



Bottled or Tap?

The U.S. has the highest total consumption of bottled water in the world. Americans consumed 14.4 billion gallons of bottled water in 2019 and are increasingly choosing bottled water instead of less healthy packaged drinks like sodas. According to the FDA, about 75 percent of bottled water sold in the U.S. comes from natural underground sources, which include rivers, lakes, springs and artesian wells (Evian, Fiji, Arrowhead) while about 25% is purified municipal water (Aquafina and Dasani). According to the Beverage Marketing Corporation, Americans spend ~\$16 billion a year on bottled water while municipal water is practically free. Some people choose bottled water simply for its convenience, but many others believe it is safer and tastes better than the water flowing from their tap. So how do they really compare?

Water Safety

According to the Centers for Disease Control and Prevention (CDC), the drinking water in the US is some of the safest in the world. The U.S. Environmental Protection Agency (EPA) oversees the safety and quality of tap water. Drinking water is continuously monitored and treated according to federal standards set forth in the Safe Drinking Water Act. Water companies are required by federal law to notify the public of any safety concerns and to provide a yearly quality report to the public. If you haven't already received the report, contact your local water company and request a copy of the Annual Water Quality Report, also known as the Consumer Confidence Report. This report lists the levels of contaminants that have been detected in the water and shows how these levels compare with EPA's drinking water standards.

Drinking water can be expected to contain small amounts of some contaminants but as long as those contaminants are lower than EPA standards, the water is considered safe to drink for healthy people. People with severely weakened immune systems or other specific health conditions, or those concerned about specific contaminants present in local drinking water, may wish to use a filter or purchase high quality bottled water.

Bottled water is regulated by the U.S. Food and Drug Administration (FDA). It is responsible for ensuring the protection of water from contaminants, the use of sanitary conditions for processing, bottling, storage, and transport safety and the truthful labeling of bottled water sold nationally. States are responsible for regulating water that is both packaged and sold within its borders. Consumer access to bottled water information and contaminant levels is limited compared with the tap water disclosure requirements required by the EPA.

While bottled water is occasionally recalled due to contaminants, it's generally considered safe. However, some products may harbor very small pieces of plastic called microplastics. A 2018 [study](#) found that 93% of the 259 bottles sampled contained microplastics. While the impacts of microplastic contamination on human health are still unknown, they are thought to act as endocrine-disrupting chemicals and may have negative long-term consequences. To minimize the leaching of microplastics into the water, store bottled water at room temperature or below.

Water Quality

The taste of all water has to do with the way it is treated and the quality of its source. Many people report that they dislike the taste of tap water, but blind taste tests consistently find that most people cannot differentiate between bottled and tap when the tap water was chlorine-free. Municipal water treatment systems often use chlorine as a disinfectant to kill bacteria and other microorganisms which can affect the taste and smell of the water. Filtering tap water to remove chlorine or placing the water in an uncovered pitcher in the refrigerator overnight will reduce the chlorine taste. Another option is to add a slice of lemon, lime, or other fruit of choice.

Environmental Impact

When it comes to the environment, there is no question that tap beats bottled. The bottling of water, transport, and disposal of bottles after use result in adverse environmental impacts that far exceed those of tap water. In 2016, 4 billion pounds of plastic was used in U.S. bottled water production, requiring an estimated energy input equivalent of about 64 million barrels of oil. In addition, the cost of bottled water is hundreds to thousands of times greater than tap water.

Try these strategies to reduce the environmental impact:

- Reduce consumption of bottled water.
- Buy a refillable bottle and develop a habit of filling with tap water and using in place of bottled water.
- If you do purchase bottled water, select brands that are manufactured close to home, refill the bottles with tap water for reuse, and recycle old bottles.

In summary, under normal circumstances, drinking water from municipal water systems is reliably safe across the United States. It costs considerably less and has a much lower environmental impact compared to bottled water. Plus, with a reusable water bottle, tap water can be just as convenient as bottled. If safety or water quality is your main concern, consider purchasing a filtration system.

When public drinking water is compromised in some way because of catastrophic events, such as severe flooding, or improperly monitored and treated as in Flint, Michigan, bottled water becomes necessary. Otherwise, tap is generally the better option.

Resources:

https://www.epa.gov/sites/production/files/2015-11/documents/2005_11_17_faq_fs_healthseries_filtration.pdf

https://www.epa.gov/sites/production/files/2015-11/documents/2005_09_14_faq_fs_healthseries_bottledwater.pdf

<https://www.healthline.com/nutrition/tap-water-vs-bottled-water>

<https://www.mwra.com/monthly/wscac/2018/113018-DovetailConsumeResp1Water.pdf>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6141690/>

<https://www.wmar2news.com/business/consumer/americans-spend-16-billion-a-year-on-bottled-water>