



## Water Filtration

Stories on water quality and contamination are in the news constantly. Pharmaceutical residues, heavy metals and agricultural chemicals are showing up in drinking water, and the fluoridation debate continues unabated. The EPA regulates fewer than 100 contaminants, but over 6000 chemicals are suspected of having a negative health impact, and more new chemicals are introduced every day. As the quality of water becomes more and more suspect and our ability to detect chemicals in water increases, the benefits of filtered water are becoming a high priority for people who care about their health.

## Water's Amazing Properties

A water molecule is one of the most unique elements on the planet. It has an incredible ability to absorb virtually anything it comes in contact with. Actually, if water was any more absorbing it would be virtually impossible to capture, store, transport and treat it. Because of this amazing property, water picks up both healthy naturally occurring minerals as well as dangerous, life-threatening chemicals and heavy metals.

## Sources of Contamination

Water bodies such as lakes, rivers, oceans, and groundwater, which can be harmful to the organisms and plants that live in these water bodies, as well as the humans that consume or bathe in it. The primary sources of water pollution and chemicals in water are:

**Point-source pollution** - One specific source such as discharges from a wastewater treatment plant, outfalls from a factory, leaking underground tanks, etc.

**Non-point source pollution** - Diffuse sources such as nutrient runoff in storm water from flow over an agricultural field, or metals and hydrocarbons from roads and parking lots.

## History and Evolution of Filtration

The earliest recorded attempts to find or generate pure water date back to 2000 b.c.e. in India. using boiling and filtering through sand and charcoal to improve taste. It was assumed that good

tasting water was also clean - impure water was not connected with disease and harmful organisms in water had not been discovered.

Centuries later, Hippocrates, the famed father of medicine, designed his own crude water filter to "purify" the water he used for his patients. Known as the "Hippocratic sleeve", this filter was a cloth bag through which water could be poured after being boiled.

During the Enlightenment, the French scientist La Hire proposed that every French household have a sand water filter installed that would provide clean water to that household.

Sand filters were the most popular method of water filtration throughout many European towns. The benefits of clean, filtered water began to be associated with these innate rights of all humanity.

The first city-wide municipal treatment plant was installed in Paisley Scotland in 1804, using slow sand filters.

## Water Treatment 101

There are a few basic categories of filtration:

- **Sediment Removal**
- **Adsorption/ Carbon**
- **Specialty Resins**
- **Reverse Osmosis**

## UltraWater Products

Over a decade of commitment to developing the best possible filtration system has led to our proprietary, patent-pending, USA-made UltraWater product range. UltraWater products can reduce the following pollutants and chemicals in water up to 99.9%:

- **Arsenic, Chlorine, VOCs**
- **Lead, Chloramines, THMs**
- **Fluoride, Heavy Metals, Copper**
- **Pharmaceuticals, Nitrates**
- **Cadmium, Chromium, Mercury etc.**

**Purely Water Supply** also carries AlkaViva water filters that can handle any excess amounts of contaminants including iron, nitrates, hydrogen sulfide, e-coli, cysts and radioactive particles. See the Replacement Filters section of our website!