

# Fluoride Isn't the Answer, Sugar Is the Problem

By Dr. Mercola

Dental caries are caused by demineralization of your teeth (enamel and dentin) by the acids formed during the bacterial fermentation of dietary sugars.

Demineralization is countered by the deposit of minerals from your saliva, or remineralization, which is a slow process, and enthusiasts report that fluoride prevents dental caries by enhancing this mineralization.

However, dental caries, i.e. cavities, are not caused by a lack of fluoride, which is a cumulative poison that has little, if any, impact on dental health. Despite this, government organizations, including the American Dental Association, continue to promote water fluoridation as a key part of dental health... when lowering sugar intake would be far more useful.

## The More Sugar You Eat, the Greater Your Risk of Cavities Becomes: New Study

New research by Aubrey Sheiham, Emeritus Professor of Dental Public Health, Department of Epidemiology & Public Health, University College London, shows there is a “robust” log-linear relationship of dental caries to sugar intakes.<sup>1</sup>

What this means is that your risk of cavities increases the more sugar you eat – and this was found to be true *despite* the use of fluoride.

The World Health Organization (WHO) recommends that sugar intake represent no more than 10 percent of your daily energy intake in order to protect against dental caries in children and adults.

But the new study found that, in order to minimize your risk of cavities, sugar should make up no more than 3 percent of your total energy intake (with 5 percent noted as a “pragmatic” or more realistic goal).

Again, the relationship between sugar intake and risk of cavities remained even in areas where fluoride was widely used. In fact, the researchers noted that adults aged 65 and older living in areas with fluoridated water *and* in areas where most people use fluoridated toothpaste accounted for nearly half of all tooth surfaces affected by cavities.

Yet, the prevalence of cavities was markedly reduced in adults whose diets were made up of 3 percent sugar or less. In an interview with *Medical Research*, Professor Sheiham explained that current approaches are missing the boat when it comes to preventing cavities:<sup>2</sup>

*“Current approaches to controlling dental caries are failing to prevent high levels of caries in adults in all countries and this relates to the current high level of sugar intake across the globe.*

*Thus, for multiple reasons, including obesity and diabetes prevention, we need to adopt a new and radical policy of progressive sugar reduction.*

*The progressive accumulation of dental caries, despite widespread use of fluoride, shows that sugars intakes should be <3% to minimize the disability and cost of dental caries in a population.”*

## **Sugar Is the Primary Cause of Dental Decay**

By far, excess dietary sugar is the most significant factor in driving dental decay. WHO and most dental experts agree upon this fact.<sup>3</sup> The massive consumption of sugar in the Western diet, particularly [fructose](#) in [high fructose corn syrup](#), fuels the fire of tooth decay. Some of the true primary causes of tooth decay cited in the literature include:

- Consistent use of [refined sugar](#), sugary soft drinks, and processed foods in general
- Children going to bed with a bottle of sweetened drink in their mouth, or sucking at will from such a bottle during the day
- Poor dental hygiene and poor access to and utilization of dental health services, usually related to socioeconomic status
- Mineral deficiencies, like [magnesium](#), which can weaken bones and teeth<sup>4</sup>
- [Vitamin K2](#) is crucial for bone mineralization and unless one has a regular source of healthy non-pasteurized fermented foods in their diet, there is a good chance they will be deficient in this important nutrient.
- More than 600 medications promote tooth decay by inhibiting saliva

While the American Dental Association does recommend limiting sugar to reduce your cavity risk, the message takes a backseat to their promotion of fluoride. For years, the ADA has warned that if you stop fluoridating your water, your rates of tooth decay will increase.

Indeed, if fluoride were effective in preventing caries, you would expect to see an increase in tooth decay when fluoridation is stopped. Yet, this is NOT what we see...

## **Optimize Your Vitamin D Levels to Lower Your Risk of Cavities**

The enamel on your teeth is made up of primarily calcium and phosphate. [Vitamin D](#) is important for increasing your body's absorption of these substances, which may help fight demineralization. Further, vitamin D receptors can be found on both immune system cells and cells in your teeth. According to the Vitamin D Council:<sup>5</sup>

*“Vitamin D can bind to these receptors and increase the amount of good antimicrobial proteins in your body which help to fight the bacteria that cause dental caries. In addition, the cells in the teeth that form dentin and enamel contain vitamin D receptors, meaning that vitamin D may play a role in their functioning.”*

Several studies have shown a link between low vitamin D levels and cavities, including:

- Children with early childhood caries tend to have lower vitamin D levels than healthy children<sup>6</sup>
- Vitamin D supplementation appears to be useful for preventing dental caries in adults<sup>7</sup>
- Dental caries has been shown to be [inversely related to total sun exposure](#), with those living in sunnier areas (with presumably higher vitamin D levels) having about half as many cavities as those living in less sunny areas

As for HOW to optimize your vitamin D levels, I firmly believe that appropriate sun exposure is the best way. There's a handy smartphone app called DMinder ([dminder.info](http://dminder.info)) that will tell you how much UV radiation you're getting and how many IUs of vitamin D you're making based on your local weather conditions (reported from the weather service) and other individual parameters such as your skin tone and age.

It will also tell you when to get *out* of the sun, to protect yourself from sunburn. If you can't get enough sunshine, then a tanning bed would be your next best option, followed by vitamin D3 supplementation. It's important to [get your levels tested regularly](#) to be sure they're in the optimal range.

I recommend getting your vitamin D level tested at least once per year, when your levels are likely to be at its lowest. For people in the northern hemisphere, this would be around January or February. Based on the evaluation of healthy populations that get plenty of natural sun exposure, the optimal range for general health appears to be somewhere between 50 and 70 ng/ml.

## VITAMIN D LEVELS 25 HYDROXY D

Deficient	Optimal	Treat Cancer and Heart Disease	Excess
< 50 ng/ml	50-70 ng/ml	70-100 ng/ml	> 100 ng/ml

Multiply ng/ml by 2.5 to convert to nmol/litre

[Sources](#)

### Drinking Fluoridated Water Doesn't Prevent Cavities

According to WHO data, the US, which fluoridates about two-thirds of public water supplies, actually has *higher* rates of tooth decay than many countries that do not fluoridate their water, including Denmark, the Netherlands, Belgium, and Sweden.<sup>8</sup> The following demographic studies and fluoridation trends make it clear that fluoridation has very little to do with whether or not you develop cavities.

- In Japan, fluoridation has been virtually nonexistent since the 1970s, yet rates of dental caries have declined since that time.<sup>9</sup>
- In the town of Tiel in the Netherlands, water fluoridation was discontinued in 1973, and by 1993, rates of dental caries had declined.<sup>10</sup>
- In the town of Kuopio, Finland, water fluoridation was stopped after 1992. In 1995 and 1998, dental caries had either decreased or stayed the same.<sup>11</sup>
- In two towns in former East Germany, a significant fall in the prevalence of dental caries was seen in the 20 years following cessation of water fluoridation.<sup>12</sup>
- In Canada, "the prevalence of caries decreased over time in the fluoridation-ended community while remaining unchanged in the fluoridated community."<sup>13</sup>

It's widely accepted now that what little benefit fluoride may have is *topical*, not systemic, making the practice of water fluoridation all the more fruitless. But even topical fluoride, such as fluoride toothpaste, is questionable at best.

A groundbreaking study published in the journal *Langmuir* uncovered that the fluorapatite layer formed on your teeth from fluoride is a mere six nanometers thick.<sup>14</sup> You'd need 10,000 of these layers to get the width of a strand of your hair...

It's unknown whether this ultra-thin layer can actually protect your enamel and provide any discernible benefit, considering the fact that it is quickly eliminated by simple chewing.

## Oral Fluoride Won't Help Dental Decay But Is Linked to Brain Damage

Many people are still unaware that accumulating research shows adding fluoride to water supplies may be damaging to your health, including that of your brain. Earlier this year, researchers from Harvard School of Public Health and Icahn School of Medicine at Mount Sinai added fluoride to a list of 11 chemicals known to harm brain development in children.<sup>15</sup> One of the study's authors has previously said:<sup>16</sup>

*"Fluoride seems to fit in with lead, mercury, and other poisons that cause chemical brain drain... The effect of each toxicant may seem small, but the combined damage on a population scale can be serious, especially because the brain power of the next generation is crucial to all of us."*

There are 37 human studies linking moderately high fluoride exposures with reduced intelligence, 12 human studies linking fluoride with neurobehavioral deficits, and three human studies linking fluoride exposure with impaired fetal brain development,<sup>17</sup> the idea of continuing to fluoridate drinking water is a shockingly bad idea. Approximately 100 animal studies have also linked fluoride to brain damage. This includes such effects as:<sup>18</sup>

Reduction in nicotinic acetylcholine receptors	Damage to the hippocampus	Formation of beta-amyloid plaques (the classic brain abnormality in Alzheimer's disease)
Reduction in lipid content	Damage to the	Exacerbation of lesions induced by iodine

	Purkinje cells	deficiency
Impaired antioxidant defense systems	Increased uptake of aluminum	Accumulation of fluoride in the pineal gland

One particularly striking animal study published in 1995 showed that fluoride ingestion had a profound influence on the animals' brains and altered behavior. Pregnant rats given fluoride produced hyperactive offspring. And animals given fluoride after birth became apathetic, lethargic "couch potatoes."<sup>19</sup> And that's not all. Fluoride toxicity is also associated with the wide-ranging problems listed below.

Increases lead absorption	Disrupts collagen synthesis	Increases manganese absorption, which is also linked to lower IQ in children	Crippling skeletal fluorosis and <a href="#">bone fractures</a>
Genetic damage and cell death	Increased tumor and cancer growth	Disrupts immune system	Inhibits antibody production
Brain damage and lowered IQ	Dementia	Arthritis	Severe eye problems, including <a href="#">blindness</a>
Impaired <a href="#">thyroid</a> function	Bone cancer (osteosarcoma)	Inactivates 62 enzymes	Muscle disorders

### ADA-Approved Toothpaste Is Ludicrous

The American Dental Association offers its "Seal of Acceptance" to more than 300 products, which they say have passed their "rigorous screening process." The ADA boasts that their ADA seal is "the gold standard when it comes to evaluating the safety and efficacy of dental products,"<sup>20</sup> but don't fall for this self-serving propaganda. Earlier this month, for instance, a Dallas dental hygienist reported finding tiny bits of plastic, which Crest calls "microbeads," in patients' teeth.

The bits, which are made of polyethylene plastic, were found in Crest microbead toothpaste and were getting trapped under patients' gums. This gives food and bacteria an entrance to your gum line, which could actually *cause* gum disease.<sup>21</sup> Procter & Gamble, which makes Crest, recently reported they would stop using the "microbeads," but many other risks remain, not only in Crest but in many other top-selling "ADA-approved" toothpastes. Colgate Total, for instance, is the only [triclosan-containing toothpaste](#) sold in the US. Research has shown that triclosan can alter hormone regulation and may interfere with fetal development.

Animal studies have also raised concerns about its ability to affect fertility, and bacteria exposed to triclosan may also become [resistant to antibiotics](#). Even an increased cancer risk has been

suggested. And, yes, despite its content of triclosan (one of the most prevalent endocrine-disrupting chemicals on the market), Colgate Total has earned the ADA's Seal of Acceptance (proof of why this seal is virtually useless in gauging a quality toothpaste). Many ADA-approved toothpastes also contain surfactants like sodium laurel sulfate, sodium laureth sulfate (SLS), or sodium lauryl ether sulfate (SLES).

Surfactants are chemicals responsible for the foaming action of the toothpaste. But these chemicals can also interfere with the functioning of your taste buds, and may suppress taste receptors responsible for tasting sweet notes. This is thought to be the reason why everything tastes so bad right after you've brushed your teeth. So, choosing a toothpaste that does not contain SLS or SLES will allow you to taste your food properly after brushing your teeth. (As an aside, this may also be part of why [coconut oil](#) works so well for oral hygiene, as it helps maintain a more natural balance of lipids on your tongue, while still having potent antimicrobial properties.)

## A Fluoride-Free Plan for Reducing Your Risk of Cavities and Improving Dental Health

Water fluoridation is ineffective and may offer no benefit at all for your teeth, not to mention placing your overall health in jeopardy. There's no reason to risk it, especially since *sugar* is one of the main factors in your dental health. Here are my basic guidelines for optimizing your dental health, safely and naturally, without the use of fluoride:

- Avoid fluoridated water and fluoridated toothpaste.
- Minimize your sugar and grain consumption. Keep your fructose intake to less than 25 grams per day. Avoid processed foods.
- Make sure you consume a diet rich in fresh, whole foods, fermented vegetables, and grass-fed meats, which will ensure you're getting plenty of the minerals that are so important for strong bones and teeth.
- Practice good [oral hygiene](#) and get regular cleanings from a mercury-free natural dentist.
- Consider [oil pulling with coconut oil](#), which is a powerful inhibitor of a large variety of pathogenic organisms.
- Consume high-quality non-pasteurized fermented foods that are high in vitamin K2 to help mineralize your teeth properly.

## Join the Fight to Get Fluoride Out of Drinking Water

There's no doubt about it: *fluoride should not be ingested*. At least when it comes to topical application, you have a choice. You can easily buy fluoride-free toothpaste and mouthwash. But you're stuck with whatever your community puts in your water, and it's very difficult to filter out of your water once it's added. Many do not have the resources or the knowledge to do so.

The only real solution is to stop the archaic practice of water fluoridation in the first place. Fortunately, the Fluoride Action Network has a game plan to END water fluoridation, both in the United States and Canada. Clean, pure water is a prerequisite to optimal health. Industrial

chemicals, drugs and other toxic additives really have no place in our water supplies. So, please, support the anti-fluoride movement by making a donation to the Fluoride Action Network today.