5 Steps to Whole-House Water Purification for Your Home

If you own a home or are building a home, and your water will be supplied by a municipal water utility, this article is for you. Everyday, water is used in a home for drinking, washing, cooking, bathing, and more. It touches so much of our lives – our bodies, clothes, dishes, appliances, glass, showers, plumbing, and yet sometimes we don’t give a second thought of what is in our water and how it affects us.

Let me ask you this, if you bought a “purified drinking water” gallon from the grocery store, opened it, and someone asked you to put just one drop of chlorine in it, would you? Would you drink it if someone had? Would you let your children?

Keep reading to learn more.

Water Purification

Water purification is taking the stance that you want to take control of what’s in your water. That you are not okay with low quality water being consumed and used by you and your family.

Please understand, we think that municipalities do a great job for what they are supposed to do. They collect, filter, and distribute millions of gallons of water every day for millions of people. If the regulations made them filter water to a high quality standard, it would cost an infeasible amount to the consumer.

The solution to high quality of water is home-based purification. And here are the steps to fully taking control of your water:

 Step 1. Identify the problem

Like stated above, mass water filtration and distribution do not provide high quality water. The drop of chlorine in a gallon of pure water was just an example, but there are many more contaminants than just a drop of chlorine in municipal water.

Currently, there is a list of 94 contaminants that municipalities are required to regulate. Of those 94, only one contaminant must have 0% presence. That means that 93 contaminants are allowed up to some amount of presence in your water. It doesn’t end there.

There is another list of contaminants, called the CCL (Contaminant Candidate List) that includes all the contaminants that “are likely to be present or are present in municipal water” – EPA. This list includes pesticides, pharmaceuticals, insecticides, hormones, and many more.

Step 2. Learn your options

It is important to contact a [certified water specialist](https://www.wqa.org/programs-services/resources/find-providers/find-certified-professionals) who can answer water quality questions you may have. They should also be able to assess your home and water demand to recommend a system that works well for you and your family.

Be careful of water dealers that push a free water test as their primary need for an appointment. Field testing can tell you some, but especially with municipal water, the water quality of that municipality should be known to the water specialist.

For municipal water, there are three primary problems that should be addressed: drinking water contaminants, chlorine, and hardness.

Step 3. Drinking Water Purification

Drinking water purification is defined by us as reverse osmosis filtration. For years, faucet and pitcher filtration companies have tried to give reverse osmosis a bad name (I wrote an article covering [the myths of Reverse Osmosis](https://4perfectwater.com/blog/myths-of-drinking-water-purification/)), but facts tell us otherwise. Reverse osmosis (RO) is the highest form of filtration available for residential applications.

RO removes all of the heavy metals, pesticides, hormones, pharmaceuticals, and most all other contaminants.

For [reference](https://www.wqa.org/learn-about-water/common-contaminants/bacteria-viruses), when dealing with very small objects, the measurement “micron” is often used. You can see below how small the reverse osmosis pore size really is and how little can make it through.

1 Inch = 25,400 micron

Human Hair = 40 micron – 300 micron

Cysts = 2 micron – 50 micron

Bacteria = 0.2 micron – 1 micron

Viruses = 0.004 micron – 0.1 micron

Pesticides/Herbicides = 0.001 micron

Reverse Osmosis Pore Size = 0.0001 micron

The CDC produced a [guide](https://www.cdc.gov/healthywater/drinking/home-water-treatment/household_water_treatment.html) (Here is the [PDF](https://www.cdc.gov/healthywater/pdf/drinking/household_water_treatment.pdf)) showing that reverse osmosis was the most effective when compared to distillation, nanofiltration, ultrafiltration, and microfiltration.

As you can see, reverse osmosis is extremely effective at removing contaminants.

Reverse osmosis systems can be installed to supply special drinking water faucets, ice machines, coffee makers, wet bars, outdoor kitchens and more with purified drinking water lines throughout the home coming from a centralized system.

Step 4. Chlorine Removal

Chlorine/Chloramine is a toxic chemical. It is the primary disinfectant used in municipal water. Chlorine can be absorbed into the body through contact with your skin and of course through oral consumption.

Chlorine can affect your skin, causing itchiness and dryness. Studies have pointed to chlorinated water affecting other organs in your body.

Step 5. Water Softening

Hard water affects everything it touches. The scale buildup on your sinks, shower doors, toilets, and more is probably due to hard water. The calcium and magnesium (Hardness) in the water build up on practically every surface, including your dishes and clothing.

It also affects water using appliances such as washing machines, and dishwashers, ice machines, coffee makers, and causes them to breakdown more quickly. Water heaters are drastically affected as well as whole-house plumbing.

Soft water changes all of that. Water softeners remove the calcium and magnesium from the water and replace it with sodium. Don’t worry, it’s a very small amount and sodium is NOT the same as salt (sodium-chloride).

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