

Preparing for the Inevitable - Part 1

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By Dan Eden

Water, the necessity of all life.

A very large percentage of you and me is water. While we can go for weeks without food, we can only last a couple of miserable days with no water. It seems odd that water would be a problem during a flood, since there is so much of it everywhere. But that's just the problem -- that water has been *everywhere* and will have picked up sewage, toxic chemicals and organisms that can make you very ill or even die.

But you can separate the good water from these impurities. There are two ways of doing this in an emergency:

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. Allow the water to cool if it is for drinking plain and store it in a sanitized (see below) bottle.

Liquid Clorox Bleach

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



When the tap water stops flowing, Regular Clorox Bleach isn't just a laundry-aid, it's a lifesaver. First let water stand until particles settle. Pour the clear water into an uncontaminated container and add Regular Clorox Bleach.

- Use 2 drops of Regular Clorox Bleach per quart of water.
- Use 8 drops of Regular Clorox Bleach per gallon of water.
- Use 1/2 teaspoon Regular Clorox Bleach per five gallons of water.
- If water is cloudy, double the recommended dosages of Clorox Bleach.

Don't freak out as the 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.

Don't pour good water into a contaminated container. Always sanitize your water containers, as well as all of your food utensils, as follows:

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.

Sunlight can purify water!

World Health Organization reports that water can be purified using sunlight and plastic bottles!

According to the UN report:

“ A do-it-yourself technique of disinfecting water with sunlight and soft-drink bottles could save hundreds of thousands of lives a year, the World Health Organization said Thursday. In a campaign to reduce deaths from unhealthy water in developing countries, the UN health agency is promoting a nearly cost-free process called Solar Water Disinfection, or SODIS. The process is simple: Transparent bottles are filled with water and placed horizontally on a flat surface for about five hours. The heat and ultraviolet rays of the sun kill illness-causing microorganisms in polluted water. Special UN Report [2001]

”

Iodine Treatment

Iodine is light sensitive and must always be stored in a dark bottle. It works best if the water is over 68 F (21 C). Iodine has been shown to be more effect than chlorine-based treatments in inactivating Giardia cysts. Be aware that some people are allergic to iodine and cannot use it as a form of water purification. Persons with thyroid problems or on lithum, women over fifty, and pregnant women should consult their physician prior to using iodine for purification. Also, some people who are allergic to shellfish are also allergic to iodine. If someone cannot use iodine, use either a chlorine-based product or the solar method. Generally, the procedure is as follows:



Liquid 2% Tincture of Iodine Add 5 drops per quart when the water is clear. Add 10 drops per quart when the water is cloudy.

Polar Pure Iodine Crystals Fill the Polar Pure bottle with water and shake. The solution will be ready for use in one hour. Add the number of capfuls (per quart of water treated) listed on the bottle, based on the temperature of the iodine solution. The particle trap prevents crystals from getting into the water being treated. It is important to note that you are using the iodine solution to treat the water, not the iodine crystals. The concentration of iodine in a crystal is poisonous and can burn tissue or eyes. Let the treated water stand for 30 minutes before drinking. In order to destroy Giardia cysts, the drinking water must be at least 68 F (20 C). The water can be warmed in the sun before treating or hot water can be added. Refill the treatment bottle after use so that the solution will be ready one hour later. Crystals in the bottle make enough solution to treat about 2,000 quarts. Discard the bottle when empty.

As usual, please send more e-mails with suggestions and stuff I probably forget to include.

[Part 4 - Food Substitutes!](#)

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Comments:

Well you didn't mention filters. But that's ok because they have problems. If the water is too dirty to start with then the filter quickly becomes clogged and the water won't go through it anymore. Also, if you are using a filter and it suddenly decides to break or get a hole in it then the entire batch of water you just filtered is no good.

The things they sell for use in your home is ok but it's no good for taking with you in the case of an emergency where you will need a gallon of clean water for each person in your family. The bleach idea is probably the best one you've mentioned. But it really makes coffee taste bad!

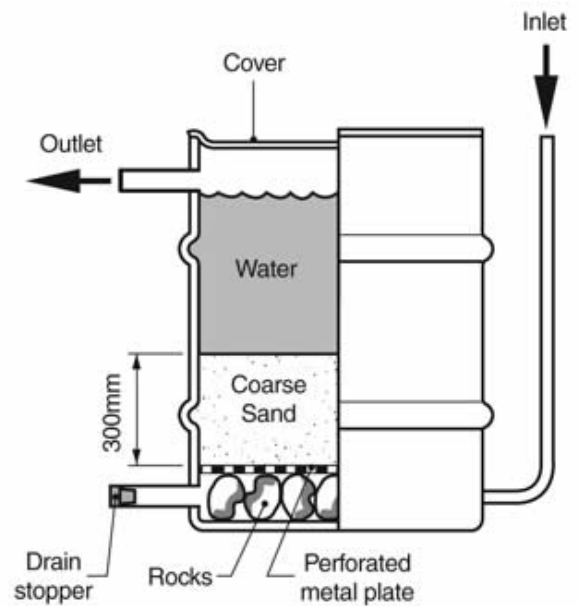
L.D.

The main danger you face with drinking water from a stream or lake is a tiny organism called Giardia. It's an ugly looking parasite that lives in animal intestines and gets in to the water from their feces. If it gets in a human body it lives in the small intestines, multiplies rapidly and causes diarrhea, excess gas, stomach and gut aches and the constant feeling of nausea. This can last for more than a month and cause weight loss and other problems. It's not easy to get rid of it, even when you take the appropriate medicine (metronidazole). Not fun at all.

Dr. P

I remember seeing a show on TV where these people made a sand filter out of a barrel.

The idea is to get some beach sand or filtered sand, not too small grain or containing clay (or it will hold the water and not let it pass through). You have a healthy layer of this sand, then underneath you have a plate with lots of small holes in it, and then under that you have some rocks. You connect a tube to the bottom of the barrel and force the water up through the plate and the sand, collecting it at the top of the barrel.



The sand will do most of the filtering of the small organism and microbes and the rocks are just there to hold the plate and sand and allow the filtered water to percolate up and be caught at the top.

I found an illustration I am including which shows the idea. An improvement of the idea is to also include a layer of charcoal (blackened burnt wood) in between the sand layer.

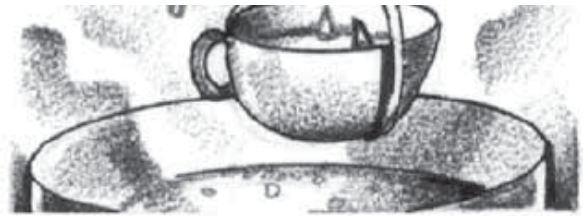
Of course this is something that a group of survivalists could build and may not be practical for a few people running from a toxic cloud or whatever!

Leo

Here's an idea if you find yourself next to the ocean and need to remove the salt.

The principle method is called distillation. When you boil salt water, the steam that is produced contains only pure water molecules. They form a gas that rises from the surface of the water. If you hang a cool object over the steam it will condense back to a liquid and gravity will make it fall again.





So in this Boy Scout method, you place a lid over the boiling water and hang a cup from the center and lowest part of the lid. The steam will condense and follow the curve of the lid where it will then accumulate and drip into the cup.

The idea could be scaled up and the same set up would work powered by the sun if it was covered with some plastic to trap the heat, say on a beach.

Thanks for posting these ideas. This makes a nice survival manual if one has a laptop and internet access during the next crisis! lol

B.B.

I like BB's idea and think it might work if you had one of those old pressure cookers. Maybe put a tube on the top vent and then run it to another container after it passes through a bucket of cold water. The pressure should keep everything moving and spit out clean water at the end [of the tube].

Walt

Clorox has a pretty short shelf life. It is only 1/2 as effective after 6 months. If you bought a gallon today, it would require 4 times the dose after a year, so you need to rotate your Clorox. That's why I like chlorine tabs, which I need for my swimming pool anyhow.

I keep a 250 gallon military water bag flushed out and full all the time. I found it on eBay for 32 bucks when the bird flu scare started in 2006. The water used to flush it out goes to fill my pool, so it's not wasted.

I tell my wife if I'm not home and something big happens, fill the bathtubs while there is still water pressure.

Be on the lookout for wells. Have the water tested now. Be prepared to retrieve the water with no power. I have a 4 inch X 4 foot piece of PVC with a check valve on the bottom end, with a 300 foot rope.

I also have a 25' X 40' clean tarp for harvesting rainwater. A quarter inch of rain falling on this 1,000 square foot tarp would yield 21 cubic feet of water (166 gallons, enough for 4 people for 40 days)

I also have 2 katydyn water filters that will supposedly allow you to drink swamp water.

As a last ditch, I can dig a hole 3 feet in diameter 2 feet deep and put a 4'X4' piece of plastic stretched over it. Put a collection can in the bottom and put a small stone on the plastic so condensed water will drip into the can.

I am a power grid operator, and can attest that Dan's concern about a CME or EMP blast is a VERY real threat. Infrequent but high consequence.

I have never seen it addressed in any article, but I can only speculate that at least 95% or the population would perish within a month if a total power failure. And that is an optimistic estimate. 2 weeks is probably more realistic. No power = no water = desperate masses of people

J.P.S.

