

## SHOULD WE FLOURIDATE HAWAII'S PUBLIC WATER?

For 15 of the 20 years I have been in dental practice, I was an advocate of fluoridation of our water. My awareness of alarming studies within the last few years has prompted me to take the opposite viewpoint in spite of the fact that the American Dental Association endorses fluoridation.

To begin with, it should be made very clear, at the outset, that an individual in America has a right to select his/her dentist/physician; and that same right continues so that he/she can reject or accept the recommended treatment or prescription.

It appears that some of the general public and our political leaders are unaware of the fact that fluoride is a toxic chemical. The burden is on those who want to fluoridate the public water supply to disprove this fact.

The companies that manufacture the fluoride chemicals used to fluoridate water are required to supply a Material Safety Data Sheet (MSDS), which are detailed information bulletins of any product that contains a chemical deemed to be hazardous. These chemicals are considered very toxic and corrosive, even in a diluted form such as in toothpaste. The boxes of fluoride toothpaste contain this warning from the FDA- "If you accidentally swallow more than used for brushing, seek professional help or contact a poison control center immediately". Between 1988 and 1994, the number of fluoride poisoning incidences reported to the U.S. poison control centers averaged 10,072 per year. Of these, on average, 41 required treatment of symptoms and 7 ended up with irreversible symptoms while four were fatal. This data does not include injury from public water spills or incidents in dental offices.

Review of current literature as well as the research of some of the countries' top experts on fluoride unveils a serious concern over patients receiving too much fluoride. Their findings have been published in *The Journal of the American Dental Association* (a pro-fluoride, peer review journal) in the December 1995, July 1996, and November 1999 issues.

*The following are some of their findings in this recent, comprehensive study.*

1. The optimal level of safe fluoride intake has never been determined scientifically and has been used only in general terms.
2. Regional studies in Canada and the U.S. have found the incidence of mild fluorosis to be in the range of 5 to 65 percent. When fluoride was first introduced to public water sources, 10 percent of the population having mild fluorosis was considered acceptable. Mild fluorosis is a visible sign on teeth, that the person is receiving more fluoride than desirable. Opaque white spots are indications of this condition.
3. The role of systemic fluoride is believed by some experts to be less important than previously believed. (i.e. surface to surface fluoride is much more effective).
4. The authors studied 532 juices and juice drinks and found the fluoride ion ranged from 0.02 to 2.80 parts per million. They conclude that children's ingestion of fluoride from these drinks can be substantial and a determining factor in developing dental fluorosis.

5. It is very difficult to predict the accumulated amount of fluoride a patient may receive from a combination of fluoridated water, fluoride supplements, in-office topical fluoride application, and ingested fluoride from toothpaste.
6. The majority of children have much less decay than in the past. (A small percent of the population of children have most of the decay. I agree with the recommendation of an Iowa research group that states, "that supplements be considered a targeted preventive regimen instead of being used routinely for the general population of all children living in non fluoridated areas".

*For those who say mild-moderate fluorosis of the population is insignificant, I would say:*

- a. It is physical evidence to show that people today are getting more than the desired amount of fluoride and certainly more than originators 50 years ago had predicted the population should receive.
- b. Many patients are bothered by white, opaque spots and will spend out-of-pocket money (non-insurance covered) to correct these defects.

*The following concerns by everyone from the general public to scientists warrant consideration.*

1. Pro-fluoridationists claim there is no scientific information to warrant concern. A review of scientific literature tells another story. In 1997, the town of Natick, Massachusetts put together a panel of non-biased experts to decide whether or not they should add fluoride to its water. Chairman Norman Mancuso, Ph.D., had been a chemical engineer, a post doctoral fellow at MIT and a project scientist at NASA on the Apollo program. The other four panelists all had advanced degrees and extensive experience in chemical risk assessment. Based on scientific information, they found positive relationships between: a) water fluoridation and increased incidence of hip fractures, b) fluoride and metabolic and enzymatic reactions, c) fluoride and central nervous system afflictions, and d) fluoride and other possible deleterious effects, cancer among them.
2. In April 1998, Chapter 280 of the National Treasury Employees Union, comprised of and representing 1500 scientists, lawyers, engineers and other professional employees at EPA Headquarters in Washington D.C. concluded that "Recent, peer-reviewed toxicity data, when applied to EPA's standard method for controlling risks from toxic chemicals, require an immediate halt to the use of the nation's drinking water reservoirs as a disposal site for the toxic waste of the phosphate fertilizer industry."
3. On June 8, 1993, Frank Pazzari of the FDA confirmed with Assemblyman John Kelly of the New Jersey State Legislature that fluoride supplements for children are classified as unapproved new drugs. In order to be classified as an approved new drug, certain criteria must be met. Among these criteria are studies to demonstrate the safety and effectiveness of these drugs. I have confirmed this in a recent telephone conversation with Mary Jean Fornaro of the FDA.
4. For the majority of people who stand to gain no benefit from fluoridated water, it will cost money to either filter out the fluoride or purchase non-fluoridated water.
5. Many people and scientists feel that artificially adding fluoride to water supplies may not be the smartest method of delivering fluoride to those who desire it. They are rightfully concerned that not only all food and drink (due to the artificial fluoridation of many US cities) but also the environment is also becoming increasingly saturated with fluoride due to industrial waste and pesticide use.

6. Humans make mistakes and machines do malfunction. There are documented instances of both, causing illness and even death.
7. There are concerns about the cost of purchasing machines and chemicals, time to train personnel and maintain the system, and the caustic nature of fluoride that may hasten metal breakdown, not to mention the potential litigation that may result from a spill.
8. For those concerned about lead levels in water, there is evidence that fluoride may increase levels of lead. Such an incident happened in Tacoma, Washington, in 1992.
9. Many will hear testimony from parents that their children were exposed to fluoridated water, and they have no cavities. When we look at studies of large populations, either in the US or Canada, we see that there are, in many instances, as much reduction or sometimes even more reduction in decay in populations NOT exposed to fluoridated water. Also, consider cities that share similar statistics in tooth decay, yet some have non-fluoridated water while others do not. This suggests there are other workable alternatives to reducing juvenile tooth decay without resorting to medicinally altering the most vital public commodity in our communities.
10. It is stated that Hawaii has among the highest decay rates in the nation. Instead of legislating a "one size fits all" remedy, a more prudent step would be to examine the causes of high rates of tooth decay. Among such factors may be diet, home care frequency and effectiveness, visits to the dentist, immune status of the patient, type of toothpaste, motivation and education.
11. Most major developed countries do not fluoridate their water supplies. The Netherlands and West Germany discontinued fluoride treatment of water after many years of experimentation.
12. Many US cities have continued to reject fluoridation, and cities like St. Genevieve, Missouri (quit after 13 years) and Western Nassau County, New York (quit after 23 years) have even reversed their previous decision of acceptance.

The proposed program of putting fluoride in the drinking water seriously compromises citizens' rights to choose and unduly exposes the health of our people to injury. Finally, the program is an inaccurate, costly and overly wasteful way of accomplishing the objective of quality dental care for the youth of our state. "When in doubt, don't" is apropos in this situation. The jury is still out on the safety issue. I urge the decision-makers of our state to approach the dental cavity problem with wisdom.

## TESTIMONIALS

April 27, 1999

Aloha Dr. Doi,  
As you know, I'm from the age when painless dentistry was painless only on the part of the dentist. I stayed away for as long as I could and therefore had even more discomfort before & after my ordeals. However, that has all changed since we discovered you.

I do have to tell you that I really no longer dread visits to your office. Your chairs are comfortable and all procedures you have done on/with me have been, while not totally enjoyable, virtually

without any real pain (that terrible word). Even your injections are not really uncomfortable!

I do especially appreciate you and your staff's care in preparing and maintaining as sterile an atmosphere as possible. You have managed to acquire a most capable and personable staff. My thanks to them too. But I must tell you my latest sessions with you have certainly been well rewarded – this was being “fitted” for a new seven tooth upper partial. From the very first day, which I think was the Tuesday preceding Thanksgiving Day, I have had no discomfort with it! What a joy to be able to chew! Also another truism “...without teeth there can be no chewing, without chewing there can be no nourishment and without nourishment there is no health”.

So again I thank you especially and your staff for being all we could want in oral care.

Sincerely,  
Bernie Bauma