



bottled water

Is it Really a Squeaky-clean Alternative to Tap?

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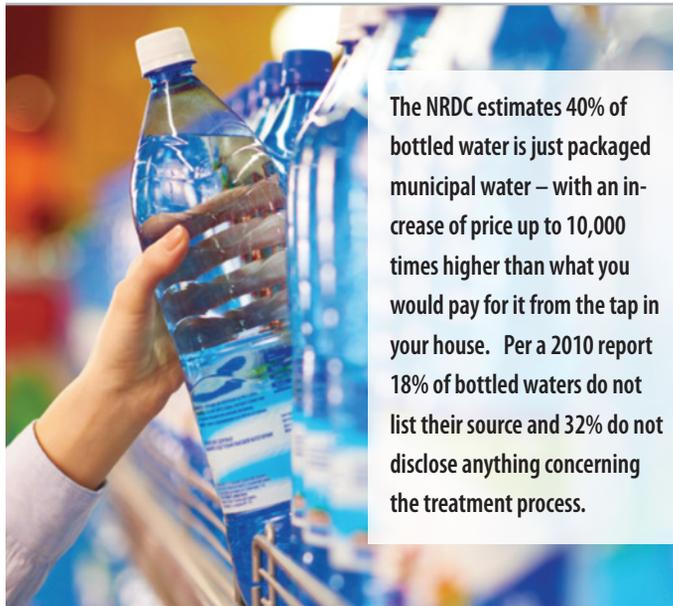
Bottled water is a staple in many people's households and generally consumed daily at the office, gym, or when running errands. Statistics estimate at least 30% of the American public regularly consumes bottled water with the U.S. seeing double digit growth since 2014; but how many of these consumers know what is in their bottle or where it comes from?

Various terms are assigned to help promote bottled water sales but do people know what these terms mean? Marketing for bottled water uses terms such as artesian, purified, sparkling, mineral, spring or alkaline.

There seems to be an assumption that bottled water is cleaner than tap water; but this is not always the case. When the National Resources Defense Council (NRDC) tested water from over 103 brands it found nearly 33% had significant contamination levels – some higher than those allowed by the Environmental Protection Agency (EPA) which regulates tap water.

Contaminants include numerous elements such as various harsh metals, fertilizers, pollutants and industrial solvents. Bottle water producers are regulated by the Food and Drug Administration (FDA) which requires regular testing before bottles hit the market – but accidents are blamed on the contamination. One recent example made news when Niagara Bottling had to recall spring water due to possible E. coli contamination.

Martin Riese, the sole certified mineral water sommelier in the US, suggests the best bottled water to buy is one that (a) lists the total/type of dissolved minerals in the product, and (b) provides information on the water source, as well as (c) water testing procedures on their website. Note that many companies simply filter municipal water and then add electrolytes and other min-



The NRDC estimates 40% of bottled water is just packaged municipal water – with an increase of price up to 10,000 times higher than what you would pay for it from the tap in your house. Per a 2010 report 18% of bottled waters do not list their source and 32% do not disclose anything concerning the treatment process.

erals back in to improve its taste.

Additionally, one might be well advised to stick with companies that use BPA-free bottles as mounting research seems to point to BPA's ability to disrupt normal hormonal functions when consumed in elevated quantities over time. Bottles left in the heat or out in the sun experience additional leaching of BPAs into the water. To identify the difference between tap and bottled water one must be able to decode the different marketing terms used in advertising. The following terms are quite common and should be understood to help any consumer make an educated choice:

- **Purified:** Water filtered by reverse osmosis, distillation, deionization or other processes which may or may not be checked by a municipality. Check for a water source.
- **Spring:** Water that naturally flows to the surface

from an underground spring formation. Again, check the source because springs can be located anywhere – including near industrial sites and farms where the risk for pollutants is high.

- **Sparkling:** May or may not be tap water; sparkling denotes its carbonated nature rather than a pure quality of the source.
- **Mineral:** Water from a protected underground source that contains more than 250 parts per million of total dissolved solids (minerals). No minerals are added; they are all from the natural source.
- **Artesian:** Well-water coming from an underground confined aquifer. It is naturally filtered and free of contact with the air or other pollutants. The minerals of the aquifer will impact the taste.
- **Alkaline:** Water treated to have pH levels like that found in nature. It may or

may not be municipal water – again make sure to check the source.

So what about the environment? While an improvement from the early 2000's when soda dominated consumption, Americans now drink significant amounts of bottled water. In 2015, Americans bought the equivalent of 1.7 billion half-liter bottles of water every single week. This equates to everyone in the country consuming more than five bottles of water every week.

According to an article published by *National Geographic*, "bottled water sales in 2015 rose almost three times faster than the whole market for "liquid refreshment," and bottled water rose even as sales of carbonated soda fell 1.5 percent, to the lowest level per person since 1985." Interestingly people are predominantly giving up diet soda not full sugar soda in exchange for water.

So where are all those bottles going? The reported U.S.'s recycling rate for plastic is only 23%. So, a large amount of those plastic bottles become landfill which is problematic for the environment. While numerous campaigns and even water bottle bans exist, the impact has not moved the needle. Today consumers interested in saving a dollar, the environment, or both have switched to sustainable containers for carrying water. These products range in price and by material but certainly provide enough diversity in look, size, and carry-application for everyone.



Specific brands of reusable water bottles are chosen for various reasons by consumers. Consumer reports suggest areas of evaluation amongst purchasers – aesthetics, durability, type of material (plastic, metal, glass, etc.), style, ergonomics, cooling power and resistance to chemical leaching or changes in fluid taste over time. Some connoisseurs state that uncoated stainless steel bottles are best as there is no chance of leaching anything into your drinking water, they are the easiest to clean, usually have wide mouth openings, and there are limited ways for it to wear out. In any case, the reusable water bottle market is highly saturated with refined choices, giving consumers nearly limitless options to choose from. The following brands have demonstrated consistent quality and popularity (via positive reviews) among users; helping them to stand out in the crowd.

Klean Kanteen Stainless Steel Bottle

The option has no BPA lining, and even the cap is very high-quality. The product is made of steel, bamboo and silicone. It promises to keep hot drinks hot for up to 14 hours and cold drinks cold for a whopping 100 hours. It is leak-proof and highly durable.

Camelbak Eddy Bottle

Camelbak Eddy bottles are not made of steel but are loved for their ease of use with the “straw-like” mouth opening that allows you to flip and sip with ease. Consumers also favor the styling and the fact that it is BPA-free. The drinking valve is made of high-quality silicone that guarantees maximum leakage protection. It is also one of the more economic options. The Camelbak “Big Chill” plastic water bottle is also popular due to its “Jet Valve” technology which makes it easy to get a quick drink with a very high flow rate through the mouth cap.

Hydro Flask Stainless Steel Bottle

This option is a double-walled, vacuum-insulated stainless steel flask bottle that will keep drinks cold for up to 24 hours and hot for 6 hours. It is made of stainless steel, has no liner and is BPA free. Some users also use it for coffee due to its high thermal insulation properties (via “TempShield technology”).

Nalgene Tritan Water Bottle

Nalgene has been creating the best-selling plastic reusable water bottles for over 20 years. The “Tritan” is one of the most popular. It is made for both warm and cold beverages and its wide mouth also makes its cleaning easy and even adding ice cubes easy. Its opening also accommodates most water filters. The bottles usually have fluid measures printed along the side for precise fluid intake during exercise. For many consumers, low price and simplicity fit the bill.

Nike

Nike reusable bottles are popular among fitness enthusiasts. The T1 Flow Swoosh is the #1 option with its vibrant, see-through design and good grip – making it a common choice for those who like to drink when running. The pop-up mouthpiece means that you don’t have to tilt the bottle too far before water runs through. It also has volume measurements up the side and you can clip the bottle to your bag with the loop on the lid.

Brita Blue Sports Bottle

Brita bottles have the unique characteristic of an included filter to reduce the quantity of potential impurities such as chlorine. The filter does need to be soaked in warm water every few weeks to keep it clean. The Brita Blue has a lid to stop leakage in your bag and a hoop so you can attach it to a backpack if hiking. Consumers say the filter certainly improves the flavor of tap water and they are still relatively inexpensive.

CEUQuiz

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The CEU Quiz is now available online at:

<http://www.ncsf.org/continued/onlineceu.aspx>

