



Consumer's Guide- Storing Water for Short Term Emergencies

The body's need for water is very important. Most people can live only a few days without water. In preparing to store water for emergencies, keep at least a 3-day supply of water for each person in your household (one gallon per person per day, on average- see below). Stocking water reserves and learning how to purify contaminated water should be among your top priorities in preparing for an emergency.

How Much Do I Need?

Store a total of **at least one gallon per person, per day**. This is a good estimate, although everyone's needs will differ, depending upon age, physical condition, activity, diet and climate. A normally active person needs to drink at least two quarts of water a day. Hot environments can double that amount. Children, nursing women and ill persons will need more. You can minimize the amount of water your body needs by reducing your activity and staying cool. You will need additional water for food preparation and hygiene.

Storing Emergency Water Supplies

Plastic, glass, fiberglass or enamel-lined metal containers are suitable for storing water supplies. Never use a container that has held toxic (poisonous) or non-food substances. No matter how well you clean these containers, tiny amounts of toxic substances may remain in the container's pores. Intact, durable plastic containers, such as soft drink bottles or those you purchase water in, are best. You can also purchase **food-grade** plastic buckets or larger containers. Milk jugs and other containers that previously held food items are almost impossible to adequately clean. Use these only when other containers are not available. Long-term Care Facilities should **avoid** using plastic milk jugs. Pathogens can remain in the jugs and present problems for residents.

For ease of use, water containers for personal use should be **no larger than 1 or 2 gallons**. (If contamination or a leak occurs in a stored container, you also lose less of your supply by using smaller containers.) Two-liter (about ½ gallon) plastic soft drink bottles also work well. Five- or ten-gallon storage drums (intended for water or food) will work well for larger supplies. Thoroughly wash the container and lid immediately before filling it with treated water (see below). Use clean, hot water and detergent. Rinse well with hot water after washing.

Before storing your water, treat it with a preservative, such as chlorine bleach, to prevent the growth of microorganisms. Use liquid household chlorine bleach that contains 5.25% sodium hypochlorite and no soap. Do not use scented or "color safe"

bleach or bleaches with added cleaners. **Add** 16 drops of bleach, or ¼ teaspoon, per gallon of water and stir. Two liter soft drink bottles are about ½ gallon in size; use 8 drops or 1/8 teaspoon bleach for each of these bottles. Mix the water and bleach thoroughly and let stand for at least 30 minutes before using the water. To store water, seal your water containers tightly, label them “Purified Drinking Water”, date them and store them in a cool, dark place.

Some Quick Conversion Figures

Amount of Water	Amount of Bleach
1 quart	4 drops
1/2 gallon (about 2 liters)	8 drops or 1/8 teaspoon
1 gallon	16 drops or 1/4 teaspoon

Water can also be stored in the freezer. This will keep the water at an acceptable quality for a longer period of time and will help keep any food in the freezer from thawing in the event that the power goes out.

Replacing Emergency Water Supplies

The length of time that water can be stored depends on the original quality of the water, the temperature at which it is stored, and how much light it is exposed to. Stored water may eventually develop a disagreeable appearance, taste, or odor. Plan to replace your emergency water supply every 3 months. Under emergency conditions, water that tastes flat can be aerated by pouring the water back and forth between the container and a clean bottle. To increase the shelf life of water stored in translucent containers (those you can see into), group the containers together in dark plastic bags to keep out the light. Store the water supply away from gasoline, kerosene, pesticides or other chemicals. Plastic water storage bottles can allow the vapors from these chemicals to enter the bottle and contaminate the water.

Finding Water in Emergencies

If you haven't put water away in preparation for emergency use during disasters, you do have some other options. Most homes have hidden sources of water that can be used in an emergency. But remember during a natural disaster to consider all water from wells, cisterns, and other delivery systems unsafe until tested.

The tank of your **hot water heater** or water pressure tank can supply many gallons of emergency water. First, turn off the electric or gas supply to the heater. Turn off the gas at the intake valve or turn off the electric circuit breaker for the hot water heat, or unplug the unit. You can obtain water by opening the drain valve at the bottom of the tank. Pipes and plumbing also carry several gallons of water. As a last resort, you can use water in the reservoir tank of your toilet (not the bowl), but purify it first (see below).

Purifying Emergency Water Supplies

When a safe supply of water is not available, or your usual supply of water becomes unsafe for drinking, you must treat the water before it can be used for drinking, cooking or brushing teeth. In addition to having a bad odor or taste, contaminated water can contain microorganisms that cause diseases such as dysentery, cholera, typhoid and hepatitis. There are two ways of treating water: boiling or adding bleach. If the water looks cloudy, filter it before purifying. First, let the water sit undisturbed so that any suspended particles settle to the bottom. Then filter the water through layers of clean cotton or paper towels, cheesecloth, or coffee filters.

Boiling is the safest method of purifying water. Place the water in a clean saucepan or other cooking container. Bring the water to a rolling boil and continue boiling for 10 minutes, keeping in mind that some water will evaporate. Let the water cool before drinking, keeping it covered during cooling.

You can also use liquid household bleach which contains 5.25% sodium hypochlorite to purify water. Place the water (filtered if necessary) in a clean container and add bleach. Add 16 drops of bleach (1/4 teaspoon) per gallon of water. Mix thoroughly and let stand (covered) for 30 minutes. If the water does not slightly taste and smell of bleach, repeat the bleach treatment and let stand another 15 minutes.

Note: If an emergency arises quickly, fill large clean containers and bathtubs with water. This water can be purified immediately before use, if needed. Ice, soft drinks and fruit juices are water substitutes for drinking in emergencies.

For more information:

- Centers for Disease Control and Prevention
<http://www.bt.cdc.gov/disasters/earthquakes/food.asp>
- Federal Emergency Management Agency
<http://www.fema.gov/plan/prepare/water.shtm>

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