

The Absurdities of Water Fluoridation

By Paul Connett, PhD

Water fluoridation is a peculiarly American phenomenon. It started at a time when asbestos lined our pipes, lead was added to gasoline, PCBs filled our transformers and DDT was deemed so "safe and effective" that officials felt no qualms spraying kids in school classrooms and seated at picnic tables. One by one all these chemicals have been banned, but fluoridation remains untouched.

For over 50 years U.S. government officials have confidently and enthusiastically claimed that fluoridation is "safe and effective." However, they are seldom prepared to defend the practice in open public debate. Actually, there are so many arguments against fluoridation that it can get overwhelming. To simplify things it helps to separate the ethical from the scientific arguments.

For those for which ethical concerns are paramount, the issue of fluoridation is very simple to resolve. It is simply not ethical; we simply shouldn't be forcing medication on people without their "informed consent."

The bad news is that ethical arguments are not very influential in Washington, DC unless politicians are very conscious of millions of people watching them. The good news is that the ethical arguments are buttressed by solid common sense arguments and scientific studies which convincingly show that fluoridation is neither "safe and effective" nor necessary. I have summarized the arguments in several categories:

Fluoridation is unethical because:

- 1) It violates the individual's right to informed consent to medication.
- 2) The municipality cannot control the dose of the patient.
- 3) The municipality cannot track each individual's response.
- 4) It ignores the fact that some people are more vulnerable to fluoride's toxic effects than others. Some people will suffer while others may benefit.
- 5) It violates the Nuremberg code for human experimentation.

As stated by the recent recipient of the Nobel Prize for Medicine (2000), Dr. Arvid Carlsson:

"I am quite convinced that water fluoridation, in a not-too-distant future, will be consigned to medical history...Water fluoridation goes against leading principles of pharmacotherapy, which is progressing from a stereotyped medication -- of the type 1 tablet three times a day -- to a much more individualized therapy as regards both dosage and selection of drugs. The addition of drugs to the drinking water means exactly the opposite of an individualized therapy."

As stated by Dr. Peter Mansfield, a physician from the UK and advisory board member of the recent government review of fluoridation (McDonagh et al 2000):

"No physician in his right senses would prescribe for a person he has never met, whose medical history he does not know, a substance which is intended to create bodily change, with the advice: 'Take as much as you like, but you will take it for the rest of your life because so many children suffer from tooth decay.' It is a preposterous notion."

Fluoridation is unnecessary because:

- 1) Children can have perfectly good teeth without being exposed to fluoride.
- 2) The promoters (CDC, 1999, 2001) admit that the benefits are topical not systemic, so fluoridated toothpaste, which is universally available, is a more rational approach to delivering fluoride to the target organ (teeth) while minimizing exposure to the rest of the body.
- 3) The vast majority of western Europe has rejected water fluoridation, but has been equally successful as the U.S., if not more so, in tackling tooth decay.
- 4) If fluoride was necessary for strong teeth one would expect to find it in breast milk, but the level there is 0.01 ppm, which is 100 times LESS than in fluoridated tap water (IOM, 1997).
- 5) Children in non-fluoridated communities are already getting the so-called "optimal" doses from other sources (Heller et al, 1997). In fact, many are already being over-exposed to fluoride.

Fluoridation is ineffective because:

- 1) Major dental researchers concede that fluoride's benefits are topical not systemic (Fejerskov 1981; Carlos 1983; CDC 1999, 2001; Limeback 1999; Locker 1999; Featherstone 2000).
- 2) Major dental researchers also concede that fluoride is ineffective at preventing pit and fissure tooth decay, which is 85 percent of the tooth decay experienced by children (JADA 1984; Gray 1987; White 1993; Pinkham 1999).
- 3) Several studies indicate that dental decay is coming down just as fast, if not faster, in non-fluoridated industrialized countries as fluoridated ones (Diesendorf, 1986; Colquhoun, 1994; World Health Organization, Online).
- 4) The largest survey conducted in the U.S. showed only a minute difference in tooth decay between children who had lived all their lives in fluoridated compared to non-fluoridated communities. The difference was not clinically significant nor shown to be statistically significant (Brunelle & Carlos, 1990).
- 5) The worst tooth decay in the U.S. occurs in the poor neighborhoods of our largest cities, the vast majority of which have been fluoridated for decades.
- 6) When fluoridation has been halted in communities in Finland, former East Germany, Cuba and Canada, tooth decay did not go up but continued to go down (Maupome et al, 2001; Kunzel and Fischer, 1997, 2000; Kunzel et al, 2000 and Seppa et al, 2000).

Fluoridation is unsafe because:

- 1) It accumulates in our bones and makes them more brittle and prone to fracture. The weight of evidence from animal studies, clinical studies and epidemiological studies on this is overwhelming. Lifetime exposure to fluoride will contribute to higher rates of hip fracture in the elderly.
- 2) It accumulates in our pineal gland, possibly lowering the production of melatonin, a very important regulatory hormone (Luke, 1997, 2001).
- 3) It damages the enamel (dental fluorosis) of a high percentage of children. Between 30 percent and 50 percent of children have dental fluorosis on at least two teeth in optimally fluoridated communities (Heller et al, 1997 and McDonagh et al, 2000).
- 4) There are serious, but yet unproven, concerns about a connection between fluoridation and osteosarcoma in young men (Cohn, 1992), as well as fluoridation and the current epidemics of both arthritis and hypothyroidism.
- 5) In animal studies fluoride at 1 ppm in drinking water increases the uptake of aluminum into the brain (Varner et al, 1998).
- 6) Counties with 3 ppm or more of fluoride in their water have lower fertility rates (Freni, 1994).
- 7) In human studies the fluoridating agents most commonly used in the U.S. not only increase the uptake of lead into children's blood (Masters and Coplan, 1999, 2000) but are also associated with an increase in violent behavior.
- 8) The margin of safety between the so-called therapeutic benefit of reducing dental decay and many of these end points is either nonexistent or precariously low.

Fluoridation is inequitable because:

- 1) It will go to all households, and the poor cannot afford to avoid it, if they want to, because they will not be able to purchase bottled water or expensive removal equipment.
- 2) The poor are more likely to suffer poor nutrition, which is known to make children more vulnerable to fluoride's toxic effects (Massler & Schour 1952; Marier & Rose 1977; ATSDR 1993; Teotia et al, 1998).
- 3) Very rarely, if ever, do governments offer to pay the costs of those who are unfortunate enough to get dental fluorosis severe enough to require expensive treatment.

Fluoridation is inefficient and not cost-effective because:

- 1) Only a small fraction of the water fluoridated actually reaches the target. Most of it ends up being used to wash the dishes, to flush the toilet or to water our lawns and gardens.
- 2) It would be totally cost-prohibitive to use pharmaceutical grade sodium fluoride (the substance that has been tested) as a fluoridating agent for the public water supply. Water fluoridation is artificially cheap because, unknown to most people, the fluoridating agent is an unpurified hazardous waste product from the phosphate fertilizer industry.
- 3) If it was deemed appropriate to swallow fluoride (even though its major benefits are topical not systemic) a safer and more cost-effective approach would be to provide fluoridated bottled water in supermarkets free of charge. This approach would allow both the quality and the dose to be controlled. Moreover, it would not force it on people who don't want it.

Fluoridation is unscientifically promoted. For example:

- 1) In 1950, the U.S. Public Health Service enthusiastically endorsed fluoridation before one single trial had been completed.
- 2) Even though we are getting many more sources of fluoride today than we were in 1945, the so-called "optimal concentration" of 1 ppm has remained unchanged.
- 3) The U.S. Public health Service has never felt obliged to monitor the fluoride levels in our bones even though they have known for years that 50 percent of the fluoride we swallow each day accumulates there.
- 4) Officials that promote fluoridation never check to see what the levels of dental fluorosis are in the communities before they fluoridate, even though they know that this level indicates whether children are being overdosed or not.
- 5) No U.S. agency has yet to respond to Luke's finding that fluoride accumulates in the human pineal gland, even though her finding was published in 1994 (abstract), 1997 (Ph. D. thesis), 1998 (paper presented at conference of the International Society for Fluoride Research), and 2001 (published in Caries Research).
- 6) The CDC's 1999, 2001 reports advocating fluoridation were both six years out of date in the research they cited on health concerns.

Fluoridation is not defensible in open public debate.

The proponents of water fluoridation refuse to defend this practice in open debate because they know that they would lose that debate. A vast majority of the health officials around the U.S. and in other countries who promote water fluoridation do so based upon someone else's advice and not based upon a first hand familiarity with the scientific literature.

This second hand information produces second-rate confidence when they are challenged to defend their position. Their position has more to do with faith than it does with reason.

Those who pull the strings of these public health 'puppets,' do know the issues, and are cynically playing for time and hoping that they can continue to fool people with the recitation of a long list of "authorities" which support fluoridation instead of engaging the key issues.

As Brian Martin made clear in his book *Scientific Knowledge in Controversy: The Social Dynamics of the Fluoridation Debate* (1991), the promotion of fluoridation is based upon the exercise of political power not on rational analysis. The question to answer, therefore, is: "Why is the U.S. Public Health Service choosing to exercise its power in this way?"

Motivations -- especially those that have operated over several generations of decision makers -- are always difficult to ascertain. However, whether intended or not, fluoridation has served to distract us from several key issues. It has distracted us from:

- a) The failure of one of the richest countries in the world to provide decent dental care for poor people.
- b) The failure of 80 percent of American dentists to treat children on Medicaid.
- c) The failure of the public health community to fight the huge over consumption of sugary foods by our nation's children, even to the point of turning a blind eye to the wholesale introduction of soft drink machines into our schools. Their attitude seems to be if fluoride can stop dental decay why bother controlling sugar intake.
- d) The failure to adequately address the health and ecological effects of fluoride pollution from large industry. Despite the damage that fluoride pollution has caused, and is still causing, few environmentalists have ever conceived of fluoride as a 'pollutant.'
- e) The failure of the U.S. EPA to develop a Maximum Contaminant Level (MCL) for fluoride in water that can be scientifically defended.
- f) The fact that more and more organofluorine compounds are being introduced into commerce in the form of plastics, pharmaceuticals and pesticides. Despite the fact that some of these compounds pose just as much a threat to our health and environment as their chlorinated and brominated counterparts (i.e. they are highly persistent and fat soluble and many accumulate in the food chains and our body fat), those organizations and agencies which have acted to limit the wide-scale dissemination of these other halogenated products, seem to have a blind spot for the dangers posed by organofluorine compounds.

So while fluoridation is neither effective nor safe, it continues to provide a convenient cover for many of the interests that stand to profit from the public being misinformed about fluoride.

Unfortunately, because government officials have put so much of their credibility on the line defending fluoridation, it will be very difficult for them to speak honestly and openly about the issue. As with the case of mercury amalgams, it is difficult for institutions such as the American Dental Association to concede health risks because of the liabilities waiting in the wings if they were to do so.

However, difficult as it may be, it is nonetheless essential -- in order to protect millions of people from unnecessary harm -- that the U.S. government begin to move away from its anachronistic, and increasingly absurd, status quo on this issue. There are precedents. They were able to do this with hormone replacement therapy.

But getting any honest action out of the U.S. government on this is going to be difficult. Effecting change is like driving a nail through wood -- science can sharpen the nail but we need the weight of public opinion to drive it home. Thus, it is going to require a sustained effort to educate the American people and then recruiting their help to put sustained pressure on our political representatives.

At the very least we need a moratorium on fluoridation (which simply means turning off the tap for a few months) until there has been a full Congressional hearing on the key issues with testimony offered by scientists on both sides. With the issue of education we are in better shape than ever before. Most of the key studies are available on the Internet (<http://www.slweb.org/bibliography.html>) and there are videotaped interviews with many of the scientists and protagonists whose work has been so important to a modern re-evaluation of this issue (see Videos at <http://www.fluoridealert.org>).

With this new information, more and more communities are rejecting new fluoridation proposals at the local level. On the national level, there have been some hopeful developments as well, such as the EPA Headquarters Union coming out against fluoridation and the Sierra Club seeking to have the issue re-examined. However, there is still a huge need for other national groups to get involved in order to make this the national issue it desperately needs to be.

I hope that if there are RFW readers who disagree with me on this, they will rebut these arguments. If they can't then I hope they will get off the fence and help end one of the silliest policies ever inflicted on U.S. citizens. It is time to end this folly of water fluoridation without further delay. It is not going to be easy. Fluoridation represents a very powerful "belief system" backed up by special interests and by entrenched governmental power and influence.

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All references cited can be found here.

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