

Freshen Up Your Drink

Reusing water bottles is good ecologically but is it bad for your health?

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Drinking water should be a gloriously guilt-free activity. H₂O won't make you fat, give you cancer or stain your teeth a revolting shade of yellow. It's second only to soda as the American beverage of choice, ever since marketers thought to package it for us in handy plastic bottles. But now the green lobby informs us we may as well be clubbing baby seals with our Evian bottles, so great is the environmental havoc wreaked by their manufacture and disposal. Some resourceful consumers have taken to reusing the containers multiple times; others have switched to reusable water bottles.

While we fuss over the impact of water containers on the environment, however, most of us have overlooked their potential impact on our health. Many water bottles on the market, like many soda containers, are made of a hard plastic called polyethylene terephthalate, or PET. While the material is perfectly safe for single use, it's not designed for repeated reuse, says Kellogg Schwab, an environmental microbiologist at Johns Hopkins Bloomberg School of Public Health: "Your mouth leaves a film that harbors bacteria, and the bottle's narrow mouth makes it hard to clean."

Reusable water bottles merit scrutiny as well. Like many rock climbers, Scott Belcher used to carry a Nalgene water bottle made of polycarbonate, a sturdy, clear plastic. As an associate pharmacology professor at the University of Cincinnati, he knew that polycarbonates contain bisphenol A (BPA), a synthetic hormone that mimics estrogen. What he didn't know was if or how much BPA wound up in his water. In experiments, he learned that trace amounts of BPA do seep into room-temperature water. But he was startled to find that when the containers were filled with boiling water--a common practice for climbers in cold climates--the BPA released 55 times as fast. His research, published in January in the journal *Toxicology Letters*, spurred alarm among not just water drinkers but also parents: 95% of baby bottles, which are routinely filled with hot water to make formula, are made of polycarbonates.

Scientists debate the effects of BPA, thought by some to damage reproductive systems when ingested in excessive amounts. The U.S. Food and Drug Administration (FDA), which regulates bottled water, has declared PET and polycarbonate bottles safe. Nalge Nunc, the Rochester, N.Y., company behind the Nalgene brand, attests to the safety of all its bottles--while also making clear that it offers products made of other materials (see below). The safest bet? Water from the tap--in a glass.

Is Your Water Bottle Safe? Here's what you need to know before you chug that H₂O.



	Single-Use PET	Polycarbonate	HDPE	Stainless Steel
What it's made of	Polyethylene terephthalate, or PET, is a lightweight plastic used in many drink bottles	This thermoplastic polymer is used in many products, including water containers	High-density polyethylene is a softer, opaque plastic made from petroleum	These bottles are made of durable and light stainless steel inside and out
Potential problems	PET degrades with use, and wrinkled surfaces can host germs--as can backwash	Studies show polycarbonates can leach a potentially harmful synthetic hormone	Scientists and health advocates have reported no known problems with HDPE	Stainless steel doesn't leach or react. But avoid freezing or filling with hot water
Should I reuse this bottle?	No. Use it as it's intended: once. Recycle it or reimagine and reuse--as a flower vase	The FDA insists polycarbonate containers are safe, but some scientists disagree	Yes. Though less snazzy-looking than polycarbonate, HDPE containers are safe	Yes. Stainless steel rates up there with glass as a safe, reliable material. Drink up!