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Bottled Water: Pure Drink or Pure Hype?

While bottled water marketing conveys images of purity, inadequate regulations offer no assurance.

[\[En Español\]](#)

Sales of bottled water in this country have exploded in recent years, largely as a result of a public perception of purity driven by advertisements and packaging labels featuring pristine glaciers and crystal-clear mountain springs. But bottled water sold in the United States is not necessarily cleaner or safer than most tap water, according to a four-year scientific study recently made public by NRDC.

NRDC's study included testing of more than 1,000 bottles of 103 brands of bottled water. While most of the tested waters were found to be of high quality, some brands were contaminated: about one-third of the waters tested contained levels of contamination -- including synthetic organic chemicals, bacteria, and arsenic -- in at least one sample that exceeded allowable limits under either state or bottled water industry standards or guidelines.

A key NRDC finding is that bottled water regulations are inadequate to assure consumers of either purity or safety, although both the federal government and the states have bottled water safety programs. At the national level, the Food and Drug Administration is responsible for bottled water safety, but the FDA's rules completely exempt waters that are packaged and sold within the same state, which account for between 60 and 70 percent of all bottled water sold in the United States (roughly one out of five states don't regulate these waters either). The FDA also exempts carbonated water and seltzer, and fewer than half of the states require carbonated waters to meet their own bottled water standards.

Even when bottled waters are covered by the FDA's rules, they are subject to less rigorous testing and purity standards than those which apply to city tap water (see chart below). For example, bottled water is required to be tested less frequently than city tap water for bacteria and chemical contaminants. In addition, bottled water rules allow for some contamination by E. coli or fecal coliform (which indicate possible contamination with fecal matter), contrary to tap water rules, which prohibit any confirmed contamination with these bacteria. Similarly, there are no requirements for bottled water to be disinfected or tested for parasites such as cryptosporidium or giardia, unlike the rules for big city tap water systems that use surface water sources. This leaves open the possibility that some bottled water may present a health threat to people with weakened immune systems, such as the frail elderly, some infants, transplant or cancer patients, or people with HIV/AIDS.

<i>Some Key Differences Between EPA Tap Water and FDA Bottled Water Rules</i>						
Water Type	Disinfection Required?	Confirmed <i>E. Coli</i> & Fecal Coliform Banned?	Testing Frequency for Bacteria	Must Filter to Remove Pathogens, or Have Strictly Protected Source?	Must Test for <i>Cryptosporidium</i> , <i>Giardia</i> , Viruses?	Testing Frequency for Most Synthetic Organic Chemicals
Bottled Water	No	No	1/week	No	No	1/year
Carbonated or Seltzer Water	No	No	None	No	No	None

Big City Tap Water (using surface water)	Yes	Yes	Hundreds/month	Yes	Yes	1/quarter (limited waivers available if clean source)
See Table 1 of NRDC's bottled water report for further comparisons and explanations.						

Ironically, public concern about tap water quality is at least partly responsible for the growth in bottled water sales, which have tripled in the past 10 years. This bonanza is also fueled by marketing designed to convince the public of bottled water's purity and safety, marketing so successful that people spend from 240 to over 10,000 times more per gallon for bottled water than they typically do for tap water.

In fact, about one-fourth of bottled water is actually bottled tap water, according to government and industry estimates (some estimates go as high as 40 percent). And FDA rules allow bottlers to call their product "spring water" even though it may be brought to the surface using a pumped well, and it may be treated with chemicals. But the actual source of water is not always made clear -- some bottled water marketing is misleading, implying the water comes from pristine sources when it does not. In 1995, the FDA issued labeling rules to prevent misleading claims, but while the rules do prohibit some of the most deceptive labeling practices, they have not eliminated the problem.

Some examples of interesting labels NRDC observed include:

"Spring Water" (with a picture of a lake surrounded by mountains on the label) -- *Was actually from an industrial parking lot next to a hazardous waste site.*

Alasika™ -- "Alaska Premium Glacier Drinking Water: Pure Glacier Water From the Last Unpolluted Frontier, Bacteria Free" -- *Apparently came from a public water supply. This label has since been changed after FDA intervention.*

Vals Water -- "Known to Generations in France for its Purity and Agreeable Contribution to Health . . . Reputed to Help Restore Energy, Vitality, and Combat Fatigue" -- *The International Bottled Water Association voluntary code prohibits health claims, but some bottlers still make such claims.*

NRDC makes the following recommendations for improving bottled water safety precautions:

- The FDA should set strict limits for contaminants of concern in bottled water.
- The FDA's rules should apply to all bottled water distributed nationally or within a state, carbonated or not, and bottled water standards must be made at least as strict as those applicable to city tap water supplies.
- Water bottlers should be required to disclose water source, treatments and other key information as is now required of tap water systems.
- A penny-per-bottle fee should be initiated on bottled water to fund testing, regulatory programs, and enforcement at both state and national levels.
- State bottled water programs should be subject to federal review.

Ultimately, however, while Americans who choose to buy bottled water deserve the assurance that it is safe, the long-term solution to our drinking water problems is to ensure that safe, clean, good-tasting drinking water comes from our *taps*. Those who are particularly concerned about the quality of their tap water can take action by 1) calling their state drinking water program or the EPA Safe Drinking Water Hotline (800 426-4791) for a list of state certified labs; and 2) purchasing filters certified by [NSF International](#) (800 NSF-MARK) to remove the contaminants of special concern to the consumer (NSF certification is not, however, a complete guarantee of safety).

Based on [BOTTLED WATER: Pure Drink or Pure Hype?](#) a March 1999 report by the Natural Resources Defense Council (which includes a chart of our test results). See also the bottled water [FAQ](#).

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