



FREE EXPERT CONSULTATION or QUESTIONS: **1-888-891-4821**

## EXPLANATION OF MAJOR DISADVANTAGES & RISKS OF COMMON FILTRATION OPTIONS\*

<b>REVERSE OSMOSIS</b> 	<p><b>Method of Action:</b> Works by the principle of <i>Reverse Osmosis</i> forcing water through a thin semi permeable membrane with microscopic pores, rejecting most of the ions that are larger than the water molecule.</p> <p><b>Disadvantages:</b> This filtration method has a major risk, and that is, that the delicate membrane can break at any time without your knowledge, and leak contaminated water. Also, RO method results in a <b>water waste</b> of approximately <b>3</b> gallons for every <b>1</b> filtered. Contaminants along with naturally necessary minerals, microelements and electrolytes are rejected and thereby, removed, resulting in <b>de-natured, acidic, corrosive and flat tasting water</b>, not the way water is found in nature. Some RO Systems that offer a re-mineralization cartridge may contain contaminated minerals of unknown quality. Further, after the water is filtered, it is stored in a stainless steel storage tank, which may be coated with a plastic paint inside. Over 20,000 potential chemicals can leach from plastics into the water it comes in contact with, especially denatured/acidic water, which is much more reactive because it is “empty” and seeks to re-absorb ions to maintain equilibrium.</p>
<b>GRAVITY-FED</b> 	<p><b>Method of Action:</b> Works by using the force of <i>gravity</i> to cause water to slowly drip down from top chamber, through filtration elements and into the bottom reservoir, where the water is stored.</p> <p><b>Disadvantages:</b> This filtration process is typically much slower than reverse osmosis, and limits the amount of water you can use by the reservoir capacity. Although there is no water waste, the water does sit in contact with the holding chamber (plastic or metal) and has ample opportunity to absorb metal/plastic ions before going into your cup. Bacteria &amp; fouling are also a concern with standing water in such systems (especially in warmer weather), as well as constant exposure to air/touch.</p>
<b>DISTILLERS</b> 	<p><b>Method of Action:</b> Works by the principle of <i>condensation</i>, whereas, water is heated to a point of evaporation, then it comes in contact with cooling coils (typically metal) and condenses back into a liquid, to be stored in storage reservoir. All ions that are heavier than air get left behind, and thus filtered out.</p> <p><b>Disadvantages:</b> This is perhaps one of the costliest filtration methods (energy wise) as it requires electricity to boil the water each time. It also will not work if your power goes out. Metal condensation coils can leech metals into the distilled water, leading to a metallic taste. Plastic holding reservoir can leech hormone-disrupting chemicals into distilled water. And as with Reverse Osmosis: minerals are removed, leaving acidic and flat tasting, denatured water. Furthermore, chemicals like VOC's, Chloroform, and certain Drug Residues that turn to vapor when heated, will evaporate with the water vapor into the distilled reservoir.</p>

<b>IONIZERS</b> 	<p><b>Method of Action:</b> Works by the principle of <i>electrolysis</i>, which uses metal plates and electricity to separate the already present mineral/electrolyte ions in the water into alkaline and acidic streams. Because the main purpose of these machines is to ionize the water, they typically feature a basic small carbon block filter as far as filtration goes.</p> <p><b>Disadvantages:</b> Ionizers rely on electricity to operate, and will not work if your power goes out. Because electrolytic cells (platinum/titanium metal plates) are necessary to artificially alkalize your water, there is concern of metal leaching/cross contamination during this process. Water ionizers are usually sold through Multi-Level Marketing programs, and due to this, are often over-hyped and over-priced for whatever value they may bring. They typically are poor filters, as they do not contain sufficient room to store enough filtration media, and the water flow rate is often too fast to clean the water thoroughly.</p>
<b>PITCHERS / FAUCET</b> 	<p><b>Method of Action:</b> Pitchers work by principle of <i>gravity</i> as described in the gravity-fed filter above. Faucet mount filters work by <i>water-pressure</i> pushing through a filtration media, typically a carbon block.</p> <p><b>Disadvantages:</b> These type of filters are considered “entry-level” products that most people buy when they first learn they need to filter their water. However, they are not designed to last very long, and are often made of cheap materials. They often do not filter fluoride, radiation or many other complex chemicals and often have bacterial growth &amp; fouling issues due to constant contact and standing water (pitchers). Due to filtered water sitting in plastic reservoir of the pitcher, hormone disrupting plastic leaching is also a concern.</p>

\*This chart is designed to provide a general idea of the common filtration options and configurations on the market at the time it was created. If further explanation or clarification is necessary, please contact us. Thank you.