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You Have No Idea How Gross Your Water Bottle Is. Here's How to Clean It.

Rinsing it under water for a few seconds won't cut it

Source: Kayla Blanton, OutsideOnline.com, November 17, 2024

As an active person, staying hydrated is one of your top priorities. Cleaning your water bottle should be high up on your to-do list, too, but for many of us—let's be honest—it's not.

This makes for a humbling (and gross) reality check when you go for a drink, glance down at your mouthpiece, and are forced to reckon with a film of mystery gunk that has collected there since the last time you washed it. Due to busy schedules, forgetfulness, and a lack of extra tumblers, water bottles get nasty quickly. Although we love the sustainable choice of reusing one, that commitment requires some care-taking to avoid illness and maintain good water-bottle hygiene.

Below, experts dig into the dirty details and share their tips for keeping your water bottle safe and sanitary, no matter how many sweaty hikes or shared sips it endures.

What Types of Bacteria Are Lurking in Your Reusable Water Bottle?

According to the Water Quality Association, a not-for-profit organization in the water treatment industry, all drinking water contains microbes or heterotrophic microorganisms, a catch-all term for types of bacteria, mold, or yeast.

A September 2024 survey that swabbed water bottles found that the most common bacteria in reusable bottles were associated with antibiotic-resistant, hospital-acquired infections like pneumonia and meningitis (which can be fatal), and food poisoning, which comes with symptoms like vomiting and diarrhea.

The survey also concluded that Americans' reusable water bottles, on average, contain 20.8 million CFUs of bacteria—about 40,000 times more than you'd typically find on a household toilet seat.

Exactly what type of invaders your water bottle collects depends on if it has a screw top with nooks and crannies for germs to stow away in, whether or not you share your bottle with others, or if you use it for anything other than water, like coffee or sports drinks, explains Jun Wu, a professor of Environmental and Occupational Health at the University of California Irvine's Joe C. Wen School of Population and Public Health.

Sugary beverages, in particular, leave behind nutrients for bacteria to feed on and multiply.

Drinking from a Dirty Bottle Can Make You Sick

If you don't clean your water bottle properly, all kinds of bacteria can start to grow. Ingesting water from an unclean bottle can result in gastrointestinal or respiratory issues, says Qinchun Rao, a professor of Food and Nutrition at Florida State University.

How to Tell When Your Water Bottle Is Dirty

Acceptable levels of heterotrophic organisms, also known as heterotrophic plate counts (HPC), vary by country. The Environmental Protection Agency's HPC standard for any given drinking water sample is less than or equal to 500 colony-forming units per milliliter (CFU/mL).

When your water surpasses that threshold, and/or other bacteria strains are introduced to the mix—like when a water bottle goes uncleaned after a workout—water safety is called into question.

You won't always be able to tell how dirty your water bottle is. That's a big reason cleaning them falls by the wayside: they "look" clean. According to the Cleveland Clinic, more noticeable signs of contamination are visible mold spots, an unpleasant smell, cloudy water, or an off-putting taste.

Instead of waiting for it to show signs of grime, just get into the practice of cleaning it daily at a minimum. However, if you fall behind and skip a few days, remain on the lookout for a tell-tale layer of dark slime known as a biofilm. It's something that you will likely have to remove your lid and peek inside to notice, especially if it's only been a few days since the bottle's last wash.

Even then, if you don't see anything, it's worth taking a paper towel to swipe the bottle's inner walls. If your napkin comes up soiled with a black, brown, or green substance, that's not a good sign. You may also notice a weird odor emanating from its opening, or your water may suddenly taste off.

Does the Material or Design Impact Bacterial Growth?

In short, yes. "Plastic bottles, especially those made from softer materials, can develop scratches over time, creating spots where bacteria can thrive, and certain slightly porous plastics can further promote bacterial colonization," explains Wu.

On the flip side, metal bottles are usually smoother, less porous, and therefore scratch-resistant, she adds, which makes bacterial growth less likely.

Regarding design, Wu adds, "Narrow openings are harder to clean thoroughly, increasing contamination risks." So, your best bet is to go with a metal or glass bottle with a wide mouth.

How to Clean Your Water Bottle

"Treat your water bottle like a utensil," says Mitzi Baum, the CEO of Stop Foodborne Illness. If it's dishwasher safe, she strongly recommends running it through a wash cycle. Below are some more expert tips for water bottle washing.

Clean Your Water Bottle After You Purchase It. When you've bought your ideal water bottle, don't race to use it. Baum says it's important to clean and sanitize it with hot water before your lips ever touch it—because who knows how dirty its journey to the store was.

Wash Your Water Bottle Daily, and Do a Good Job. Rao recommends washing the bottle with warm, soapy water, especially if you use it frequently or for beverages other than water. (Reader: just rinsing the bottle under some running water doesn't qualify as cleaning it.)

Clean Your Reusable Straw with a Small, Long Brush. Flushing the narrow spout with water won't cut it. This is especially the case if your straw is plastic because, as Wu notes about plastic water bottles, they are most easily scratched and, therefore, more likely to harbor bacteria. Regardless of material, straws are small and compact, making them the perfect hiding places for bacteria, so they always need a good scrubbing from end to end with a slim brush tool like this one.

Dismantle Your Sip Spout and Clean Each Individual Piece. If your sip spout is made up of multiple pieces, break down your bottle before cleaning it to ensure you can sanitize all of the hidden pockets where moisture and residue get trapped, for example, the joint where the straw folds in and out. When the lid construction is more cumbersome, you can soak it in hot, soapy water and rinse it thoroughly or toss it in the dishwasher. If you have the option, use the sani rinse cycle; this will clean your dishware at a higher temperature than a normal wash and kill more germs.

Narrow-Neck Bottles Require Attention to Detail. Professor Wu points out that bottles with narrow necks make thorough cleaning difficult. Cleaning one efficiently might take a slender bottle-cleaning brush or, more simply, a soft sponge that's easy to manipulate around its curves without missing any spots.

Don't Forget to Wash the Outside. "People often carry their water bottle throughout the day and rest it on various surfaces," says Dr. Mieses Malchuk, a board-certified family physician in North Carolina, like, for example, in a sweaty duffel or on a musty tree trunk. For that reason, cleaning the outside of your bottle with the same soapy water method matters.

The easiest way to keep your water bottle clean is to make washing it part of your daily routine, Malchuk says, just like brushing your teeth. That way, you'll never have to wonder how gross it is, which, as we've established, could be *very*.

Possible Response Questions

- What are your thoughts about water bottle contamination? Explain.
- Did something in the article surprise you? Discuss.
- Pick a word/line/passage from the article and respond to it.
- Discuss a "move" made by the writer in this piece that you think is good/interesting. Explain.