



OFF THE SHELF

IS BOTTLED WATER BETTER?

A bottle of water can cost anywhere from 69 cents in a mini-mart to \$5 in a posh restaurant. For the price of one bottle of Evian, you could use 1000 gallons of water from your tap at home. Nonetheless, bottled water is an \$8 billion industry in the United States.¹ Why are we paying for that glass of water? Is bottled really better?

Some people buy bottled water because it is convenient to keep in their car, desk drawer, or lunch bag, but many Americans turn to bottled water because they believe it is safer and more pure than the water that comes out of the tap. In reality, the jug at the water cooler and the Dasani that you guzzle at the gym may not be any safer than tap water. The standards for bottled water purity are comparable to the minimum standards set by the Environmental Protection Agency (EPA) for municipal water systems. Because the standards that regulate bottled water are no more rigid than those regulating tap water, it is not surprising that some bottled water actually is tap water. By definition, bottled water doesn't have to be anything special; it can be any water as long as it has no added ingredients except safe and suitable antimicrobial agents. In fact about 25% of the bottled water sold in the United States is from municipal water supplies.¹

To help consumers identify the source of their bottled water and make labeling consistent from state to state, the FDA established standard definitions for all bottled water products. Under these regulations, bottled water that comes from a tap must be clearly labeled as such. However, water that has been taken from a municipal water supply and then treated—for example, filtered or disinfected—need not indicate that it is tap water. “Distilled water” and “purified water,” are examples of water taken from municipal water supplies and then treated. If you want water that did not come from the tap, select artesian water, spring water, well water, or mineral water. These come from underground water sources. Be aware however of words like “pure,” “pristine,” and “glacial.” They are added to emphasize the alleged purity of bottled water compared to tap, but they have no set definitions or meanings. Water from all of these sources, as well as the water used in certain types of flavored bottled waters, must comply with the bottled water standards set by the FDA. Products labeled as carbonated water, seltzer water, soda water, and tonic water are considered soft drinks and so are regulated as food, not as water.

Individuals who are concerned about their tap water, but who do not want to carry water home from the grocery store, may choose a home water-treatment system. There are many different kinds. Faucet filters remove chlorine and other substances that make the water taste bad. More elaborate filter units, distillation units, and water softeners remove contaminants but may also change the mineral content of the water. For example, an ion exchange unit, or water softener, removes some minerals, mainly cal-



(©Rick Mariani Photography/StockFood America)

cium and magnesium, from water and replaces them with sodium. Since minerals in hard water stain tubs, clog water heaters, and cause soap to form a film that is difficult to remove from laundry, softened water makes life easier at home. But, there may be health benefits to hard water. The incidence of heart attacks is lower in areas of the country that have hard water.² In addition, softened water has about twice the amount of sodium—about 94 mg per liter. If you are following a sodium-restricted diet, you may need to bypass the water softener when it comes to drinking water.

When choosing your water, weigh the benefits against the risks. Bottled water is more expensive and it is no guarantee of purity. A study by the National Resources Defense Council that tested 1000 bottles of 103 different brands of bottled water found that although the quality of most samples was good, it was not necessarily purer or safer than tap water.³ The safest bottled water is distilled water. In the distillation process, nonvolatile chemicals are removed, and the heat destroys bacteria and other biological contaminants. The resulting water is probably safe, but it is tasteless and lacking in essential dietary minerals that water usually supplies. Water treatment systems cost less than buying bottled water, about 18 cents a gallon compared to about a dollar or more for an 8- to 12-ounce bottle.¹ These system can improve the taste and appearance of tap water, but the filters need to be maintained. If they are not, the benefits may be lost. Before deciding to buy bottled or install a filter, take a look at the results of water-monitoring tests your water company is required to perform (or have your well water tested) and compare them with the legal limits of contaminants set by the EPA. This should help you decide if you need to look for alternatives to the tap. For information, contact the FDA (www.fda.gov), the International Bottled Water Association (www.bottledwater.org), or the EPA (www.epa.gov).

¹FDA *Consumer Magazine*. Bottled Water: Better than Tap?, July–August 2002. Available online at www.fda.gov/fdac/features/2002/402_h2o.html/ Accessed August 20, 2004.

²Rubenowitz, E., Axelsson, G., and Rylander, R. Magnesium in drinking water and death from acute myocardial infarction. *Am. J. Epidemiol.* 143:456–462, 1996.

³National Resources Defense Council, *Clean Water & Oceans: Drinking Water: In Depth: Report: Bottled Water—Pure Drink or Pure Hype?* Executive Summary. Available online at www.nrdc.org/water/drinking/bw/exesum.asp/ Accessed May 25, 2005