

Mouth Matters

Dorion on Dentistry



Fluoride: Too Much of a Good Thing?

In 1945 Brantford was the first city in Canada to add fluoride to its drinking water as a public health measure to decrease dental cavities. It was quickly discovered that this measure had a significant impact on reducing the number of cavities in the population, especially in children. Today it is estimated that over 350 million people around the world are drinking water that has fluoride artificially added.

While municipal water fluoridation was declared one of the most significant achievements in public health of the last century by the US Centers for Disease Control in 1999, there has been increasing concern in recent years about the potential of toxicity from too much fluoride.

Fluoride is found naturally in the environment especially in deep ground water and in sea water. In fact, some communities have so much naturally occurring fluoride in their water supply that they must take measures to remove it. The optimal level of fluoride in drinking water has traditionally

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been considered to be about 1 part per million.

Because we are exposed to fluoride from numerous other sources besides water, many people are now getting too much of a good thing.

One source of excess fluoride intake is swallowing toothpaste. This is a common habit of children under the age of six and for this reason it is recommended that very young children use fluoride free toothpaste.

Other sources of fluoride in our environment include air pollution from coal burning and other industrial processes. It is in our food supply through the use of fluoride containing agricultural products including fertilizers and pesticides. Canned goods, sodas, fruit juices, some medications and even bottled water can contain high levels of fluoride. Since boiling concentrates the amount of fluoride in water it can be found in high levels in baby formula.

The first and most obvious sign of excessive fluoride intake is a condition known as dental fluorosis. Fluorosis is a commonly seen condition in children. Mild cases show up as white spots on the teeth, while in more severe cases the teeth can be mottled with brown or even black dis-

coloration and sometimes deformed, pitted enamel.

Dentists today are devoting more and more of their treatment time to dental fluorosis, and doctors are seeing increasing numbers of patients suffering from what may be skeletal and/or systemic fluorosis since our bones concentrate fluoride just like our teeth.

Skeletal fluorosis involves abnormal mineralization of bone through the disruption of normal activity of the bone cells. For this reason, skeletal fluorosis often mimics osteoarthritis and/or osteoporosis in relatively young adults.

Dental and systemic fluorosis is steeply on the rise in the Western World and is recognized as a major threat to public and ecosystem health in the developing world. Many communities around the world are now reviewing their water fluoridation practices and several have taken steps to reduce or eliminate fluoride in the public water supply.

The important thing to remember is that while low levels of fluoride are still considered a health benefit, it is very difficult to control how much we ultimately take in because everyone consumes fluoride containing products including drinking water at different rates. In our office we still recommend topical fluoride for those patients at higher risk for cavities since topical application does not cause systemic problems like fluorosis as long as it is not swallowed.

If you want to reduce fluoride intake in your home, especially for your children, you should be aware of the following facts. Most residential water filters do not remove fluoride. Distilled water has no fluoride and reverse osmosis removes most of it. Read the labels on bottled water to see how it has been processed. Organically grown produce usually contains lower levels of fluoride than produce from non organic producers. Canned products especially tinned fish, often contain fluoride at levels significantly higher than 1 part per million. Limit your consumption of mechanically deboned chicken, including chicken nuggets, canned chicken, and baby food since traces of fluoride (from bones) remain from the deboning process. Avoid overheating teflon pans while cooking because some of the teflon (a fluorine compound) can be released into the air.

Yours for better dental health,

Rae Dorion, DDS

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