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To: <coshita@oehha.ca.gov>  
CC: "DeMaio, Councilmember Carl" <CarlDeMaio@sandiego.gov>  
Date: 8/8/2011 2:36 PM  
Subject: State to Decide if Fluoride in our Drinking Water is a Carcinogen

OEHHA,

Systemic fluoride in my drinking water is a health risk to me:

- a.. In February 2011 San Diego began putting fluoride in drinking water.
- b.. Fluoride is nearly impossible to completely remove from water
- c.. Fluoride added to our drinking water is waste from the aluminum industry and is toxic to humans.
- d.. Fluoride is not FDA approved for human consumption.
- e.. Studies show as we age toxic fluoride accumulates in our bones and weakens them.
- f.. Fluoride in our drinking water (systemic) is especially toxic to our children.

Please add fluoride to your list of carcinogens during your October 2011 meeting. Fluoride should never be added to our drinking water or anything else humans consume.

Thank you,  
Phil Young  
Pacific Beach, CA

[http://articles.mercola.com/sites/articles/archive/2011/08/08/bone-fluorides-magnet-new-studies-half-life.aspx?e\\_cid=20110808\\_DNL\\_art\\_1](http://articles.mercola.com/sites/articles/archive/2011/08/08/bone-fluorides-magnet-new-studies-half-life.aspx?e_cid=20110808_DNL_art_1)

The Bone Destroying Daily Drink Fooling Millions of Americans  
Posted By Dr. Mercola | August 08 2011 | 128,316 views

By The Fluoride Action Network (FAN)

Two new North American studies investigated the impact of low-level fluoride consumption on the strength and density of bone.

While these important (yet largely overlooked) studies are not slam-dunks, they provide some of the strongest evidence to date that low-level fluoride exposure alters the quality of bone tissue, and strengthen concerns that fluoride exposure may increase the rate of bone fracture in the population.

Skeletal Fluorosis-A Real Danger of Excessive Fluoride Consumption

The harmful effects of chronic fluoride exposure on bone are well established. Since the 1930s it has been known that fluoride intake causes excessive bone growth, which can result in joint pain, bone pain, and stiffness. These symptoms are difficult to distinguish from arthritis.

Other symptoms indicative of early clinical stage skeletal fluorosis include:

- a.. Burning, prickling, and tingling in your limbs
- b.. Muscle weakness
- c.. Chronic fatigue
- d.. Gastrointestinal disorders
- e.. Reduced appetite and weight loss

The second clinical stage of skeletal fluorosis is characterized by:

- a.. Stiff joints and/or constant pain in your bones; brittle bones; and osteosclerosis
- b.. Anemia
- c.. Calcification of tendons, or ligaments of ribs and pelvis
- d.. Osteoporosis in the long bones
- e.. 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 difficult, and your vertebrae partially fuse together, effectively crippling you. You have a heightened risk of developing problems from even mild exposure to fluoride, such as bone fractures, if you:

- a.. Are elderly
- b.. Are deficient in calcium, magnesium, and/or vitamin C
- c.. Have cardiovascular problems
- d.. Have kidney problems

How Much Fluoride is Too Much?

What is still not clearly established is whether fluoridated water, consumed over a lifetime, may lead to at least the initial stages of skeletal fluorosis. A threshold intake amount of 10 milligrams (mg) fluoride per day for an adult for a decade or two has been suggested as necessary before skeletal fluorosis is likely to result. Do Americans get this much fluoride? No sufficiently large study has ever been conducted in the US to determine the total intake of fluoride. However, a recent British study looked at a biomarker for fluoride intake, which is the amount of fluoride excreted over 24 hours in urine. It found that several percent of adults were likely already exceeding an intake of 10 mg/day.

The situation may actually be far worse in the US, since in Britain, only 10 percent of the population has fluoridated water, whereas in the US over 65 percent does. Fluoridated water was an important contributor to the high fluoride intake among some individuals in the British study.

Skeletal fluorosis was identified in a 2006 report by the National Research Council (NRC) as an adverse effect that needed to be considered by the EPA in establishing maximum safe levels of fluoride in drinking water. But so far, the EPA has done no serious analysis of the potential for skeletal fluorosis in the US.

How Fluoride Damages Your Bones

The NRC report had even more concern for another effect of fluoride on bone, which is the decrease in bone strength that can result in higher risks of fractures, especially in the elderly. This effect has not been as well studied as skeletal fluorosis, but since fractures of the hip in the elderly are such a serious health problem, often sending patients into a spiral of declining health ending in death, it is crucial to know whether water fluoridation is contributing to decreased bone strength. Some basic

information about how fluoride acts in your body is helpful to understanding its health effects.

First, about half of the fluoride you consume is excreted through your kidneys into your urine, while the other half becomes bound in your skeleton. The fluoride that enters your bones is eliminated very slowly. The NRC estimates the biological half-life of fluoride in bone (the time for half of it to be removed) is as long as 20 years.

Unfortunately, most people-especially if you're drinking fluoridated water on a daily basis-have constant low level exposures to fluoride, they are taking more fluoride into their bones than what is being removed, so the level of fluoride in their bones increase steadily over time.

Young people generally don't have more than a few hundred parts per million (ppm) of fluoride in their bones, whereas older people living in fluoridated areas can have several thousand ppm, which is the level where skeletal fluorosis begins. Fluoride excretion in urine is reduced in those with decreased kidney function, which is also very common in older people. So, the elderly not only have accumulated higher levels, but they are losing the ability to effectively remove it as well.

An analogy can be made between fluoride accumulating in bone and persistent chemicals such as dioxin or PCBs, which often accumulate, because they also have long biological half-lives in human tissues.

Your bone is constantly being "turned over" in a process called remodeling. The mineral portion of your bone is broken down by one type of cell and then rebuilt by another. Fluoride appears to interfere with this essential process. The result is excessive mineralization and enlargement of your bones, and a disruption of the precise architecture needed to maintain resistance to fracture.

Ironically, while fluoride often does increase your bone mineral density, which is a commonly used measure of bone quality, it simultaneously makes your dense bone more brittle and therefore more subject to fracture. Remember thicker bone does NOT equate to stronger bone.

Can Therapeutic Doses of Fluoride Cause Osteoporosis?

Supporting this are human studies performed, given therapeutic doses of fluoride to try to prevent fractures from osteoporosis, which causes low bone density, often have found increases in fracture rates in the treated patients, even though their bone density increased.

So, the important scientific question is whether water fluoridation can lead to high enough levels of fluoride in your bones to noticeably weaken them. A dozen or so epidemiological studies have investigated this, with mixed results. Some of them show that fairly low levels of fluoride intake can increase the risk of fractures, whereas others have found no effect.

An important recent study tried a different approach.

Instead of looking at the rate of fractures in people exposed to varying amounts of fluoride, it used samples of actual bone from people undergoing hip replacement to see whether the bone fluoride concentration correlated with the mechanical strength of those samples.

This type of study had been done on laboratory animals, but never in humans. The work was completed in 2001 but was not published until 2010. The number of subjects in the study was small, with only 92 people, so the results were not definitive. The authors themselves do not draw any firm conclusions. Yet when the results are examined carefully, there is clear evidence that the people with higher bone fluoride levels had weaker bones, by several different measurements of bone quality.

The most straightforward measurement of bone strength was the amount of compression force the sample could withstand before breaking, which is called the Ultimate Compressive Stress. The people with the highest levels of fluoride in their bone had their sample break under about 50 percent less stress than those with the lowest levels of fluoride. This result was statistically significant.

A serious limitation of the study was that it failed to control for age, even though it found that older people tended to have weaker bones. The problem is that since older people also tend to have higher bone fluoride, to disentangle the effect of fluoride from that of age, they should have controlled for age in some manner. For example, they could have looked at a relatively narrow age range subgroup of their subjects to see if the relationship between fluoride and bone strength could still be detected when age was "held constant".

Other, more sophisticated methods of controlling for age are also possible.

Government funding for research on fluoride has a history of granting money only to researchers who defend fluoridation, so the decision to leave this study ambiguous may have been to avoid a cut-off in future research dollars.

#### Other Evidence of Bone Damage Caused by Fluoride Ingestion

Another 2009 study suggests that fluoridated water might also be causing bone changes in young people, long before the bone fluoride concentration reaches the high levels in later life. Several types of bone mineral density measurements (BMD) were made in 11 year olds and related to fluoride intake. Several associations were found. In girls the BMD tended to decrease with higher fluoride intake, while in boys it tended to increase.

The number of children in the study was relatively small and the effects were generally weak.

The study didn't try to find out whether these changes in bone had an effect on fracture rates, however. It is worth noting that the Chachra study on bones of hip replacement patients also found only weak associations between fluoride and BMD, yet found a clear association between fluoride and bone quality. So the fact that Levy's study only found weak associations between fluoride and BMD doesn't preclude the possibility that fluoride in children may be more clearly affecting bone strength.

Simply finding that water fluoridation may be sufficient to cause changes in bone remodeling at this age is worrying. Dental proponents of fluoridation typically ignore all effects of fluoride except on the teeth, or even maintain that there are no such effects.

Clearly, the effect of water fluoridation on bone health cannot be dismissed as non-existent.

When these recent studies are seen in the light of earlier work, the concern is heightened. In one of the best bone fracture studies on adults to date, it was found that hip fracture rates increased steadily starting from the lowest fluoride level examined, which was similar to what many Americans are getting from fluoridated water.

In children, one of the only studies ever conducted looked at fracture rates in relation to dental fluorosis . Dental fluorosis is disrupted enamel development that occurs in children exposed to fluoride. This study found that bone fracture rates rose sharply with increasing severity of dental fluorosis. In the US today, roughly 40 percent of all children have dental fluorosis, and several percent have the more severe stages. This biomarker of childhood fluoride exposure tells us that overexposure and the accompanying risk to bone health starts early.

#### How to Reduce Your Exposure to Fluoride

Although not discussed in this article, the health effects of fluoride ingestion are numerous. For a list of documented health effects, please see FAN's Health Effects Database.

The science is quite clear: Fluoride should NOT be ingested. So, first of all, don't drink fluoridated water. You can remove about 80 percent of the fluoride from your drinking water using a reverse osmosis (RO) filter. It is really hard to remove all of it with virtually any commercial filter. If you are concerned about fluoride the BEST solution is to help the Fluoride Action Network in their campaign to remove it from the water supply entirely.

As discussed above, you are exposed to fluoride from many sources other than the obvious lineup of toothpastes and mouth rinses (which I recommend using fluoride-free versions of as well). Far less obvious sources of fluoride, which I highly recommend avoiding, include:

Non-organic foods (to avoid pesticide residue) Food and beverages processed with fluoridated water, including organic processed foods and beverages

Mechanically de-boned meat Pharmaceutical drugs, especially SSRI antidepressants and fluoroquinolone antibiotics like Cipro

Soy baby formulas Instant tea

Processed breakfast cereals Soda and fruit juices

You're even exposed to fluoride through air pollution! For more information about airborne fluoride pollution, please review FAN's Fluoride Pollution page.

Important! The producers of this powerful film are allowing a full and FREE preview through August 13th in celebration of Fluoride Awareness Week (Aug 7 - 13)! You can support Fluoride Action Network by purchasing the

Professional Perspectives DVD at a special price of \$10 during Fluoride Awareness Week.

What You Can Do TODAY!

The Fluoride Action Network has a game plan to END water fluoridation in both Canada and the United States, and this Fluoride Awareness Week will hopefully bring us a lot closer to that goal by spreading mass awareness. Our fluoride initiative will primarily focus on Canada since 60 percent of Canada is already non-fluoridated. A few weeks ago the city of Calgary stopped fluoridating over a million people and last October the citizens of Waterloo, Ontario voted it out in a referendum. If we can get the rest of Canada to stop fluoridating their water, we believe the U.S. will be forced to follow.

Please, join the anti-fluoride movement in Canada, New Zealand and the United States by contacting the representative for your area below.

Contact Information for Canadian Communities:

1.. If you live in Ontario, Canada, please join the ongoing effort by contacting Diane Sprules at [diane.sprules@cogeco.ca](mailto:diane.sprules@cogeco.ca).

2.. The point-of-contact for Toronto, Canada is Aliss Terpstra. You may email her at [aliss@nutrimom.ca](mailto:aliss@nutrimom.ca).

Contact Information for American Communities:

We're also going to address three US communities: New York City, Austin, and San Diego:

1.. New York City, NY: With the recent victory in Calgary, New York City is the next big emphasis. The anti-fluoridation movement has a great champion in New York City councilor Peter Vallone, Jr. who introduced legislation on January 18 "prohibiting the addition of fluoride to the water supply."

A victory there could signal the beginning of the end of fluoridation in the U.S.

If you live in the New York area I beg you to participate in this effort as your contribution could have a MAJOR difference. Remember that one person can make a difference.

The point person for this area is Carol Kopf, at the New York Coalition Opposed to Fluoridation (NYSCOF). Email her at [NYSCOF@aol.com](mailto:NYSCOF@aol.com). Please contact her if you're interested in helping with this effort.

2.. Austin, Texas: Join the effort by contacting Rae Nadler-Olenick at either: [info@fluoridefreeaustin.com](mailto:info@fluoridefreeaustin.com) or [fluoride.info@yahoo.com](mailto:fluoride.info@yahoo.com), or by regular mail or telephone:

POB 7486

Austin, Texas 78713

Phone: (512) 371-3786

3.. San Diego, California: Contact Patty Ducey-Brooks, publisher of the Presidio Sentinel at [pbrooks936@aol.com](mailto:pbrooks936@aol.com).

Contact Information for New Zealand Communities:

1.. New Zealand: Contact Mary Byrne if you live in Hastings, New Plymouth, Hamilton or Wellington. Mary would like to hear from you! Email her at: mbyrne64@yahoo.co.nz

In addition, you can:

a.. Tell the EPA you expect them to uphold their duty to protect you and your children from this toxic food fumigant.

b.. Make a generous tax-deductible donation to the Fluoride Action Network, to help them fight for your rights to fluoride-free food and water.

c.. Check out FAN's Action Page, as they are working on multiple fronts to rid our food and water supplies of fluoride.

d.. For timely updates, join the Fluoride Action Network Facebook page.