

## Purifying water by Filtration

### Ceramic/Diatomaceous Earth

The fine pores of Doulton ceramic (made from diatomaceous earth) remove parasites, organic & inorganic contaminants & chlorine but cannot filter out all the fluoride (just up to 99%). Some contain titanium zeolite to remove lead or silver to kill bacteria. They are often used instead of pasteurization in breweries. Ceramic filters are cleanable & do not use electricity. [www.aquarain.com](http://www.aquarain.com) or [www.berkefilters.com/](http://www.berkefilters.com/)

### Carbon

Block and/or Granulated Activated Carbon filters (GAC) are used to remove organic and some inorganic contaminants & chlorine, but chlorine and hot water can deteriorate carbon. And bacteria may breed in a dirty carbon filter. Quality filters last up to 10 years and are biodegradable. (There is a tremendous range in quality of carbon filters.) Even distillers now add a small carbon filter to get the other .1% of micro-organisms that may actually survive distillation. [www.pure-earth.com/comp.html](http://www.pure-earth.com/comp.html)

### Distillers

Water is boiled (212 degrees) in a tank & transferred to a 2nd tank where it 'rains' almost pure H<sub>2</sub>O, having removed heavy metals, nitrates & micro-organisms. But, this uses alot of electricity, is slow and creates 'empty (hungry) water.' If you don't eat mineral rich (organic) food, it's best to add minerals after distillation. [www.purewaterinc.com/html/comparing.htm](http://www.purewaterinc.com/html/comparing.htm)  
[www.nutriteam.com](http://www.nutriteam.com)

### Paper or Cloth

Whole-house sediment cartridges remove particles & dirt to keep your hot water heater from breaking down, but may lower your water pressure in the shower & sinks and the filters need replacing often. [www.aquasana.com/](http://www.aquasana.com/)

### Reverse Osmosis (RO) Filters

This method was first used to make saltwater fresh (desalinization). It uses a synthetic membrane filter, (which may also breed bacteria when dirty unless used in conjunction with UV light or silver). A quality unit will remove most contaminants but requires 3-7 gallons to purify 1 gallon of water (not efficient in a water shortage). Because RO flushes concentrated bacteria back into a city water system, some cities have banned its use. Hence, they are best used with well water. (Older RO units require heavy water pressure & soft water.) [aquaclearws.com/reverse-osmosis-contaminant-removal](http://aquaclearws.com/reverse-osmosis-contaminant-removal)

Ultra, Micro & Nano-Filtration is used in food & beverage industry and Deionization Systems are made for Businesses: [aquaclearws.com/business/deionization-systems/](http://aquaclearws.com/business/deionization-systems/)

## Purifying water with Additives

### Chlorine

Most 'city water' in the USA is heavily treated with chlorine to kill dangerous micro-organisms and algae (*although they remain in the water— just dead*). Unfortunately, it reacts with organic material to form chloro-organic compounds like chloroform and THMs (carcinogens) that destroys healthy intestinal bacteria and vitamin E in the body. [www.springwellwater.com/chlorine-drinking-water-good-bad-ugly/](http://www.springwellwater.com/chlorine-drinking-water-good-bad-ugly/)

### Grapefruit Seed Extract

Citricidal or **GSE** drops in water kill staph, strep, e.coli, parasites & more and then passes them—without harm—through the digestive tract. Simply put a **few drops** in the water &/or on your toothbrush. [www.nutribiotic.com/grapefruit-seed-extract.html](http://www.nutribiotic.com/grapefruit-seed-extract.html)

### Iodine

Hikers that drink from **streams** use iodine tablets or drops to kill viruses. It's not recommended for those with overactive thyroids. Iodine must be in the water for 30 minutes—longer for cold water. <https://www.survivaljunkies.com/purify-water-with-iodine/>

### Enhancing water (*after purification*)

#### Mineral Salts

A few crystals of Celtic Sea salt enhances cell absorption of H<sub>2</sub>O. [www.waterbenefitshealth.com/celtic-sea-salt.html](http://www.waterbenefitshealth.com/celtic-sea-salt.html)

#### Softening

Hard water has too much calcium in proportion to magnesium & may cause gall & kidney stones. Water softeners are used to reduce mineral buildup, make tubs and showers easier to clean, and reduce scale inside pipes and water heaters. They do **not** purify water for drinking. Sodium bicarbonate or potassium (*not regular salt—sodium chloride*) is used. [www.culligan.com/](http://www.culligan.com/)

#### Magnetizing

Coral, crushed lava, dolomite, marble chips, quartz crystals, zeolite & other minerals are being used to complement carbon or ceramic filtration, especially in aquariums. These minerals may add beneficial nutrients &/or magnetize it (resulting in less buildup on fixtures). Pi Mag Water at: [www.nikken.com/](http://www.nikken.com/)

#### Fluoridation?

Most U.S. cities also add fluoride (*a by-product of the aluminum industry— not naturally occurring fluoride*)—which competes with **iodine** in the body to cause iodine deficiency (*interfering with thyroid activity*)—causing brittle bones. <http://fluoridealert.org/>  
<https://aquaclearws.com/everything-you-need-to-know-about-fluoride-in-drinking-water/>

## Other ways to Purify water

### Light—Solar UV (Ultraviolet Sun Rays)

Swiss SODIS project: put water in a filled plastic bottle and leave it in full sunlight for at least 6 hours to eliminate viruses & bacteria. However, chemicals called phthalates are added to make some bottles more flexible & it can leach into the water when heated (*not frozen, though*). Glass bottles may work better. [www.globalwaters.org/resources/assets/sodis-solar-water-disinfection](http://www.globalwaters.org/resources/assets/sodis-solar-water-disinfection)

### Light—Electric UV (Ultraviolet Lamps)

UV light kills water-borne pathogens, but a sediment filter needs to be used first to extend the life of the lamp. <http://pure-earth.com/uv.html>

### Minerals (Ionization)

Copper & Zinc: Kinetic Degradation Fluxion (KDF) **shower filters**: water is passed through copper and zinc granules that, when wet, create an electrostatic charge, oxidating & reducing ions to convert contaminants into harmless substances or peroxides which kill bacteria. It changes some heavy metals into insoluble salts & changes chlorine into food grade zinc-chloride. [www.kdfft.com](http://www.kdfft.com)

Copper & silver: mineralizer/ ionizer for **spas/ pools**. Copper is a natural algicide <https://thepoolarea.com/copper-algaecide-for-pools/> & silver is anti-bacterial. Low voltage DC current is passed between copper & silver electrodes, causing a loss of electrons. Colloidal **silver** is also used to kill pathogens, like MRSA. [www.thesilveredge.com/kill\\_mrsa.shtml](http://www.thesilveredge.com/kill_mrsa.shtml)

### Oxygen (Ozonation)

Some **pools, aquariums & municipal water systems** (*600 in France*) kill bacteria and viruses & inactivate pesticides with an ozone (O<sub>3</sub>) generator—which is made by passing **air** through an electric current <https://poolresearch.com/ozone/>

### Plants (Phyto-Remediation)

Water hyacinths, rush, cattails, willows, reeds & more...all act as **pond** water filters. They biologically remove heavy metals from soil & water. Interestingly, ragweed & duckweed are among the best! [www.yourhealthremedy.com/health-tips/7-plants-used-phytoremediation-can-clean/](http://www.yourhealthremedy.com/health-tips/7-plants-used-phytoremediation-can-clean/)

### Note: Nuked Water

Water that has been contaminated with **radioactive fallout** can be safe to drink, but should be filtered several times (*through paper or cloth*) first to remove fallout particles, then filtered again. [www.seychelle.com](http://www.seychelle.com) sells radiation filters for all their products now.

## Why do I need a filter?

Go to your local Utilities Board website and read the most recent water quality reports. (Knox: [www.KUB.org/](http://www.KUB.org/) Loudon: [www.lcub.com/](http://www.lcub.com/))

Then, check out some of the different known contaminants and the diseases they are linked to at: [www2.epa.gov/learn-issues/water](http://www2.epa.gov/learn-issues/water)

Now, even though local utilities maintain pretty safe levels of regulated (*and unregulated*) organic and inorganic contaminants, keep in mind that virtually NO studies have been done to determine how the different contaminants may react **together** in the human body.

For instance, it may be perfectly safe to ingest a little Tagamet or Tylenol. It's even safe to inhale a little organophosphate pesticide (*such as used on golf courses*). It's safe to drink a few alcoholic beverages. However, what happens if you **simultaneously** take Tagamet & breathe an organophosphate? Or drink alcohol & take some Tylenol? **Both can be fatal.**

That's why you need to drink, shower and bathe in the purest H<sub>2</sub>O possible. Additives add up.

## But, I have well water!

Protozoa, like Giardia & Cryptosporidium have been detected in 90% of U.S. surface water.

Few wells in the U.S. are unaffected by fertilizers, factory discharges & pesticides used nearby. [aquaclearws.com/whole-house-water-systems/](http://aquaclearws.com/whole-house-water-systems/)

## Drink Water—not Cola!

Avoid sodas because **caffeine is a dehydrating agent** (*making the kidneys flush out more water*), **carbonation** erodes bones & teeth, and **high fructose corn syrup** overloads the pancreas, eventually causing diabetes.

Some research indicates that **high cholesterol** is simply an adaptation of the body to a state of chronic **dehydration**. (*The natural thirst mechanism can be fooled by chemical additives—so the body doesn't even recognize that thirst.*)

## Bathe with Salt—not Bubbles!

Soap removes the natural body oil that protects the skin and instead, deposits chemicals & blocks pores.

Try 1/2 cup of Himalayan Pink Salt instead!  
[www.saltean.com/himalayan-pink-salt-minerals/](http://www.saltean.com/himalayan-pink-salt-minerals/)

## May I Suggest?:

For drinking water at home--an RO unit  
best local source: [www.aquaclearws.com](http://www.aquaclearws.com)

For drinking water away from home: Carry bottled water--  
bottled water analyses at: [www.bottledwaterweb.com](http://www.bottledwaterweb.com)  
(*The best bottled water in TN isn't on their radar yet—it's **LeBleu.com**.*)

OR order products from:  
[www.seychelle.com](http://www.seychelle.com): Sports Bottle with filter, a Clean Sip filter Straw, or a Filter Pitcher (*safety note: **Brita & other chlorine-filter pitchers are not to be used with water that is not already filtered—since they usually ONLY remove chlorine***)



For showering at home:

Attach a 'CQ-1000 Filter' [www.rainshower.com/](http://www.rainshower.com/)  
(KDF & quartz crystal or Chlorgon—for chlorine & ammonia)

For bathing away from home:

Float a 'Crystal Ball Filter' in the bathwater to eliminate chlorine (*it uses a KDF to filter & quartz crystal to treat*)  
[www.filterwater.com/p-30-crystal-bath-ball-dechlorinator.aspx](http://www.filterwater.com/p-30-crystal-bath-ball-dechlorinator.aspx)  
or run **only hot water** and let it sit 20 minutes (*chlorine evaporates*).

For large home swimming pools/spas:

Get 'The Mineralizer' Copper/Silver Electronic Ion Generator [www.lifeguardsystems.com/](http://www.lifeguardsystems.com/) or, forget chlorine and have a **SALT WATER** swimming pool: [www.saltpoolinstaller.com](http://www.saltpoolinstaller.com)

(*Note: the downside of a salt-water pool is that when you have to empty it, that much salt may stunt or kill plants, trees or grass where it is dumped.*)

Note: There is a BIG difference between **organic minerals** (*ones that have been through the photosynthesis process of a **plant***) and **inorganic minerals**.

In fact, organic minerals (*i.e., aluminum from plants*) can actually **CHELATE inorganic minerals** out of a body by binding to them for easy elimination! That's why the aluminum & arsenic in [Youngevity.com](http://Youngevity.com) liquid colloidal mineral supplement is actually beneficial to drink!

# Water

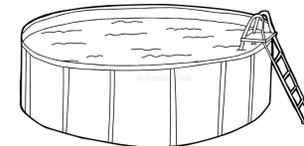


*written by grandma ginger*

This brochure is just my **unprofessional** personal opinions & suggestions. *Take it with a grain of salt!*

It was written because I highly value **pure water**—having distilled my drinking water for 20+ years, then used a counter top Aqua Rain filter for 10+ years and finally had a whole house fluoride removal filter and a kitchen RO (Reverse Osmosis) unit put in about 10 years ago by Aqua Clear Water Systems in Lenoir City. They service it annually. It's one of the best investments we've ever made—PURE water!

Note: I have nearly always had a swimming pool, (*inground in FL & above ground ones in TN*) and have managed to maintain a small pool year-round with very little maintenance using stabilized chlorine—no filters, just a net to scoop out leaves & bugs. (*I did finally figure out how worms get in—birds drop them when they get a drink.*)



Links & information here are updated from time to time, so if you find mistakes, **please** let me know. Thank you!  
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