

<b>Quick Reference to Common Water Treatment Devices</b>  <b>Device</b>	<b>Primary Use</b>	<b>Limitations</b>
Carbon Filter	Removes chlorine, some organic chemicals, resin, general taste and odor problems	Does not remove nitrate, bacteria, or metals. Periodic replacement of activated charcoal required
Mechanical Filter	Removes sand, soil, and other causes of turbidity	Requires regular cartridge replacement or backwashing (depending on type) to maintain effectiveness
Water Softener	Replaces water hardness minerals (calcium, magnesium) with sodium  Improves cleaning action of soaps, detergent  Prevents scale deposits in pipes, equipment	Removes calcium and magnesium, replacing with sodium (consult physician if sodium in diet is a health concern)  Softened water can be more corrosive than unsoftened water  Periodic backwashing and regeneration required
Iron Filter	Removes iron and manganese that can cause staining of clothes and plumbing fixtures  Prevents odor caused by iron, manganese	Periodic backwashing, addition of potassium permanganate required (frequency dependent on water usage, iron content)
Neutralizer	Treats corrosive or acidic water	May increase sodium or water hardness
Distillation Units	Removes most impurities including minerals and organic chemicals from drinking water.	Distillation takes time and can be expensive. Storage space is needed for treated water.  Distilled water has a flat or bland taste.  Hard water increases maintenance of distiller.
Reverse Osmosis	Removes most dissolved and suspended impurities	Reverse osmosis wastes up to 50% of water. Process requires time and

	from water.	storage of treated water.  Hard water clogs membrane.  Carbon and mechanical filters may be required to pretreat water.
--	-------------	---