

Home Water Treatment Systems

Home water treatment units come in two basic types: point of use (POU) and point of entry (POE) devices. POU devices, which are the most common, usually are installed near the sink or faucet and treat only water used for drinking or cooking. Other POU systems include pitchers or carafes which use water filters. POE devices treat all the water entering the house, regardless of its use.

The sale of such units is expanding. Commissioned by the Water Quality Association, the January 1999 National Consumer Water Quality Survey indicates that 38% of adults reported using a household water treatment device, a 28% increase since 1995. Forty-seven percent of respondents stated they would be more likely to buy a house with a water treatment device if they were in the market for a new home. Sixty percent of respondents indicated that the quality of their drinking water affects their health; almost half were concerned about possible health-related contaminants in their water supply; and one in five was dissatisfied with the quality of his or her household water supply. It should be noted that this survey was completed just prior to the first release of CCRs by municipal water districts throughout the country.

There is no scientific research regarding the use of home water treatment systems and caries risk. However, lack of exposure to fluoride does increase an individual's risk for caries.

Findings in the dental/medical literature indicate:

- Steam distillation removes 100% of the fluoride content.¹
- Water softeners do not significantly remove fluoride from water.^{2,3}
- Charcoal/carbon filters generally do not remove fluoride.¹
- Reverse osmosis removes 65-95% of the fluoride.¹

In addition, manufacturers have reported that carbon-charcoal filters generally do not remove fluoride, and are used alone to improve taste and odor or in combination with reverse osmosis (RO) filters to protect the RO membrane from the effects of chlorine. However, some activated carbon filters contain activated alumina that may remove over 80% of the fluoride. RO systems require regular maintenance and their efficiency at removing fluoride is affected by such factors as cleanliness of filters and water pressure in the supply lines. When RO filters are not performing at an optimal level, the water fluoride levels will be higher than anticipated.¹

Information regarding the existing level of fluoride in a community's public water supply can be obtained by asking a local dentist, contacting the local or state health department, or contacting the local water supplier.

Individuals who drink water processed by home water treatment systems as their primary source of water could be losing the decay preventive effects of optimally fluoridated water available from their community water supply. Therefore, consumers should seek advice from their dentist about specific fluoride needs.

References

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3. Full CA and Wefel JS. Water softener influence on anions and cations. Iowa Dent J. 1983 Oct;69(4):37-9.