

## Removing Drugs & Pharmaceuticals From Drinking Water

As the Associated Press documented in a five-month investigation, drinking water provided to at least 41 million people living in 24 major metropolitan areas in the United States has tested positive for trace amounts of pharmaceuticals.

The drugs discovered included sex hormones, anti-epileptics, cholesterol medications, drugs used to treat depression and mental illness, painkillers, mood altering drugs, tranquilizers, antibiotics, and caffeine. Tests conducted in many drinking water treatment plants showed traces of 3 or 4 drugs while others showed dozens.

The source of the drugs is presumed to be from human waste products that are processed and then discharged back into the environment. Of course, the dumping of old prescriptions into the sink or toilet is certainly another source.

Perhaps more frightening than these first findings is that this report is the first of its kind. Rarely does the first round of investigation and discovery uncover the full magnitude of the issue. It is almost certain the subsequent rounds of investigation will find that most of the drugs we consume, or flush down the toilet end up in our drinking water source in some form and some concentration.

There is very little known about the long term health effects of consuming low levels of a mixture of random pharmaceuticals. The US Environmental Protection Agency does not regulate the type or concentration of any pharmaceutical in drinking water in the USA. Follow this link to see what they do regulate: <http://www.epa.gov/safewater/contaminants/index.html>

Fortunately there are several technologies that allow consumers to wrestle back control over the quality of their drinking water. These technologies have been around for a long time and offer a very cost effective and efficient means to purifying your drinking water at home. Even better, you won't have to haul any 5 gallons jugs of water nor will you fill up your local landfill with empty PET plastic bottles.

### Reverse Osmosis (RO) For Removing Pharmaceuticals From Drinking Water

Reverse Osmosis - RO for short – is a technology where water is pressurized against a membrane. The membrane contains millions of microscopic pores that are so small that only pure water can pass through. Contaminants are blocked and are flushed to the drain. Several studies have shown that Reverse Osmosis technology is capable of removing many of the commonly encountered pharmaceuticals in drinking water. The fact that most Reverse Osmosis (RO) systems also incorporate carbon filtration positions it as a solid choice in removing drugs and pharmaceuticals from tap water. Reverse Osmosis systems for homes range in price from \$250 to \$1000. They are a small appliance (about the size of a computer tower) that fit under the sink and deliver the purified water to a dedicated faucet on your countertop.

### Water Distillers for Removing Pharmaceuticals From Drinking Water

Water Distillers are perhaps the oldest and most proven technology for removing contaminants from drinking water. Distillation mimics the natural hydrologic process where water is vaporized and then condensed to create very pure, pollutant-free water. As water turns from vapor and back to liquid it "drops" any contaminants it may be carrying. The result is very high quality drinking water that is free from all contaminants. Water distillers come in several designs with the most popular being a coffee maker sized countertop unit. These systems sell for about \$400-\$500.

### About the Author

C. Reid Thornley is a B.Sc. Biology and a former research associate for a world class water purification manufacturer. He has been a presenter for the US Water Quality Association and he now owns and operates a Quatell - [Waterwise Water Distillers](#)

Source: [www.isnare.com](http://www.isnare.com)

Source: <http://articles.exospy.com>