store at least one gallon of water per person per day!

If your water supplies begin to run low, remember:

- Never ration water.
- Drink the amount of water you need for today, and try to find more water for tomorrow.
- You can minimize the amount of water your body needs by reducing activity and staying cool.

How to Store Emergency Water Supplies

You can store your water in thoroughly washed plastic, fiberglass or enamel-lined metal containers. You should avoid glass or plastic milk cartons, as they may break or leak. Never use a container that has held toxic substances, because tiny amounts may remain in the container's pores. Sound plastic containers such as soft drink bottles are best. You can also purchase food-grade plastic buckets or drums.

Before storing your water, treat it with a preservative, such as chlorine bleach, to prevent the growth of microorganisms. Use liquid bleach that contains 5.25 percent sodium hypochlorite and no soap or other additives. Some containers warn, "Not for Personal Use." You may disregard these warnings if the label states sodium hypochlorite is the only active ingredient and if you use only the small quantities in these instructions.

Add 4 drops of bleach per quart of water (or two scant teaspoons per 10 gallons), and stir. Seal your water containers tightly, label them and store them in a cool, dark place.

Hidden Water Sources in your home

If the disaster catches you without a stored supply of clean water, you can use water in your hot-water tank, in your plumbing and in ice cubes. As a last resort you can use water in the reservoir tank of your toilet (not the bowl), but purify it first.

Water beds hold up to 400 gallons, but some water beds contain toxic chemicals that are not fully removed by many purifiers. If you designate a water bed in your home as an emergency resource, drain it yearly and refill it with fresh water containing two ounces of bleach per 120 gallons.

To use the water in your pipes, let air into the plumbing by turning on the highest faucet in your house and draining the water from the lowest one.

Emergency Outdoor Water Sources

If you need to seek water outside your home, you can use these sources. But purify the water before drinking it.

- Rainwater
- Streams, rivers and other moving bodies of water.
- Ponds and lakes.
- Natural springs.

Avoid water with floating material, an odor or dark color. Use saltwater only if you distill it first.

To use the water in your hot-water tank, be sure the electricity or gas is off, and open the drain at the bottom of the tank. Start the water flowing by turning off the water intake valve and turning on a hot-water faucet. Do not turn on the gas or electricity when the tank is empty.

Do you know the location of your incoming water valve? You'll need to shut it off to stop contaminated water from entering your home if you hear reports of broken water or sewer lines.

Three Easy Steps to Purify Water

In addition to having a bad odor and taste, contaminated water can contain microorganisms that cause disease such as dysentery, cholera, typhoid and hepatitis. You should purify all water of uncertain purity before using it for drinking, food preparation or hygiene.

There are many ways to purify water. None are perfect. Often the best solution is a combination of methods. Before purifying, let any suspended particles settle to the bottom, or strain them through layers of paper towel or clean cloth.

Three easy purification methods are outlined below. These measures will kill microbes but will not remove other contaminants such as heavy metals, salts or most other chemicals.

Boiling is the safest method of purifying water. Bring water to a rolling boil for 10 minutes, keeping in mind that some water will evaporate. Let the water cool before drinking.

Boiled water will taste better if you put oxygen back into it by pouring it back and forth between two containers. This will also improve the taste of stored water.

Chlorination uses liquid chlorine bleach to kill microorganisms. (See above for bleach safety information.) Add two drops of bleach per quart of water (four drops if the water is cloudy), stir and let stand for 30 minutes. If the water does not taste and smell of chlorine at that point, retreat the water and let stand for another 15 minutes.

If you do not have a dropper, use a spoon and a square-ended strip of paper or thin cloth about 1/4 inch by 2 inches. Put the strip in the spoon with an end hanging down about 1/2 inch below the scoop of the spoon. Place bleach in the spoon and carefully tip it. Drops the size of those from a medicine dropper will drip off the end of the strip.

Purification tablets release chlorine or iodine. They are inexpensive and available at most sporting goods stores and some drugstores. Follow the package directions. Usually one tablet is enough for one quart of water. Double the dose for cloudy water.

Check the expiration date, and replace the tablets when they expire.

A More Rigorous Purification Method

While the three methods described above will remove only microbes from water, the following purification method will remove other contaminants. Distillation will remove microbes, heavy metals, salts and most other chemicals.

Distillation involves boiling water and then collecting the vapor that condenses back to water. The condensed vapor will not include salt and other impurities. To distill, fill a pot halfway with water. Tie a cup to the handle on the pot's lid so that the cup will hang right-side-up when the lid is upside-down. Put the lid on the pot upside down (Make sure the cup is not dangling into the water, and boil the water for 20 minutes. The water that drips from the lid into the cup is distilled.