At the end of last year, with the hope of improving dental health, Southern California began to add fluoride to its water supplies—a procedure first adopted 68 years ago in Grand Rapids, Michigan. Surprisingly, even though fluoride is now added to most public drinking water and found in the vast majority of toothpaste, few of us actually know what it is.

For promoters of the practice, that’s probably a good thing. Fluoride, as it turns out, is one of the most toxic substances known to man. According to former EPA scientist Dr. Robert Carton, “Fluoride is somewhat less toxic than arsenic and more toxic than lead.” Which is interesting since fluoridated water contains on average 1 mg/liter of fluoride—even though the EPA considers any water containing more than .015 mg/liter of either lead or arsenic to be in excess of its maximum contaminant level.
In its elemental form, fluoride is found in minerals in the earth’s crust, such as apatite, and cryolite. Apatite, used in the manufacture of phosphate fertilizers, is the primary source of the fluoride used in water fluoridation programs. The United States Department of Health and Human Services states: “In the manufacture of phosphate fertilizer ... fluorides...are released as toxic pollutants.” That is unless these toxic pollutants are recovered and dumped into our children’s drinking water.

Additionally, fluoride is widely used as an insecticide. It kills bugs while at the same time giving them great teeth. Fluoride is in fact so toxic, your tube of toothpaste contains the warning, “If more than used for brushing is accidentally swallowed, get medical help or contact a Poison Control Center right away.”

Fluoride and fluoridation are responsible for a condition called dental fluorosis, which, in very mild cases, causes white and yellow blotches on our children’s developing teeth. The condition is permanent and can only be masked by expensive cosmetic surgery. Fluorosis is on the rise afflicting 20 to 75% of children living in fluoridated areas.

Dentists often blame swallowed toothpaste for the problem because it allows them to use the “fluoride is only a problem when used improperly” excuse. However, current levels of dietary fluoride are more than enough to cause the condition without any help from toothpaste.

These same dentists assure us the discoloration effecting our children’s teeth is “only cosmetic” (while at the same time marketing their whitening products and services by reminding us how important a beautiful smile is) and that the condition is mild or very mild—which is meaningless when one considers that moderate to severe cases of fluorosis. When waters containing naturally high levels of fluoride are consumed, victims are left with crumbling, dark brown remnants of teeth.

The problem has gotten so bad the ADA, by far fluoride’s biggest supporter, recently had to issue a warning about allowing babies to drink fluoridated tap water because of the fluorosis
risk. Think about that. Due to the actions of the government and dental authorities it is unsafe for our babies to drink their own tap water.

But don’t we have to take a risk? After all we were told, “Most dentists agree that adding fluoride has drastically reduced tooth decay.” Perhaps, if they were right. But the evidence supporting the efficacy of fluoride is exceedingly questionable and has been widely criticized within the mainstream scientific community.

Articles appearing in the journals Nature and Perspectives in Biology and Medicine have both agreed fluoride was not responsible for the large drop in tooth decay that began in the mid part of the 20th century, which coincided with the post-World War II increase in teeth brushing.

Furthermore, a 1999 investigation performed at the behest of the Ontario Ministry of Health reported that, at that time, the effects of fluoridation were often both statistically and clinically insignificant and, when examining the four major studies initiated the 1940s and whose results led to widespread fluoridation, found them to have been “crude and subject to a number of methodological flaws.” So numerous were these flaws that Sutton in 1959 was able to write an entire book about them.

Finally in 2000, the British Medical Journal published a study by McDonagh entitled “Systematic Review of Water Fluoridation,” which examined 214 studies involving fluoridation and found none of them to have been of good quality.

Another important fact to be aware of is that today, when studies measure fluoride efficacy, they generally employ a measure called the DMFS index, which tabulates decayed, missing and filled tooth surfaces (each of us, if we have all our teeth, has 128 surfaces). Using the DMFS index has the effect of creating percentage variations that give the illusion of substantial benefits where none exist. For example, a widely cited National Institute of Dental Research study released in 1990 attributed an 18–25% carries reduction—depending on how the data was interpreted—to fluoridation. Yet when one considers the variation in DMFS, 2.79 vs. 3.39, from which those numbers were derived, the benefit is less than 1/2 of one tooth surface per child. And even that data is suspect because the aforementioned study, like almost all fluoride studies, did not take into account the wellknown fact that fluoride consumption, even in “optimal” amounts, can delay tooth eruption long enough to confound fluoridation studies (a delayed eruption lessens the time a tooth is vulnerable to decay and, since studies compare children of the same age, fluoridated children may actually have “younger” teeth than their unfluoridated
Unfortunately, fluoridated water is not the only source of exposure. Toothpaste adds substantially to the burden. It is very often swallowed, especially by vulnerable, younger children. And even when used by children with good control of swallowing, it adds as much fluoride to the “diet” as do all other sources—including fluoridated water.

But can we afford to give up fluoridated toothpaste? Surely that works. After all we’ve seen the commercials telling us it’s “clinically proven to fight cavities.” But what does clinically proven really mean?

When “clinically proven” benefits have been found, they generally fall within the 15–30% range, which is large enough to be called “significant.” However, because these percentages are expressed in terms of the DMFS index, those “benefits” are, as in the previously cited NIDR fluoridation study, again in the half of one tooth surface range—hardly anything to crow about.

Then one must consider the studies from which these numbers are derived. One particularly revealing study, conducted in 1962 and funded by Proctor and Gamble, maker of fluoridated Crest, basically gave out free toothpaste—some fluoridated and some not—to kids and told them to use it, with or without supervision and however they pleased, at home.

Not surprisingly, the study found that the fluoride toothpaste was protective. It also found the kids were brushing less than once a day and for about 40 seconds at a time—a less than optimal regimen to say the least. And remember, they were using toothbrushes of the 1960s, which are hardly comparable to those of today.

In regard to fluoride consumption, there are two other items about which parents need to be particularly concerned. The first is white grape juice and the second mechanically separated chicken which is found in baby food, chicken sticks and chicken nuggets. Both contain high levels of fluoride—the former due to pesticides, the later due to fluoride-containing bone dust released during the separation process.
When fluoride was introduced into the water supply, the 1 ppm level was, in general, deemed optimal. It provided a supposed anticaries effect without creating an excessively high risk of fluorosis. But the emergence of additional sources of fluoride has exposed children to substantially more than the optimal amount, creating an epidemic of dental fluorosis. The government’s response has been to do nothing but to expand fluoridation while celebrating its imagined virtues.

The increased consumption of fluoride among children has been matched by an increase in adult consumption. A 2000 study published in the British Medical Journal found adult fluoride intake varies from between 1.58 to 6.60 mg/day. Much of this fluoride is stored in bone and can cause a condition called skeletal fluorosis. According to the NRC and others, consumption of as little as 10 mg of fluoride per day over a ten-year period may cause a crippling form of the disease. That's an amount under the highest consumption levels reported, but one must remember these high levels are being consumed over a lifetime, not a ten-year period. Additionally, if 10 mg over 10 years can cause the disease's crippling form, how much fluoride over what period of time causes a less severe manifestation? And what do we do after our 10 years are up? Move to another country. The NRC report does reassure us that, “crippling skeletal fluorosis in the United States has been rare and not a public health problem.” Which is reassuring until we realize the symptoms of skeletal fluorosis are indistinguishable from those of arthritis—a disease whose prevalence grows day by day.

If fluoride sounds like something you’d like to avoid, here are my suggestions.

**Use bottled water for cooking and drinking.** I prefer brands that remove fluoride using the reverse-osmosis filtering process. Remember, fluoride exists in the earth as a natural element, and therefore may be present, at undesirable levels, in some bottled waters.

**Switch to a non-fluoridated toothpaste.** The kids might not like the idea of giving up Tweety Bird™, Barbie™ and the artificial sweeteners (although some non-fluoridated toothpastes now replicate the taste of the fluoridated variety) but they’ll get used to it. Just be firm when you make the change. If they resist brushing, inform them, in a pleasant, non-threatening way that you’ll no longer be able to provide any treats until they see the error of their ways.

**If you’re not ready to give up fluoride toothpaste, at least restrict the amount your**
children use to the recommended pea-sized amount and make sure they don’t swallow it. Additionally keep an eye on them when they brush: at least twice a day and especially before bed. If we don’t see them brush, there’s no guarantee they’re brushing—even if they say they are.

Choose health over chemicals. If you have the former you won’t need the latter. I had a mouthful of cavities growing up in optimally fluoridated—and sugared—NY, while my daughter, fluoride-free for the last five years and living a healthier lifestyle, is, knock on wood, cavity-free at age twelve.