

## REMOVING FLUORIDE FROM OUR WATER SUPPLY: A Few More Things You Should Know

Recently the Spring Hill Board of Aldermen decided to remove fluoride from our city water supply. All of the fluoride was expected to be out of the water by November 1, 2011. Every citizen of Spring Hill should have received by now 2 (two) notifications of this decision. The first was a posting on the October water bills. The second notification was a pamphlet that was entitled, "Removing fluoride from our water supply, what you should know." I received mine at my office during the week of November 12-16, 2011.

The purpose of this article is not to debate the decision all over again. Nor is it my intent to be derogatory about the pamphlet. In fact, the mailer is pretty well prepared and it is factual. However, I have practiced dentistry in a variety of situations, including a charity clinic and a number of nursing home facilities as well as private practice for over 28 (twenty-eight) years. There are some aspects to the fluoridation issue that I think are worthy of your consideration. These concerns can't be given their due in a direct mail piece or even in this article. I do hope to raise your awareness to a level that will cause you to ask some questions of one of our local dentists. If you do not have a dentist, my office will be happy to talk with you.

First of all, it is well documented that fluoride reduces tooth decay. It is also true that we have a lot of sources of fluoride in addition to that found in fluoridated water. However, it is believed that even with all of these available sources, fluoridated water supplies still reduce tooth decay by 20-45%. Stay with me for a bit and I'll explore with you why that would be so.

Tooth decay is caused by bacteria (plaque) fermenting sugars, a process that produces acid. It is the acid that demineralizes the tooth and ultimately causes decay. One way fluoride helps to reduce tooth decay is by replacing the lost minerals. The pamphlet you received listed some sources of fluoride. Yes, all of these sources are available and they are good for remineralizing teeth. The point is these are all topical sources of fluoride which help for as long as they are in direct contact with the teeth. When fluoride is consumed through the water source, the fluoride gets incorporated into the saliva, which in turn provides a topical fluoride bath for the teeth 24 hours a day, 7 (seven) days a week. You cannot replace that benefit any other way.

There are other ways that fluoride reduces tooth decay, but only when the fluoride is ingested on a constant basis. In addition to remineralizing teeth, fluoride also seems to help reduce the amount of plaque that causes the problem in the first place. Also, fluoride that is ingested is absorbed into the inner layers of tooth structure, providing some resistance to the spread of decay through the tooth. Optimally fluoridated water is by far the best way to provide this protection. The only other option here is prescription fluoride tablets. Tennessee state law requires that you be an active patient of record to receive a prescription from any health care provider.

So, not only does fluoride reduce the number of teeth that decay, it also helps to slow down the decay process, providing a better likelihood that the decay can be found while the decay is contained in the enamel (the outer layer) of the tooth. The second layer of the tooth is dentin which is much softer than enamel and decays much faster and some pain is usually felt once the decay reaches this part of the tooth. Once decay presses completely through the dentin layer, then the nerve of the tooth will be affected, resulting in a root canal or loss of the tooth. This process occurs at different rates for different individuals. However, the process definitely progresses faster without fluoride. This leads to a real concern that the dental profession has been noticing for a few years now.

Many in our society were already turning to bottled water as their primary water source, even before the fluoride was removed. Words of caution are in order. Many bottled waters do not contain fluoride. To make matters worse, as far as tooth decay is concerned, some bottled waters are very acidic. Some are almost as acidic as soda pop. Recall that earlier I said it is acid that causes tooth decay in the first place. Therefore, if you consume one of these non-fluoridated, highly acidic bottled beverages, you not only lose the protection of the fluoride, you are also consuming more of what you least need, more acid. This is most critical in children at the age of tooth formation. It is also very critical for older adults whose immune system is compromised and may have lost some of the manual dexterity needed to properly brush and floss their teeth. It is also of tremendous importance to those individuals who have medical conditions or must take medication that dries their mouth. The loss of the natural flow of saliva greatly increases tooth decay. (A separate article would be necessary to address that issue.) Suffice it to say here, that if you have dry mouth be sure to ask your dentist about the best solutions for that condition as well as the best ways to reduce tooth decay.

There is one other issue that I feel needs to be addressed in regards to bottled water. Let me encourage you to go online and google Bottled Water and Bacteria. You will find that the bacterial count for some bottled waters is significantly higher than tap water.

So, what is one to do? First, read the labels or go online or call your dentist. Research the source of the water you and your family consumes. You have a lot of choices and they are not all equal. Secondly, keep in mind that the decay process starts with plaque. If you can control plaque, you can control 80% of dental diseases. BRUSH AND FLOSS! BRUSH AND FLOSS! There are many excellent products on the market to aid you in your oral hygiene such as mechanical toothbrushes and oral irrigators. But once again they are not all created equal. Ask your dentist or hygienist or go to our website, ([doctorgdds.com](http://doctorgdds.com)) for recommendations. Finally, this is going to sound self-serving, but there is no other way to say it. If you are not consuming fluoridated water or taking fluoride supplements you are at a higher risk for tooth decay and it is all the more important to have those regular dental visits.