



Bottled Water: Pure Drink or Pure Hype?

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 National Resources Defense Council (NRDC).

1. Isn't bottled water safer than tap water?

No, not necessarily. National Resources Defense Council (NRDC) conducted a four-year review of the bottled water industry and the safety standards that govern it, including a comparison of national bottled water rules with national tap water rules, and independent testing of over 1,000 bottles of 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. Our conclusion is that there is no assurance that just because water comes out of a bottle it is any cleaner or safer than water from the tap. And in fact, an estimated 25 percent or more of bottled water is really just *tap water in a bottle* -- sometimes further treated, sometimes not.

2. Is bottled water actually unsafe?

Most bottled water appears to be safe. Of the bottles we tested, the majority proved to be high quality and relatively free of contaminants. The quality of some brands was spotty, however, and such products may pose a health risk, primarily for people with weakened immune systems (such as the frail elderly, some infants, transplant and cancer patients, or people with HIV/AIDS). About 22 percent of the brands we tested contained, in at least one sample, chemical contaminants at levels above strict state health limits. If consumed over a long period of time, some of these contaminants could cause cancer or other health problems.

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 applied to city tap water (see chart below). For example, 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. 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.

3. How can I find out where my bottled water comes from?

A few state bottled water programs (e.g., Massachusetts and New York) maintain lists of the sources of bottled water, but many do not. Try calling or writing the bottler to ask what the source is, or call the bottled water program in your state or the state in which the water was bottled to see if they have a record of the source (your state's health or agriculture department is most likely to run the bottled water program). If you choose to buy bottled water and are concerned about its safety, buy brands with a known protected source and ones that make readily available testing and treatment information that shows high water quality.



4. How can I determine if bottled water is really just tap water?

Often it's not easy. 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.

First, carefully check the bottle label and even the cap -- if it says "from a municipal source" or "from a community water system" this means it's derived from tap water. Again, you can call the bottler, or the bottled water program in your state or the state where it was packaged.

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 (surface water)	Yes	Yes	Hundreds/month	Yes	Yes	1/quarter (limited waivers available if clean source)

5. If I drink tap water should I use a filter and what types of filters are most effective?

The real long-term solution is to make tap water safe for everyone. However, if you know you have a tap water quality or taste problem, or want to take extra precautions, you should purchase filters certified by NSF International (800 NSF-MARK). These filters remove the contaminants of special concern such as cryptosporidium. Such certification is not necessarily a safety guarantee, but it is better than no certification at all. It is critically important that all filters be maintained and replaced at least as often as recommended by the manufacturer, or they might make the problem worse.

6. How can I obtain test results on my tap water?

Under new "right-to-know" provisions in the drinking water law, all tap water suppliers must provide annual water quality reports to their customers. To obtain a copy, call your water provider (the one that sends your water bills).

You also can test your water yourself, though this can be expensive. There are state-certified drinking water laboratories in virtually every state that can test your water. Call your state drinking water program or the EPA Safe Drinking Water Hotline (800 426-4791) for a list of contacts. Standard consumer test packages are available through large commercial labs at a relatively reasonable price.

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). <http://www.nrdc.org/water/drinking/qbw.asp>