

**Ask Jon Eakes**

# The basics of water purification and limitations of water filters.

Last Updated: Monday, August 15th, 2022, Created: Friday, January 25th, 2002

The microbiologist Dr. Phillip Stuart joined me to talk about residential water filtration systems. A couple of very important things came out.

Carbon filters, like the Brita and other counter-top or end of spout filters are only designed to use with treated water systems to remove bad taste. They do not remove any bacteria. In fact, if used on a rural or cottage system that has not been chlorinated, the carbon can be an incredible breeding ground for bacteria making the water dangerous rather than safe. Small quantities of bacteria that would normally be harmless, can multiply into harmful quantities of bacteria overnight inside a carbon filter.

UV lamps used to sterilise water supplies must have the water pre-filtered to remove minerals before it reaches the lamp, if not, the minerals in the water will quickly coat the lamp itself, blocking the UV rays. This can render the anti-bacteria action of the lamp useless in a matter of a couple of weeks. Yet many plumbers don't understand that and simply install the lamps in the water line, giving you a false sense of security.

Reverse Osmosis can make very "clean" highly filtered water -- but at a great waste of water as far more water goes through the system and down the drain than comes out the filter spout.

Some multi-stage filtration (under the counter) system use ceramic filters, carbon filters and iodinating which kills viruses, bacteria and parasites. Whether you are looking at his system or any other system, get your water tested first to see what is in it and have the company you are dealing with give you one or more appropriate filters to deal with your specific problem. No one water quality system will work for all conditions.

Cleaning the ceramic filter - the first one in the line that catches the larger stuff - is a wise maintenance task about every six months. This keeps the water flow strong through the system while maintaining full filtration.

## DEALING WITH SPECIFIC POLLUTANTS, LIKE LEAD

More and more filter systems are available at renovation stores. These often have standardized filter holders and could be a DIY money saver, but I would never get my initial "prescription" as to what filtration I needed, and which filter in front or after which other filter from a DIY store. That would be a bit like getting access to the prescription section of a drug store without any knowledge as to which pill does what. Find out what you need from a professional. If you can get replacement filters that are the same as what was "prescribed" for your water situation, then it doesn't really matter where you

buy the replacements.

Because of attention focused in the past years on Lead from old plumbing pipes, specific LEAD filters are showing up on the market, some as simple as being attached to the end of the kitchen faucet, filtering lead for cooking and drinking while letting regular city water through for general cleaning. These work well and you can buy them without a "prescription" because you know what you are trying to block, and these filters are specifically labeled for blocking lead.

I recommend getting filters every year from the same professional partially because they remind you when it is time, and partially because they change your filter "prescription" when new technology is developed.

Jon

**Keywords:**

Filters, Quality, Lead, Purification, Water, Health, Security, Safety

**Article 1672**

[www.joneakes.com](http://www.joneakes.com)