

# HARD WATER vs. SOFT WATER

## *How much do you know about your water?*

**Hard water:** water that contains a noticeable quantity of dissolved minerals like calcium or magnesium

**Soft water:** water in which calcium or magnesium minerals are replaced with a negligible amount of sodium ions

### ***THE PROBLEM:***

As rainwater falls, it is naturally soft. However, as water makes its way through the ground and into our waterways, it picks up minerals like calcium and magnesium. Water is stored in large aquifers underground. Most of the water we use comes from the ground in the form of city water or well water. This water is typically untreated and therefore hard water.

Hard water can best be seen while doing household chores. It is to blame for dingy looking clothes, dishes with spots and residue, and bathtubs with lots of film and soap scum. Even hair washed in hard water may feel sticky and look dull. Hard water can take a toll on household appliances as well and use up more energy. The elements of hard water are to blame for all of these negative factors, as soap is less effective due to its reaction to the magnesium and calcium. The lather is not as rich and bubbly.

Today, we also know that water from the ground can often contain harmful contaminants including toxic chemicals and heavy metals. These chemicals come from farms and industries across the US. Some of the toxins found in normal ground water are listed below.

- **Arsenic:** Arsenic causes lung, bladder and skin cancer and may cause liver and kidney cancer. It can also damage your heart, central and peripheral nervous systems, and can instigate reproductive system problems and birth defects. As a result, you should avoid this contaminant at all cost.
- **Radioactivity:** Radioactive particles can spread easily through underground water systems and thus affects all water ways and ecosystems. Concentrations of uranium above the levels set by the Environmental Protection Agency (EPA) cause kidney damage and increase your risk for certain cancers. Meanwhile, radioactive iodine accumulates in the thyroid and causes thyroid cancer as it decays. Unfortunately drinking contaminated water is one of the primary methods we are exposed to radioactivity.
- **Chromium:** In 2010 the [Environmental Working Group](#) (EWG) found excessive levels of chromium 6, a carcinogen, in the water supply of 31 U.S. cities. Exposure to chromium 6 causes a long list of terrible conditions like stomach cancer, kidney failure, renal and liver failure, premature dementia and allergic contact dermatitis. Chromates are often used to make leather goods, mortar and paints, and they leach from these industrial processes into groundwater and soil, eventually ending up in our water.
- **Lead:** By now we all know the consequences of lead poisoning. The heavy metal is toxic to children since it interferes with the development of the nervous system and can cause anemia, seizures and even death. Lead gets into water via water pipes, and even copper pipes may be soldered with lead. While lead was banned from water pipes in 1986, some pipes made today still contain traces of lead.



## THE SOLUTION:

Luckily, there are ways to combat water hardness and harmful contamination. Water softening and filtering is the key to healthy water in your home! You will love using soft water! Tasks can actually be performed more efficiently with it. Soap will lather better and items will be left cleaner. Glasses will sparkle and hair will look healthy. The shower curtain will be scum-free. Clothes and skin are left softer. In addition to time, this can also save money, as less soap and detergents will be used. Since appliances have to work less hard, soft water can also prolong the life of washing machines, dishwashers and water heaters. Energy bills are noticeably lower when in households with water softeners. In a time of rising energy costs, this is something to think about.

Not only will you experience lower energy costs and cleaner dishes, but food made with softened water tastes better. Soft water has less minerals in it, so you will find your water has a better taste. This means your tea, coffee and other drinks made with water will taste more pure.



## WHAT NOW?

What type is your water? The Water Quality Association (WQA) defines hard water as having dissolved mineral hardness of 1 GPG (grain per gallon) or more. Here is a helpful table to show the hardness of water:

- Soft Water- less than 1 gpg
- Slightly Hard- 1-3.5 gpg
- Moderately Hard- 3.5-7 gpg
- Very Hard- 7-10 gpg
- Extremely Hard- over 10 gpg



A simple water test will determine what is in your water. If you have hard water, it is recommended that you use a water softener to remove the hardness minerals from your water. If you have harmful contaminants in your water or if you have extremely hard water, it is recommended that you install a Reverse Osmosis filtration system in your home. Both are inexpensive and easy to install. A simple installation fee may be required when you purchase these types of systems and most water experts recommend a professional installation as opposed to installing it on your own.

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If you would like more information on any of the above, contact one of our Sales Associates and we will direct you to the right product for your water. Contact us for a **FREE WATER TEST!**

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