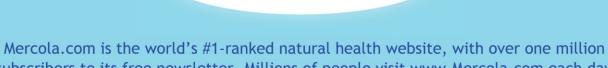
# Toxic Waters The Truth About Water Fluoridation

## DR. MERCOLA





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## **Toxic Waters** The Truth About Water Fluoridation

The practice of adding fluoride to your tap water began in 1945.<sup>1</sup> With more than 60 percent of U.S. water supplies currently fluoridated, chances are you're one of the 170 million Americans who drink fluoride on a daily basis.<sup>2</sup> Most likely, your dentist – along with countless government and public health officials -- has praised and

promoted the use of fluoride, both in toothpaste and drinking water, as one of your must-do regimens to promote strong and healthy teeth.

Unfortunately, they've all bought the public deception, and have unwittingly participated in and perpetuated perhaps one of the grandest public health frauds and toxic coverups in U.S. history.



The full story behind the introduction of fluoride to your drinking water reads like a cross between a gut churning psychological thriller and mind-boggling science fiction. I will share some of the highlights with you here.

A bibliography of books about fluoridation is supplied at the end of this report, if you would like to continue your investigation into the issues revealed here.

## **The Dirty Laundry of Water Fluoridation**

The commonly repeated history of how water fluoridation came to be, states that the practice was spurred on by 1930's research findings that fluoride helps prevent tooth decay, which was, and is, a common health problem. And, it would appear as though it was a successful government intervention on your behalf. More than 60 years later, the Centers for Disease Control and Prevention (CDC) declared community water fluoridation one of the 10 great public health achievements of the 20<sup>th</sup> century.

But as you will soon find out, it may be nothing more than another well-orchestrated PR stunt – another glowing example of the art of disseminating "adjustable truths," to sell an inconveniently toxic reality to an unsuspecting public.

Some sources even go so far as to try to make you believe that fluoride is a nutrient – a supplement that naturally helps build strong teeth and bones. One such example is the *Directive 2002/46/EC of the European Parliament and the Council*,<sup>3</sup> which lists "fluoride" as one of only 28 vitamins and minerals permissible for sale for human consumption within the European Union.

But let's make this point clear right from the start: **fluoride is not an essential nutrient**, as you will soon find out.



The truth is that the facts behind the endorsement of fluoride for public health have been shrouded by fraudulent science on behalf of extremely powerful political forces with financial and political agendas.

The deceit has been so effective, you're hard-pressed to find anyone who doesn't automatically say, "But everyone knows fluoride is good for you!"

This wasn't always the case, however, and in recent years, an ever-growing number of scientists, dentists, and public health advocates have raised the red flag, speaking out about the danger of fluoride.

#### The Medical Consensus on Fluoride Prior to 1945

Prior to 1945 when communal water fluoridation took effect, fluoride was a known toxin.

For example, a 1936 issue of the *Journal of the American Dental Association* stated that fluoride at the 1 ppm (part per million) concentration is as toxic as arsenic and lead.

The Journal of the American Medical Association stated in their September 18, 1943 issue, that fluorides are general protoplasmic poisons that change the permeability of the cell membrane by certain enzymes.<sup>4</sup> And, an editorial published in the Journal of the American Dental Association, October 1, 1944, stated, "Drinking water containing as little as 1.2 ppm fluoride will cause developmental disturbances. We cannot run the risk of producing such serious systemic disturbances. The potentialities for harm outweigh those for good."

More recently, Christopher Bryson, award winning journalist and former producer at the BBC revealed the multi-tiered abuse of power by military and industry scientists and public health officials in his book *The Fluoride Deception.*<sup>5</sup> In it, he describes the intertwined interests that existed in the 1940's and 50's between the aluminum industry, the U.S. nuclear weapons program, and the dental industry, which resulted in fluoride being declared not only safe, but beneficial to human health.

How could things possibly go so awry?

#### **Cox and Frary – Masterminds With Toxic Connections**

The brainchild of water fluoridation was Gerald Cox, a researcher with the Mellon Institute in Pittsburg. He received the suggestion to look at fluoride's dental effects (which I will go over later) from Francis C. Frary, then director of the aluminum laboratory for the Aluminum Company of America.

Frary had reasons for the suggestion other than the possibility of protecting tooth enamel. He was very concerned about the fluoride pollution being generated by the aluminum plant, as lawsuits from surrounding farmers increased. Disposing of fluoride – the toxic waste product from aluminum plants -- was quickly turning into a very costly problem. (In fact, there's been more litigation on alleged damage to agriculture by fluoride than all other pollutants combined.)

Gerald Cox also had reasons to figure out a solution to the fluoride-waste problem. The Mellon Institute had been the leading defender of the asbestos industry, producing research showing that asbestos was harmless, and that workers' health problems were due to other causes, in a fruitless effort to save



the asbestos industry from financial Aluminum smelting factory catastrophe.

Now the aluminum industry was quickly realizing that fluoride could generate lawsuits of a similar magnitude as asbestos. Cox's connection to the Mellon Institute -- and their history of offering "science-based" protection to industry -- makes his recommendation to turn toxic waste material into a usable "health product" something that cannot be viewed as a mere coincidence.

But the story doesn't end there. The ultimate driving force behind fluoridation gaining public acceptance, cementing the perception of fluoride as a healthy and safe additive to your drinking water, was a man named Harold Hodge.

#### Harold Hodge – The Man Who Invented Fluoride Safety

Harold Hodge with the University of Rochester was the nation's leading, most trusted scientist when he declared that fluoride was absolutely safe at 1 ppm. The year was 1957, and everyone believed him.

Today, we know that Harold Hodge was also the co-orchestrator of The Human Radiation Experiment, in which hospitalized citizens of Rochester and Oakridge were injected with plutonium. (His involvement was discovered during the Presidential inquiry into the experiments.) So, while he was assuring fluoride's safety, he also had unsuspecting human subjects injected with plutonium and uranium.

Surely, this is enough to sound the warning bells, but what was Hodge's motive for experimenting with dangerous toxins, and promoting them as safe for human consumption?

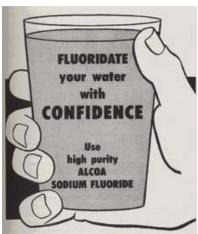
As it turns out, Hodge was also the chief toxicologist of the Manhattan Project. As part of a group of scientists and engineers who helped develop the atomic bomb in World War II, Hodge was responsible for evaluating the toxicity of the chemicals used in the production of the atomic bomb. One of the chemicals in question was fluoride.

Due to the massive amounts of fluoride required to produce bomb-grade uranium and plutonium for these nuclear weapons, the Manhattan Project conducted various experiments to determine its toxic effects in 1946. Since there were already several instances on record of fluoride being toxic to crops, livestock and people living downwind www.MERCOLA.com

from the polluters, the public concern over fluoride emissions needed to be put to rest to avoid further, potentially crippling lawsuits.

### **Toxic Waste Confirmed Healthy. Science Paid For by Polluters**

Robert Kehoe with the Kettering Laboratory – a private toxicology lab – was another leading defender and promoter of water fluoridation, alongside Harold Hodge. The Kettering Laboratory produced a massive bibliography of abstracts on the soundness of communal water fluoridation, and fluoride's (beneficial) role in public health, adding to the public's feeling of safety based on scientific data.



The Kettering report was funded by the National Institute of Dental Research, and fluoride-polluting industryheavyweights like:

- The Aluminum company of America (ALCOA)
  - The Aluminum company of Canada
  - The American petroleum institute
    - DuPont
    - Kaiser Aluminum
    - Reynolds Metals
      - U.S. Steel

And what was Robert Kehoe's motivation for participating in

this potentially devastating deception?

Kehoe was also working for the Fluorine Lawyers Committee, preparing defenses in fluoride litigation cases.

#### You're Still Paying For the Atomic Bomb Program, With Your Health

Within the now declassified files of the Manhattan Project and the Atomic Energy Commission, Christopher Bryson found that the toxicology department at the University of Rochester -- which was under the direction of Harold Hodge -- was asked to produce medical information about fluoride that could help defend the government against lawsuits where they were charged with fluoride pollution.

One such declassified correspondence from the Atomic Energy Commission (dated October 8, 1947), reads:

*"Information which would invite or tend to encourage claims against the Atomic Energy Commission or its contractors, such as portions of articles to be published should be reworded or deleted."* 

It is now clear that if water fluoridation were declared harmful to human health, the U.S. nuclear bomb program, as well as many other fluoride-polluting industries such as aluminum plants and fertilizer manufacturers, would have been left open to massive litigation.

What became the answer to these increasingly debilitating political and industrial problems?

Endorse fluoride as a nutrient that will grace you with brilliant pearly whites (epitomized in the advertisement jingle that declares fluoride as "*nature's way to prevent tooth decay*," reminiscent of another 1940's classic, "DDT *is good for me-e-e!*"<sup>6</sup>), rather than the poison it really is.



The idea that Harold Hodge would ever admit that water fluoridation was dangerous is out of the question, as it could have spelled the end to the nuclear weapons program.

## "To Your Health!" – The Power of Marketing

The only thing left was to convince the American public that fluoride was not the toxin of old, but rather something that – when mixed with water at the optimum level of 1 part per million -- provided added protection against dental caries, solving a rather pervasive public health problem.

The task of selling fluoridation fell upon Edward L. Bernays -- Sigmund Freud's nephew - revered as "the father of public relations," for his brilliantly executed marketing of the tobacco industry.

The National Institute of Dental Research chose Bernays to head up the fluoride campaign, which zeroed in on all the doctors and dentists of America.

If you're old enough to remember the black and white television ads from the late 40's and 50's, when doctors and dentists promoted everything from cigarettes to pesticides, it's no wonder that water fluoridation and the dental profession ended up hand in glove. With fluoride's perceived dental benefits, it was (and still is) a perfect fit. It offered maximum market acceptance through the most respected and trustworthy endorser – your personal dentist.

It was actually a rather brilliant scheme.



#### Industry could now sell their toxic waste as something that was good for you, rather than pay for proper toxic waste disposal or risk being sued for hazardous pollution.

The sad fact is, few doctors and dentists are even aware that the fluoride in your water is not pharmaceutical grade fluoride, but rather the toxic byproduct from aluminum smelting and the Florida phosphate (fertilizer) industry.

## What is Fluoride?

Unless you have a strong background in the scientific field, you might not realize that there's no such thing as plain "fluoride." What is generically referred to as fluoride (or fluorine) is rather one of several types of fluoride compounds.<sup>7</sup> Some fluorides are natural; found in the earth's crust, others not so much.

One of the points made by many pro-fluoride advocates is that fluoride is a natural mineral found in human teeth and bones. Therefore, adding fluoride, whether through your diet or via topical applications is a good thing, as it should help re-mineralize your bones and teeth.

This is where you need to remember how good deception works. A good fib must always start with a truth, or else no one will listen to you – at least not for long. So, as long as you start with the truth, you can then bend and twist it around to serve your own means, and most people won't notice that the story has veered so far from reality that the original statement is no longer applicable. This is how most misinformation campaigns work.

#### The Kernel of Truth That Started it All

The natural form of mineral fluoride found both in nature, and in your teeth and bones, is called Apatite (calcium fluoro-chloro-hydroxyl phosphate).

It's a mineral found in many areas of the world, and although it is often regarded as a single mineral, it is usually divided into three mineral sub-groups:

- Fluorapatite (calcium fluoro-phosphate)
- Chlorapatite (calcium chloro-phosphate)
- Hydroxyl-apatite (basic calcium phosphate)



**Natural Apatite Minerals** 

An ironic side note is that the name Apatite stems from the Greek word *apate*, which means "deceit." It originally got its name because it has a similar appearance to many other minerals, but if you believe in fateful signs then this would certainly fit the bill. Because as you've just learned, the deceit behind fluoride runs deep.

Inside your mouth, there is a natural equilibrium between hydroxyl-apatite (calcium phosphate) dissolving and forming in your tooth enamel from substances occurring naturally in your saliva. Like everything else, your diet and various physical conditions shift this equilibrium back and forth constantly. When you have more calcium phosphate dissolving than being adhered, you end up with a demineralization condition called caries. This is when cavities form in your teeth.<sup>8</sup>

However, this is where the truth about fluoride's benefits end, and the lies begin.

### What is REALLY Added to Your Water?

When "fluoride" is added to your drinking water, it's NOT the natural mineral, nor a pharmaceutical grade fluoride. Instead, the fluoride in question is another chemical fluoride compound – the toxic waste product from phosphate fertilizer plants.

There are three basic compound commonly used for fluoridating water supplies:9

- 1. Sodium fluoride (NaF)
- 2. Sodium silicofluoride
- 3. Hydrofluorosilicic acid

The first one of these, sodium fluoride, is pharmaceutical grade. It's the most well known, as this is the compound used in toxicology studies and other research into the potential health dangers of fluoride.



The other two, **sodium silicofluoride and hydrofluorosilicic acid**, **are the compounds used for water fluoridation**, with hydrofluorosilicic acid being the most commonly used additive, according to the CDC.<sup>10</sup>

Sodium silicofluoride and hydrofluorosilicic acid are the waste products from the wet scrubbing systems of the fertilizer industry, and are classified as hazardous wastes. Contamination with various impurities such as arsenic is also common.

## Why Water Fluoridation May be Even MORE Hazardous Than Research Suggests!

Another tidbit that is not talked about openly is the fact that these hazardous industrial wastes – the fluoride compounds actually added to your water -- have NEVER been fully tested to ascertain their full potential health hazard. Instead, the pharmaceutical grade sodium fluoride is used in the majority of studies evaluating the risk to human health. Therefore, the real danger to your health may be far greater than any of the studies done so far have shown. Numerous studies have already identified sodium fluoride as a toxic agent, capable of doing irreparable harm to your body, which we'll go over later.

The industrial fluorides, however, have been shown to act differently from the simpler sodium fluoride.

#### Water Fluoridation – A Case of Bait and Switch

For example, hydrofluorosilicic acid is one of the most reactive chemicals known to man. Its toxicity is rather well known in chemical circles. It will eat through metal and plastic pipes, and corrode stainless steel and other materials. It will dissolve rubber tires and www.MERCOLA.com melt concrete<sup>11</sup>. This is what is added to your water – all in the name of saving children from cavities.

But even the less reactive sodium fluoride is a deadly poison, even in small quantities. Other common uses for sodium fluoride include:

- Rat and cockroach poisons
- Anesthetics
- Hypnotics
- Psychiatric drugs
- Military nerve gas (sarin)

So, as you can see, the chemical fluorides used in your water are ENTIRELY different from the natural Apatite used by your body to build and strengthen bones and teeth.



Apatite is an organic salt that can only be assimilated by your body **when derived naturally from proper foods**.

The non-organic fluoride used in fluoridating water, on the other hand, is a poison that your body cannot assimilate.

## **Symptoms of Acute Fluoride Toxicity**

According to information from its Material Safety Data Sheet (MSDS), and from the National Institute of Occupational Safety and Health (NIOSH), sodium fluoride is a dangerous toxin that can cause serious physical harm. The chemical targets your:<sup>12</sup>

- Kidneys
- Heart
- Gastrointestinal system
- Bone and skeletal structures
- Teeth
- Nerves

#### Symptoms of an acute fluoride overdose include:<sup>13 14</sup>

- Drowsiness
- Salivation, thirst
- Nausea, vomiting
- Abdominal pain
- Diarrhea
- · Fever, sweating
- Labored breathing
- Stiff spine
- Dermatitis (skin rash)

The MSDS for sodium fluoride also states that fluoride compounds can induce:

- Systemic toxic effects on your heart, liver, and kidney
- Depleted calcium levels in your body leading to hypocalcaemia and death

It points out that the toxic effect of fluoride might be delayed, and that laboratory experiments have resulted the development of tumors.

Both "fluorides" and "fluorine" (gas) are also listed on the NIOSH *Immediately Dangerous to Life or Health* list.<sup>15</sup> Surely, something natural with physiological benefits would not easily end up on such a list.

## **How Fluoride Destroys Your Health**

Fluoride is a cumulative poison. 98 percent of the fluoride you ingest in water is absorbed into your blood through your gastrointestinal tract. From there, it enters your body's cellular tissues. On average, about 50 percent of the fluoride you ingest each day gets excreted through your kidneys. The remainder accumulates in your teeth and bones,<sup>16</sup> pineal gland,<sup>17</sup> and other tissues, such as the aorta.

The amount deposited into your bones and teeth varies depending on your age.

In children, more than 50 percent of an ingested dose of fluoride is deposited in bone, but in adults only about 10 percent is stored there.

As with teeth, fluoride is deposited in bone by the ionic exchange with hydroxyl-apatite as mentioned earlier. It does dissolve from bone as well, but at a



slower rate than it is deposited, so if your intake remains constant, the level of fluoride in your bones increases linearly with age.

Therefore, if your kidneys are damaged, fluoride accumulation will increase, and with it, the likelihood of harm.

As the number of research studies into the toxic effects of fluoride has increased, there is now support for a rather long list of potential health problems.

#### 20 Most Commonly Mentioned Health Hazards and Diseases Associated with Fluoride<sup>18</sup> <sup>19</sup>

- Increases lead absorption<sup>20</sup>
- . Hyperactivity and/or lethargy<sup>21</sup>
- Lowers IQ

and the second

- Brain damage
- Dementia
- Disrupts synthesis of collagen
- . Muscle disorders
- Arthritis
- . Bone fractures<sup>22</sup>
- Bone cancer (osteosarcoma)

- Dental fluorosis (staining and pitting of teeth)
- . Lowers thyroid function
- Inactivates 62 enzymes<sup>23</sup>
- . Genetic damage and cell death<sup>24</sup>
- . Disrupts immune system
- Inhibits formation of antibodies
- Increases tumor and cancer rate
- Increases aging process
- Reduces melatonin production and leads to earlier onset of puberty<sup>25</sup>
- Damages sperm, increases infertility

Although there's no shortage of studies confirming the detrimental side effects and health hazards associated with fluoride, the three most commonly discussed problems are dental fluorosis, skeletal fluorosis (where your bones become soft and brittle), and its disruptive impact on your thyroid function.

#### Latest Scientific Review Gives Fluoride Safety Thumbs Down

Some of the most recent validation for the danger of fluoridating drinking water comes from the National Research Council of the National Academies' review, *Fluoride in Drinking Water: A Scientific Review of EPA's Standards*,<sup>26</sup> published in March 2006.

This 12-member NRC committee had been asked to provide an independent review of the scientific basis for the maximum contaminant level goal (MCLG) of fluoride in drinking water set by the U.S. Environmental Protection Agency (EPA) in 1985. They came back with sobering news – even though the EPA misdirected the committee on several accounts:

- The EPA instructed the reviewing committee to identify only health effects that are known with total certainty. This is contrary to the intent of the Safe Drinking Water Act (SDWA), which requires that the EPA determine "whether any adverse effects can be reasonably anticipated, even though not proved to exist"
- 2. The EPA instructed the committee to NOT determine a new safe level of fluoride in drinking water, and
- 3. The committee was instructed to NOT review silicofluorides (the industrial waste product actually used in more than 90 percent of all fluoridated drinking water)

Despite these restrictions, the committee broke new ground by declaring that:

- Severe dental fluorosis IS an adverse health effects, not a mere cosmetic defect
- The current standard of 4 mg of fluoride per liter does NOT protect against adverse health effects, and that
- Silicofluorides need to be tested for adverse health effects

Their report determined that the amount of fluoride necessary to cause harm to the more vulnerable members of the population is exceeded by the current fluoride levels in water.

They also included extensive information about other potential health hazards, such as endocrine dysfunction, and brain damage.

Robert J. Carton, PhD, the scientist who wrote an official review and summary of the NRC report for the July-September 2006 issue of the *Fluoride Journal*<sup>27</sup> stated that,



"Based on the information uncovered, and if applying the proper interpretation of the Safe Drinking Water Act, the recommended Maximum Contaminant Level Goal (MCLG) for fluoride in drinking water should be zero."

### What Exactly is Fluorosis?

**Dental Fluorosis** is a mottling of the tooth enamel, which is permanent once a child's teeth are formed.

The staining and mottling happens when fluoride disrupts the process of enamel formation, making it more and more porous.



In moderate to severe cases, these porous

**Dental fluorosis** 

lesions will extend toward the inner enamel. The porous areas may then flake off, creating visible defects in your enamel. As the fluorosis grows in severity the initially opaque areas turn into yellow to brown discolorations, and the teeth may develop pits in the surface.

Since the function of your enamel is to protect the dentin and pulp from decay and infection, dental fluorosis cannot reasonably be considered a mere cosmetic defect.

**Skeletal Fluorosis** is a complicated illness that occurs when too much fluoride has accumulated in your bones. It has a number of stages. The first two stages are preclinical, which means that you may not feel any symptoms but changes have taken place in your body.

In the first preclinical stage, biochemical abnormalities occur in your blood and bone composition; in the second, changes can now be seen in biopsied bone samples. Some experts insist these changes harmful because they are precursors of more serious conditions. Others say they are harmless.

## Once you're in the early clinical stage of skeletal fluorosis, symptoms will include:

- Pains in your bones and joints
- Burning, prickling, and tingling in your limbs
- Muscle weakness
- Chronic fatigue
- Gastrointestinal disorders
- Reduced appetite and weight loss



#### The second clinical stage is characterized by:

- Constant pain in your bones
- Anemia

•

- Brittle bones and osteosclerosis
- Stiff joints
- Calcification of tendons, or ligaments of ribs and pelvis
- Osteoporosis in the long bones
- Bony spurs may also appear on your limb bones, especially around your knee, elbow, and on the surface

of tibia and ulna

In advanced skeletal fluorosis (called crippling skeletal fluorosis), your extremities become weak and moving your joints is difficult, and your vertebrae partially fuse together, effectively crippling you.

Most experts in skeletal fluorosis agree that ingesting 20 mg of fluoride a day, for 20 years or more, can cause crippling skeletal fluorosis. Doses as low as 2 to 5 mg per day can induce the preclinical and earlier clinical stages.

Unfortunately, complicating the issue further is the fact that your risk of skeletal fluorosis depends on more than just the level of fluoride in your water. It also depends on your nutritional status, intake of vitamin D and protein, the amount of calcium, and ratio of calcium to magnesium in your drinking water, as well as other factors.

#### Are You in a High Risk Group?

In 1993, the U.S. Department of Health and Human Services (HHS) stated in its *Toxicological Profile on Fluoride*, "Existing data indicate that subsets of the population may be unusually susceptible to the toxic effects of fluoride and its compounds."

You have a heightened risk of developing problems from even mild exposure to fluoride, such as bone fractures, if you:

- Are elderly
- Are deficient in calcium, magnesium, and/or vitamin C
- Have cardiovascular problems
- Have kidney problems

## **Mind-Altering Fluoride Drugs and Their Side Effects**

A few well-known examples of mind-altering drugs containing fluoride compounds (fluorophenyl) include anti-depressants Prozac and Paxil, and "date rape drug" Rohypnol. (Rohypnol is essentially fluorinated valium, making it far more potent than valium alone.)

These fluorinated drugs have been found to cause serious side effects, such as interfering with thyroid activity, and causing liver disease.<sup>29</sup> Chronic hepatitis has also been indicated as a side effect of these drugs.

Fluoridated drugs also have a tendency to affect the elimination of other drugs, due to their impact on your enzymes. By inhibiting certain enzymes, the chemicals of other drugs can accumulate to dangerous levels in your body, causing a number of potentially deadly scenarios.

The metabolites produced by fluoride compounds in your liver are also capable of transferring through your placenta to your fetus if you are pregnant and taking fluoridecontaining drugs, such as Prozac or Paxil, which can lead to a number of birth defects. It has also been shown that babies who are breastfed by mothers taking Prozac have a growth curve significantly below that of infants whose mothers are not taking the drug.

#### How Much Fluoride are You Exposed to? <sup>30</sup>

In 1962, the U.S. Public Health Service (PHS) set fluoride levels of 0.7 to 1.2 parts per million (ppm) in drinking water as the ideal range to prevent dental caries with minimal dental fluorosis.

The reasoning behind the varying levels was that average water consumption varies with temperature. The lower level was suggested for hot climates, with progressively higher levels prescribed for cooler regions.

The EPA took over PHS's responsibility for regulating contaminants in drinking water in 1975. And in 1986, they relaxed the maximum contaminant level (MCL) to 4 ppm for all



climates.<sup>31</sup> Communities that add fluoride to their drinking water still use the old PHS

formula. But communities with naturally fluoridated water are not required to remove fluoride unless the level exceeds 4 ppm.

However, some of the adverse health effects can occur at levels of about 1 ppm, and they are both more pronounced and more widespread at levels near 4 ppm. What this means is that **there is no margin of safety** for fluoride exposure in the United States.

When water fluoridation first began, the "optimal" level of fluoride for dental benefit was said to be 1 mg/day for an adult male, based on the estimate that the average adult male drank one liter of water per day. However, even at that level, 10 percent of the population (those in the high-risk group) was expected to get fluorosis. Add to that the fact that we're now exposed to multiple other sources containing fluoride -- whereas in the 1940's other sources of fluoride were scarce – and you have the potential for massive fluoride overdosing.

A 1991 review by the U.S. Department of Health and Human Services shows just how drastic your overexposure might be when taking multiple sources into account.

## Fluoride exposure levels for a 110-pound adult from food, beverages, toothpaste, and mouthwash

| Fluoride Concentration in<br>Drinking Water | Total Fluoride Intake | Percentage Over 1 mg<br>"Optimal" Dosage |
|---|-----------------------|--|
| Unfluoridated Communities<br>< 0.3 mg/L     | 0.88 - 2.20 mg/day    | as much as 120 %                         |
| "Optimally" Fluoridated<br>0.7-1.2 mg/L     | 1.58 - 6.60 mg/day    | as much as 560 %                         |
| Fluoridated communities<br>> 2.0 mg/L       | 2.10 - 7.05 mg/day    | possible > 605 %                         |

Although you may not know it, you are exposed to fluoride from many sources other than the obvious lineup of toothpastes and mouth rinses.

Dentists may also apply professional strength fluoride treatments, or they may (unwisely) prescribe daily fluoride supplements, and other, far less obvious sources of fluoride include:<sup>32</sup>

- Food and beverages processed with fluoridated water
- Mechanically de-boned meat
- Pesticide residue on food
- Pharmaceutical drugs
- Soy baby formulas
- Instant tea<sup>33</sup>

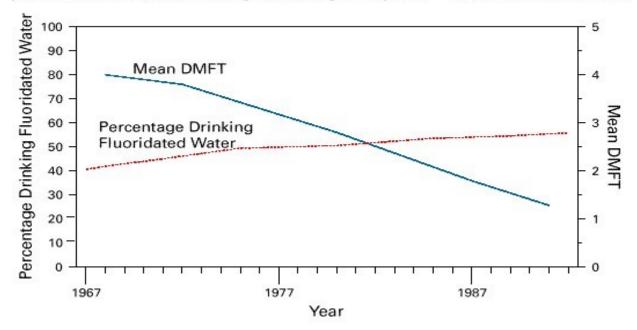
## Has Water Fluoridation Reduced Tooth Decay?

That's what fluoridation advocates would like you to believe, but the answer to that question is in fact no. It has not.

When the CDC nominated water fluoridation as one of the top 10 public health achievements of the 20<sup>th</sup> century, they backed up their claim with the following graph, showing the reduction of cavities in U.S. children along with the increase in public water fluoridation systems since the 1960's, stating:

*"as a result [of water fluoridation], dental caries declines precipitously during the second half on the 20<sup>th</sup> century."* 

FIGURE 1. Percentage of population residing in areas with fluoridated community water systems and mean number of decayed, missing (because of caries), or filled permanent teeth (DMFT) among children aged 12 years — United States, 1967–1992



At first glance, this looks like a remarkable success. However, the truth is that tooth decay has declined dramatically across the globe, irrespective of whether the country has water fluoridation or not! And there's an extensive list of scientific studies that have reached the same conclusion: that water fluoridation has NOTHING to do with the worldwide decline in dental caries. <sup>34</sup>

For example, according to one 2005 study published in the journal Fluoride,

"Graphs of tooth decay trends for 12 year olds in 24 countries, prepared using the most recent World Health Organization data, show that the decline in dental decay in recent decades has been comparable in 16 non-fluoridated countries and 8 fluoridated countries... The WHO data do not support fluoridation as being a reason for the decline in dental decay..."<sup>35</sup>

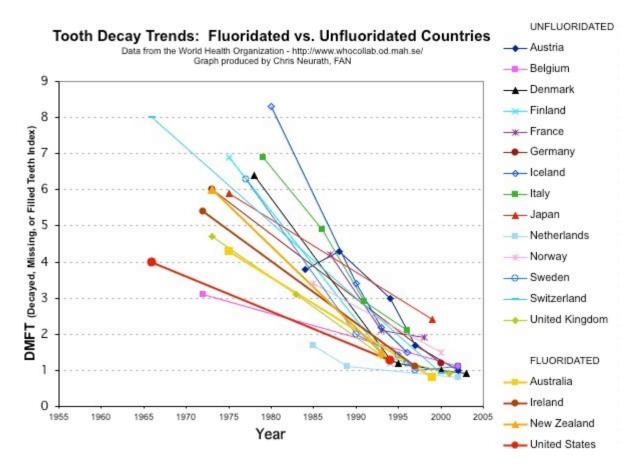
Instead, these studies indicate that it's mainly the widespread use of toothbrushes, toothpaste, and flossing that accounts for the reduction in children's' cavities. Essentially, improved oral hygiene, including the use of topical fluoride application, has created better teeth, not the ingesting of fluoridated water.

#### **Do Children in Non-Fluoridated Countries Have Bad Teeth?**

Many European countries have already realized that water fluoridation has nothing to do with caries prevention, and have banned fluoride in their drinking water, citing potential health hazards. Countries that have banned water fluoridation include:

| Austria     | Belgium | Denmark    |
|-------------|---------|------------|
| Finland     | France  | Germany    |
| Iceland     | Italy   | Luxembourg |
| Netherlands | Norway  | Sweden     |

And, according to the World Health Organization's figures, the children of these countries have teeth that are just as good as those in countries that use water fluoridation (see figure below).



#### Fluoride May CAUSE More Cavities Than it Prevents!

In fact, studies have shown that consuming too much fluoride might actually cause tooth decay, rather than prevent it.

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One such study, published in the September 2001 issue of *International Journal of Pediatric Dentistry*, found that South African children who drank water containing

high levels of natural fluoride (3 ppm), had **more** tooth decay than children in other parts of South Africa who drank much lower concentrations (between 0.19 to 0.48 ppm).

By comparison, fluoride-saturated American teenagers had **twice** the rate of cavities as the South African children drinking low levels of natural fluoride!<sup>36</sup>



According to the dental textbook, *Dentistry, Dental Practice and the Community*,<sup>37</sup> by Brian Burt, DBS and Steven Eklund, DDS, fluoride concentrations in water form a Jshaped curve, where cavities are reduced up to a point, and then begins to rise again as you're exposed to higher and higher levels of fluoride.

#### CDC Now Charged With Cover-Up, Professionals Demand Change

By the middle of August 2007, two separate events occurred, putting the issue of water fluoridation front and center.

On August 9, Daniel Stockin, a public health professional of The Lillie Center, Inc., presented the CDC's joint ethics panel with a detailed, formal complaint alleging unethical activities by the CDC. The complaint charged Oral Health Division manager William Maas and CDC Director Julie Gerberding with committing "serious and egregious" unethical actions, by not disseminating new findings about the real hazards of fluoridated water.<sup>38</sup>

Stockin stated:

"People with kidney disease or on dialysis should see this complaint and the report by the National Research Council on fluoride. And if you happen to be a member of the population with diabetes or HIV, you will be amazed how the NRC report contains important information you should know about – but that CDC has elected not to openly share with the public because it runs at odds with putting fluoride in drinking water."

On the same day, the Fluoride Action Network (FAN) released a Statement asking Congress to end water fluoridation in the United States, signed by more than 600 professionals, including a Nobel Prize winner, officers in the Union that represents Environmental Protection Agency professionals, and members of the National Research Council panel on fluoride's toxicology.<sup>39</sup> By October 2007, they had more than 1,000 professional signatories.

#### **Professionals Demand Fluoride Supporters to Provide Scientific Basis, Under Oath, For Their Continued Recommendation**

The report urges Congressional members to "*recognize that fluoridation is outdated, has serious risks that far outweigh any minor benefits, violates sound medical ethics, and denies freedom of choice.*" And, it cites eight recent events that call for an urgent end to water fluoridation. Among them:

- The 500-page review of fluoride's toxicology by the National Research Council of the National Academies (see page 11), published in 2006.<sup>40</sup>
- Evidence from the U.S. Centers for Disease Control and Prevention (CDC) that found 32 percent of U.S. children has dental fluorosis, which is caused by excess fluoride.
- The American Dental Association's 2006 policy change, which recommends not giving fluoridated water to infants for the first 12 months of life.
- A Harvard University study that found a five- to seven-fold increased risk of osteosarcoma (bone cancer) among young men who were exposed to fluoride between the ages of 6 and 8.
- The CDC's recognition that fluoride is beneficial in reducing tooth decay when it's applied topically, not taken systemically.

The statement calls for members of Congress to sponsor a new Congressional Hearing on Fluoridation that requires those who continue to support water fluoridation to provide scientific basis, under oath, for their continued recommendations.

According to one of the statement's signers, Dr. Arvid Carlsson, winner of the 2000 Nobel Prize for Medicine, "*Fluoridation is against all principles of modern pharmacology. It's really obsolete.*"

At the time of this writing, it's too soon to tell whether Congress will listen, or uphold this dangerous, toxic scheme.



### How You Can Avoid Fluoride

Did you know that a family-size tube of fluoridated toothpaste contains enough fluoride to kill a 25-pound child?

Children often swallow their toothpaste, and should therefore be monitored when brushing their teeth, and taught to spit it all out properly.



You can also protect yourself by using only non-fluoride toothpaste, and not receiving fluoride treatments from your dentist. Certain cements, fillings and bonding materials also contain fluoride, so talk to your dentist about non-fluoride options in those cases.

You definitely should NOT give your child additional fluoride supplements, which some dentists will prescribe if you live in a non-fluoridated area.

#### The Key to Healthy Teeth is in Your Diet!

If you're wondering how to keep your teeth healthy, remember that fluoride was never



the answer in the first place. Instead, look to your diet for naturally healthy teeth. In fact, most people whose diet includes very little sugar and few processed foods have very low rates of tooth decay.

Limiting, or eliminating sugar, and avoiding processed foods -- along with regular cleanings with your natural dentist -- will ensure that your teeth stay healthy naturally.

#### How to Remove Fluoride From Your Water Supply

Unfortunately, removing fluoride from your drinking water is a far more difficult feat. Whereas some other chemicals added to your drinking water will evaporate, fluoride is not one of them. Neither cooking, food processing, regular filtration, nor digestion will remove fluoride.

The only known way to remove fluoride from water is by using a reverse osmosis filter. A simple carbon filter will not remove fluoride.

You should also remember to filter not only the water that you drink, but also the water you use to wash vegetables, make ice cubes, and cook with. In addition to your kitchen, you might want to consider adding filters in your shower and your tub as well, since you will also absorb contaminations through your skin when you shower or bathe.

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