



fluoride in tap water

Feds Consider Cutting Back on Fluoride in Your Tap Water

Fluoride's been added to municipal water supplies for decades to prevent cavities, but authorities think it's time to lower the dose.

By Emily Main

what you can do:

Find fluoride-free personal-care products, and a good filter, if you're concerned about your or your family's fluoride exposure.

RODALE NEWS, EMMAUS, PA—On the heels of a new report finding that 89 percent of city tap water supplies tested are contaminated with cancer-causing chromium-6, two government agencies are announcing that there could be too much of something else in your water, as well—in this case, something that they put there on purpose.

On Friday, the Department of Health and Human Services (HHS) and the Environmental Protection Agency (EPA) jointly announced that "based on the most up-to-date scientific data," they want to start cutting down on the amount of fluoride that's intentionally added to tap water to prevent cavities and tooth decay, and reduce the amounts that creep into water by way of nature and industrial pollution.

The HHS is proposing that its range of 0.7 to 1.2 milligrams of fluoride per liter of water added to water by municipalities be capped at the low end of that range, 0.7 milligrams per liter. And the EPA, which monitors all fluoride (the stuff that's added, plus the stuff that gets in unintentionally), has said that it will review its current limit of 4.0 milligrams per liter. EPA didn't provide a new proposed limit, but just announced that it may revise its current recommendations.

"This is definitely a difficult issue," says Emily Wurth, water program director at the nonprofit Food and Water Watch. "There's been research that supports the use of water fluoridation for preventing dental cavities, but there is a growing body of research suggesting there are some concerns about its use."

THE DETAILS: Decisions about fluoridating local water supplies are left up to local or state governments, and according to Centers for Disease Control and Prevention (CDC) statistics from 2008 (the most recent data available), 64 percent of Americans drink intentionally fluoridated water. But municipal treatment isn't the only way we're exposed to fluoride. A growing number of personal-care products, pesticides, and other environmental sources are exposing people to more fluoride than they were being exposed to back in the 1940s, when water was first fluoridated. That's why HHS is proposing new lower limits and the EPA is considering reducing its maximum contaminant level for water.

A naturally occurring element, fluoride gets into water by way of eroding soil and rock, and it's a pollutant emitted by aluminum plants, brick factories, and a variety of other industries. There are also fluoridated toothpastes, mouthwashes, and all the treatments at the dentist office that expose us to still more; and then there's fluorine, the chemical element that forms fluoride. It's used in pesticides, nonstick and stain-repellent finishes like Teflon, and in the grease-resistant linings on fast-food wrappers and microwave popcorn bags. We're exposed to these fluorine-based chemicals through food and household dust.

There are clear health problems related to fluorine-based chemicals, including infertility in both men and women, ADHD, thyroid problems, and even high cholesterol. But the science on the safety of fluoride (a salt formed by fluorine) is less definitive, though some public health officials are starting to rethink the conventional wisdom supporting it. In 2006, the EPA commissioned a review of the literature on its safety by the National Research Council, a part of the National Academies of Science, and those researchers concluded that the EPA's current limit of fluoride in drinking water is too high. They found that 10 percent of children who are exposed to levels of fluoride at the EPA's current limit of 4.0 milligrams per liter of water have severe enamel fluorosis, an irreversible condition that results in discoloration, enamel loss, and pitting of the teeth. In their report, the authors called the condition "a toxic effect" that can damage underlying dental tissues, cause bacteria to become trapped in the enamel, and actually increase the risk of cavities—the very problems fluoridated water is supposed to correct.

This past November, the CDC released a report finding that enamel fluorosis has increased substantially over the past 20 years. From 1986 to 2004, the condition increased in children ages 12 to 15 from 22.6 percent to 41 percent. Moderate to severe forms of the disorder increased in that same age group from 1.3 percent to 3.6 percent, a nearly threefold increase.

The authors also concluded that, in adults, prolonged exposure to fluoride at levels deemed safe by the EPA can weaken bones and lead to an increased risk of fracture. They also said that it can lead to something called skeletal fluorosis, a condition characterized by joint stiffness and pain and, in severe stages, impaired mobility. However, the authors did say that, despite the fluoride in our drinking water, the condition is still relatively rare in the U.S.

WHAT IT MEANS: Wurth says that the conversations that will be started by the HHS's and EPA's recent announcement will help clarify some of the scientific uncertainty regarding fluoride's safety. "We need to do as much research as possible to get down to the science of how this practice affects the public and make sure that any potential benefits and potential negative effects are documented," she says. Although the EPA didn't make any promises to lower its maximum limit, she's hopeful that the agency will do so, and do it relatively quickly. "It's good that a lot of questions are being asked about why this practice started," she adds. "Now it just needs to be carefully researched so the government can ensure that the public is being protected."

If you're concerned about excessive fluoride exposure, there are ways to cut down on how much you ingest:

- **Buy a filter.** Quite a few different water filters are certified to remove fluoride—and many are not. Find a filter that's certified to remove fluoride at www.nsf.org/Certified/dwtu.

- **Find fluoride-free toothpaste.** The Environmental Working Group gives fluoride as an ingredient in oral-care products a hazard rating of 9 out of a possible 10, due to a range of animal and occupational setting studies linking it to neurotoxicity, developmental problems, and endocrine-system interference. If you want to avoid it in personal-care products, you can find fluoride-free toothpastes and mouth rinses in their [Skin Deep Cosmetics Database](#). If you're worried about cavities, practice good [oral hygiene](#) and ask your dentist about iodine treatments. Studies have found that iodine is highly effective at preventing cavities , and it's difficult to get too much iodine unless you're taking large doses every day.

- **Don't switch to bottled water!** Wurth notes that bottled water is likely to contain fluoride, so if you're trying to avoid it in your drinking water, going the bottled route won't help. Past studies by the Environmental Working Group have shown that 50 percent of bottled water comes from municipal water supplies that are quite possibly fluoridated, and some brands even add their own fluoride for dental health reasons. "It's much more important that the government do its job to make sure our public drinking-water systems are as safe as they can be," she says.

- **Comment.** If you agree or disagree with the proposed lower limits on fluoride, you can leave a public comment with HHS or EPA. HHS is expected to make a decision on the new limit within a few months. Send your comments via email to the HHS via CWFcomments@cdc.gov or to the EPA at FluorideScience@epa.gov.