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NUTRITION LAB

Bottled water versus tap: Which is safer to drink?

Both have their risks, but your home's water is subject to broader scrutiny.

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Those ubiquitous plastic water bottles have been increasingly vilified in recent years. Los Angeles, San Francisco and Santa Barbara, among others, have banned them from purchase with city funds. A few trendsetting restaurants, and even some markets and hotels, have banned them too.

The trend has left many consumers wondering: Isn't bottled safer than tap?

"Bottled water isn't any safer or purer than what comes out of the tap," says Dr. Sarah Janssen, science fellow with the Natural Resources Defense Council in San Francisco, which conducted an extensive analysis of bottled water back in 1999. "In fact, it's less well-regulated, and you're more likely to know what's in tap water."

Bottled and tap water come from essentially the same sources: lakes, springs and aquifers, to list a few. In fact, a significant fraction of the bottled water products on store shelves are tap water -- albeit filtered and treated with extra steps to improve taste.

It's not news to anyone that tap water can taste funky (too much chlorine, usually) or look discolored (from air bubbles or rust in pipes). But generally, that doesn't mean it isn't safe to drink, says Benjamin Grumbles, assistant administrator for water with the Environmental Protection Agency.

The great majority of the tap water in the country meets the EPA's drinking-water standards, which regulate the levels of roughly 90 different contaminants, including germs such as giardia, heavy metals such as lead and dozens of industrial chemicals.

"If a utility is doing its job and it's well funded, they can take all this stuff out," says Elizabeth Royte, author of "Bottlemania: How Water Went on Sale and Why We Bought It."

Different states do face different contaminants, of course, and the national standards don't cover everything that could possibly get into public water supplies. California, for example, has its own standards to regulate levels of the gasoline additive MTBE and the industrial chemicals called perchlorates.

But even state standards can't account for aging pipes that carry water from public lines into those of people's homes, which can leach copper and lead. Plus, there are certain contaminants water treatment plants just aren't designed to take out, such as medications that wash into the sewers via human excretion or drugs being dumped down the drains. An investigation by the Associated Press this year found traces of pharmaceuticals in drinking-water supplies that serve more than 41 million Americans.

In light of such facts, bottled water may seem preferable. But coming as it does from many of the same sources as tap, bottled water is subject to many of the same contaminants, Grumbles notes. It's held to essentially the same standards as tap water, albeit by the Food and Drug Administration and not the EPA.

And while large public water supplies are often tested for contaminants up to several times a day, the FDA requires private bottlers to test for contaminants only once a week, once a year or once every four years, depending on the contaminant.

Tap water suppliers are also subject to broader scrutiny; they're required by law to publish and circulate an annual Consumer Confidence Report, which states their sources of water and any contaminants found. The FDA doesn't require this of bottled-water makers, and though inspectors can drop in on water-bottling plants, such visits are assigned low priority, FDA press officer Michael Herndon says. Companies also aren't required to share any contamination episodes with their customers.

In its favor, bottled water isn't subject to contamination from lead in residential pipes. But it may contain chemicals that leach out of plastic bottles, which are often made of PET, or polyethylene terephthalate.

The chemical is distinct from the phthalates that have been linked to birth defects in newborn boys, but recent studies have shown that PET can release minuscule amounts of the toxic chemical antimony into water. The amounts are well below toxic levels, but microwaving a bottle or leaving it in the sun or a hot car can accelerate the process.

Bottled water hasn't been vilified for its health risks, however. Rather, it's the environmental toll of mass consumption (Americans have consumed more than 9 billion gallons so far this year) that's driving some consumers back to the tap.

In California alone, more than 1 billion water bottles are thrown out annually, according to the California Department of Conservation. Nationwide, just 15% of the tens of billions of bottles consumed each year are recycled. The Pacific Institute, a research group based in Oakland, calculates that in 2006, manufacturing those billions of bottles required 17 million barrels of oil.

Which relates to the final argument against bottled water: cost. Price it by the gallon, and water in those single-serve bottles is more expensive than even today's high-priced gasoline.

Tap water, on the other hand, "is one of the best bargains American consumers can find," Grumbles says.

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