FLUORIDATION AND HIP FRACTURES
1997 by John R. Lee MD

The costs and health effects of osteoporotic fractures in the US are enormous. The total cost of fracture care is now about $9 billion/year. It is estimated that about 350,000 hip fractures occur per year and the incidence is rising.

A study by the University of Iowa's Department of Preventive Medicine and Environmental Health, calculated that the lifetime risk of a fracture of the hip, spine or distal forearm is almost 40% in white women and 13% in men from age 50 years onward. Hip fractures account for 87-100% of fracture-related nursing home placements and 87-96% of short-term fracture costs.

In an effort to treat osteoporosis and prevent hip fracture, some doctors administer "therapeutic" doses of fluoride. Four US studies have examined the effect of these "therapeutic" doses and all of them found that, even though bone density appeared to increase, hip fracture rates increased within three years of treatment. In addition, all reported significant periarticular joint pain and gastrointestinal side effects in the treated subjects.

Dr. L. V. Avioli, Shoenberg Professor of Medicine at the Washington University School of Medicine, concluded that "sodium fluoride is accompanied by so many medical complications and side effects that it is hardly worth exploring in depth as a therapeutic mode for postmenopausal osteoporosis." Dr. Saul Genuith, chairman of the FDA advisory committee that analyzed the fluoride/fracture findings, was quoted in the Medical World News as saying the FDA "should quietly forget about fluoride."

More recently, attention has shifted to lower dosages of fluoride, such as found in fluoridated water. There are now at least eight studies that showed an increase of hip fracture incidence in fluoridated communities. They are summarized here:

In 1986, M.R. Sowers et al, in a retrospective study, found an increased fracture rate in both pre- and postmenopausal women relative to their water fluoride exposure.

In 1991, M.R. Sowers et al completed a prospective study again showing that water fluoride was correlated with more than double the unfluoridated fracture rates.

In 1991, Jacobsen et al showed a statistically significant increase of hip fracture incidence in fluoridated communities. They are summarized here:

In 1992, C. Danielson et al reported that the risk of hip fracture was approximately 30% higher for women and 40% higher for men in fluoridated communities. Among women at age 75, the risk was about twice as high in fluoridated communities.
In 1995, H. Jaqmin-Gedda et al, scientists from the University of Bordeaux, France, studied hip fracture rates in 75 civil parishes in southwestern France and found (after adjustment for multiple alternative variables) an increased risk [odds ratio] for hip fracture of 1.86, i.e., 86% more likely, in parishes with water fluoride levels higher than 0.11 ppm.

In addition, a number of studies suggest fluoride induces pathologically mineralized bone and a deterioration in the overall strength of bone. A 1994 report by P. Fratzl et al in the Journal of Bone & Mineral Research described abnormal bone mineralization after fluoride treatments. In that same year, C.H. Sogaard et al reported a marked decrease in trabecular bone quality after just five years of sodium fluoride therapy. Pediatric orthopedists are finding that, here in the US, sports injuries to the young are rising sharply - ranging from stress fractures of the lower spine in young gymnasts to tendonitis in swimmers. In 1992, orthopedic surgeon Carl L. Stanitski observed: "We are seeing more and more stress fractures in children and more and more injuries caused by repetitive use." Some might argue that overuse and too much training are the cause, but others are concerned that something is causing defective bone and connective tissue of US kids, and that something might well be fluoridation.

Conclusion: All studies of fracture rates relative to long-term fluoridation exposure indicate a significant increase in fracture risk from fluoridation. The increased fracture risk due to fluoridation appears to range from 40-100%, depending on the age of the subjects studied. For women in their seventh decade who have been exposed to life-long fluoridation, the risk of hip fracture is approximately doubled. The risk increases with fluoride concentration at all levels over 0.11 ppm. Increased bone and connective tissue injuries of US youngsters should alert us to the probability that our high fluoride environment is adversely affecting our youngsters as well as our elderly.

John R Lee, MD, is the former director of the Marin Medical Society in California and the author of Optimal Health Guidelines, Optimal Fluoridation and Gilbert's Disease and Fluoride Toxicity. The full text of this article was published in the research journal, Fluoride (Vol. 26 No. 4, pages 274-277, 1993).

JAMA on Fluoride and Hip Fractures

"Hip Fractures and Fluoridation in Utah's Elderly Population," a study by C. Danielson et al [Journal of the American Medical Association, August 12, 1992, 268:746-8], compared the incidence of femoral neck fractures in a community with long-standing water fluoridation (to 1 ppm) with the incidence in two communities without water fluoridation [less than 0.3 ppm]. The findings of this report support other epidemiologic studies suggesting that fluoride increases the risk of hip fracture."

- Journal of the American Medical Association

"A review of recent scientific literature reveals a consistent pattern of evidence - hip fractures, skeletal fluorosis, the effect of fluoride on bone structure, fluoride levels in bones and osteosarcomas - pointing to the existence of causal mechanisms by which fluoride damages bones…. [Fluoridation] proponents must come to grips with a serious ethical question: is it right to put fluoride in drinking water and to mislead the community that fluoride must be ingested, when any small benefit is due to the topical action of fluoride on teeth."


http://www.nofluoride.com/Hip_fractures_Lee.cfm
Risk factors for fractures in the elderly.
Jacqmin-Gadda H, Fourrier A, Commenges D, Dartigues JF.
Source
Institut National de la Santé et de la Recherche Médicale, Unité 330, Bordeaux, France.
Abstract
We report the results of a 5-year prospective cohort study of risk factors for fractures, including drinking fluoridated water, in a cohort of 3,216 men and women aged 65 years and older. We studied risk factors for hip fracture and fractures at other locations separately. We found a higher risk of hip fractures for subjects exposed to fluorine concentrations over 0.11 mg per liter but without a dose-effect relation (odds ratio (OR) = 3.25 for a concentration of 0.11-0.25 mg per liter; OR = 2.43 for > or = 0.25 mg per liter). For higher thresholds (0.7 and 1 mg per liter), however, the OR was less than 1. We found no association between fluorine and non-hip fractures. Non-hip fractures were associated with polymedication rather than with specific drug use, whereas fracture was associated with polymedication and use of anxiolytic and antidepressive drugs. Subjects drinking spirits every day were more likely to have hip fractures. Tobacco consumption increased the risk for non-hip fractures.
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SUMMARY
IT HAS NOW BEEN ESTABLISHED BY SCIENTIFIC CONSENSUS THAT WATER FLUORIDATION INCREASES THE RISK OF HIP FRACTURE IN PEOPLE 65+ YEARS OLD. HIP FRACTURE IS A MAJOR CAUSE OF DISEASE AND DEATH IN PEOPLE 65+ YEARS OLD.

ANALYSIS
It has been repeatedly demonstrated in statistically significant primary studies that artificial water fluoridation is harmful because it increases risk of hip fracture in people 65+ years old. The relevant studies are identified in the York Review (M. McDonagh, P. Whiting, M. Bradley, et al., "A Systematic Review of Water Fluoridation," NHS Centre for Reviews and Dissemination, The University of York, Report 18 (2000) which is available at: http://www.york.ac.uk/inst/crd/CRD_Reports/crdreport18.pdf
The York Review is limited to review of human epidemiological studies of water fluoridation (around 1 ppm fluoride). York Review at page 1 (which is page 16 of the download). Over 3200 primary studies on water fluoridation from years 1939 to 2000 were identified of which only eighteen investigated the association of hip fracture with water fluoridation. Id. at page
These eighteen studies provide a total of thirty analyses (men only, women only, or both in various age groups). Id. at page 10 and 48. A validity assessment was made for these studies to measure "The degree to which a result is likely to be 'true' and free from bias." Id. at page 48 and 101.

Of the said thirty analyses, eleven studied the effect of water fluoridation on hip fracture for people 65+ years old. Id. at page 48. Only four of these eleven studies produced statistically significant results according to the York Review. Id.; See the definitions of "Relative Risk" and "Statistical significance" in the York Review at pages 99-100 (pages 114-15 in the download). These four studies all find increased risk of hip fracture for people 65+ years old with water fluoridation. The York Review found no statistically significant studies published between years 1939 and 2000 that did not find increased risk of hip fracture for people 65+ years old with water fluoridation.

Explaining the above observations in more detail, I note that the York Review at page 48 presents the Relative Risk ("RR") and the 95% Confidence Interval ("95% CI") in Table 8.1. If a study has a RR of 1 in the 95% CI, the study is not statistically significant to demonstrate more or less harm from water fluoridation. York Review at 99-100. In other words, a study with a RR of 1 in the 95% CI should not be relied upon to demonstrate increased or decreased harm. A RR greater than 1 throughout the 95% CI is statistically significant proof that fluoridated water causes greater harm. Id.

Because all four of the statistically significant studies show increased risk of hip fracture for people 65+ years old, it is appropriate to conclude that water fluoridation is not safe for people 65+ years old and therefore that water fluoridation should be stopped.

For the record, the four relevant studies are identified in said Table 8.1 as Jacqmin-Gadda (1998), Danielson (1992), Jacobsen (women) (1992) and Jacobsen (men) (1992). The Jacqmin-Gadda (1998) study had the highest validity score and is the most "likely to be 'true' and free from bias" of the said four studies. Jacqmin-Gadda (1998) projects that it is most likely that there are two and one half times more such hip fractures with fluoridated water compared to without fluoridated water. York Review at page 48 (page 63 of 125 in the download). While the other three identified studies project lower rates of increase of such hip fractures, these other three studies have significantly lower "validity scores" reported in said Table 8.1.

It is reported "that approximately 50 percent of the fluoride ingested each day accumulates in bones." Connett (2010) at page 172. Therefore knowing that people 65+ years old have an increased incidence of hip fracture caused by water fluoridation (as the statistically significant studies in the York Review repeatedly demonstrate) one would expect it likely that the longer people 65+ years old have drunk fluoridated water or the more fluoride they have retained in their bones, the greater their increased risk of hip fracture would be. This might also be a factor that helps to explain the different magnitudes of increased risk projected by the said four studies. Because fluoride substitutes for calcium in the bones, differing calcium ingestion levels for the people in the said four studies might also be a factor that helps to explain the different increased risk projections.

The outer sheath of bones is called the cortical bone. Connett (2010) at page 17. "The cortical bone is critical for protection against breakage when the bone is exposed to a heavy blow or torsional stress." Id. As reported in Connett (2010) at page 17 (citations omitted): "One of the earliest trials of fluoridation (Newburgh, New York, versus Kingston, New York, 1945-1955) found approximately twice as many cortical bone defects in the fluoridated city, Newburgh, compared with Kingston, the unfluoridated city. The fact that the defects occurred in the cortical part of the bone is significant for the potential for fractures." Hip fracture for people 65+ years old is a significant health impact in the United States. "About 300,000 Americans are hospitalized for a hip fracture every year." Connett (2010) at
"Fracture of the hip is a major cause of morbidity and mortality [disease and death] in persons 65 years of age and older."

"Aside from the fact that one in five patients die within 6 months of the fracture occurring, hip fractures lead to serious disability. Many basic functions such as dressing, climbing stairs, walking and transferring are markedly interfered with following a fracture. This can result in loss of both confidence and independence and an increased risk of development of medical complications."

**CONCLUSION**

Because hip fracture is a major cause of disease and death in persons 65+ years old and because all four statistically significant studies for hip fracture rates in people 65+ years old reported in the York Review find an increased risk of hip fracture with water fluoridation, WATER FLUORIDATION MUST BE DISCONTINUED. Of these four statistically significant studies, the study reported in the York Review as most likely to be true and free from bias, Jacqmin-Gadda (1998), projects two and one half times more hip fractures for people 65+ years old with water fluoridation.

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The York Review at page xiv (page 15 of 125 in the download at http://www.york.ac.uk/inst/crd/CRD_Reports/crdreport18.pdf) states in its Conclusions that it "presents a summary of the best available and most reliable evidence on the safety and efficacy of water fluoridation," but it also concludes "little high quality research has been undertaken." Besides finding the harm from dental fluorosis that is already recognized (measured by the CDC in the United States in 1999-2004 to be 41% of all children then aged 12-15 years old) these Conclusions in the York Review find "the research is of insufficient quality to allow confident statements about other potential harms." York Review at page xiv. In other words, the comprehensive York Review has found that the evidence available in year 2000 (after 55 years of water fluoridation) may not be used to make a confident statement that standard water fluoridation is safe from the other potential harms explored by the York Review. The other potential harms explored by the York Review include other bone fractures, cancer, Down's syndrome, mortality, senile dementia, goitre, lowered IQ, hypersensitivity, and skeletal fluorosis. York Review at 52, 54, 59-60.

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Statistically significant evidence exists that fluoridated water increases the risk of humerus fractures for men 65+ years old. Table 8.2 on page 49 of the York Review. In said Table 8.2, there are results from numerous studies of the impact of fluoridated water on bone fractures (other than hip fracture). However, a review of all of these studies in said Table 8.2, finds that only one study provides statistically significant results. That one study (Karagas (1996)) reports a statistically significant increase in risk of humerus fractures for men 65+ years old when they drink fluoridated water.
In this forum, I previously presented conclusive evidence that fluoridated water increases the risk of hip fracture for people 65+ years old. Hip fracture is a major cause of disease and death for people 65+ years old.

Because water fluoridation significantly increases the risk of bone fractures for people 65+ years old, water fluoridation should be stopped.


The York Review is limited to review of human epidemiological studies of water fluoridation (around 1 ppm fluoride). York Review at page 1 (which is page 16 of the download).

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be hazardous waste disposal/filtration units. It must be stopped.

HUMAN TOXICITY, ENVIRONMENTAL IMPACT & LEGAL IMPLICATIONS OF WATER FLUORIDATION here [http://www.enviro.ie/risk.html](http://www.enviro.ie/risk.html)

FLUORIDE CAUSES CANCER – Dr. John Yiamouyiannis [http://www.youtube.com/watch?v=SYxLrtdYM4](http://www.youtube.com/watch?v=SYxLrtdYM4) “Our studies show that cancers of the gastrointestinal tract, kidney, bladder, breast and ovaries are those primarily associated with fluoride intake”. John Yiamouyiannis PhD, Cancer Control Journal, Vol. 5, no/1 + 2, p. 75.

FLUORIDE CAUSES CANCER - Dr. Dean Burk - Former Chief of Cytochemistry at National Cancer Institute for 30 years [http://www.youtube.com/watch?v=CkqK7XyfLg0](http://www.youtube.com/watch?v=CkqK7XyfLg0)

FLUORIDE’S LINK TO CANCER - DR. DAVID KENNEDY [http://www.youtube.com/](http://www.youtube.com/)


FLUORIDE HEALTH EFFECTS DATABASE [http://www.fluoridealert.org/health/](http://www.fluoridealert.org/health/)


IRELAND – FLUORIDE IS CAUSING YOU HIGHER INCIDENCES OF PANCREATIC AND PROSTATE CANCER & MORE CASES OF LEUKAEMIA.


BRAIN DEAD IF YOU STILL THINK ‘WATER FLUORIDATION’ IS A GOOD IDEA [http://www.g-tigerclaw.com/Fluoride/fluoride_strategy.htm](http://www.g-tigerclaw.com/Fluoride/fluoride_strategy.htm)

FIREWATER FILM [www.firewaterfilm.com](http://www.firewaterfilm.com)

An Educational Website about the dangers of dental mercury, mercury free dentist practices, and fluoride fraud. [http://www.dentalconfessions.com/](http://www.dentalconfessions.com/)