

**Media Release - FANNZ
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Fluoride-bone cancer denialist's study fails

Five years after being promised to disprove the link between fluoride and osteosarcoma bone cancer, the promised study has finally been published, failing in its promise, as predicted by international fluoride experts. The study only looked at bone-fluoride level at the time of osteosarcoma, which is irrelevant to age-related exposure effect shown in the earlier research it was supposed to disprove. It just shows total lifetime exposure to fluoride; not whether it occurred during the critical 6-8 year old period, shown by the earlier research.

“Fluoridation promoters have been relying on this failed promise ever since 2006, to defend continued fluoridation in spite of the risk. What will they rely on now?” asks Mary Byrne, National Coordinator of Fluoride Action Network. “Why, spinning Douglass’ study as if it were valid of course. They have already started – what else can they do? If they admit Douglass failed, they must admit that fluoridation should end immediately” answers Ms Byrne.

Osteosarcoma kills between 3 and 4 NZ male youths each year. Legal action against councils and fluoridation promoters began being prepared in the USA as soon as Bassin’s 2001 study was discovered in 2006, having been suppressed for four years. “Publication of Douglass’ failed study now opens the doorway for such action” suggests Mark Atkin, FANNZ’ legal adviser.

“Now that Douglass’ study is finally published, it is clearly incapable of refuting Bassin’s work” according to FAN director, Dr Paul Connett, Ph.D. “Bassin’s study was a high quality product; Douglass’ study was not” he concludes. “And it was only published in a dental journal, published by fluoridation promoters The International Association of Dental Research – why not in *Cancer Causes and Control* like his original promise, and Bassin’s study? Would it not have passed objective peer-review?” adds Ms Byrne.

New Study Fails to Refute Fluoride-Osteosarcoma Link

Fluoride Action Network USA

NEW YORK, Aug. 2, 2011 /PRNewswire-USNewswire/ -- A paper in the *Journal of Dental Research* by dentist Chester Douglass and colleagues, "An Assessment of Bone Fluoride and Osteosarcoma," (7/28/11) claims to show no association between fluoride bone levels and osteosarcoma, a form of bone cancer. However, Douglass' study has serious scientific flaws and is incapable of disproving a previous study (Bassin *et al.*, 2006) which linked water fluoridation to osteosarcoma, reports the Fluoride Action Network (FAN).

Bassin found a 500% to 600% increased risk for young boys, exposed to fluoride in their 6th to 8th years, of later developing osteosarcoma. Douglass' study does not address exposure during this critical period because it measured the level of fluoride in bone, which accumulates fluoride over a lifetime. These bone levels provide no information about when the person was exposed to fluoride.

Not only does Douglass' study fail to refute Bassin's main finding, it suffers from other serious weaknesses:

- 1) **Douglass' study was much smaller and weaker than Bassin's.** It had only 20 control subjects under age 30, a fifth of Bassin's. For this key age group, Douglass' study was so small it could provide no reliable conclusions. Even Douglass admitted this serious limitation.
- 2) **Douglass' choice of comparison group is suspect.** Douglass compared the bone fluoride level of patients with osteosarcoma to "controls" with other forms of bone cancer. If fluoride also causes these other bone cancer types, then one would not expect to find any difference in bone fluoride between these groups. It is biologically plausible that fluoride could cause other bone cancers because it reaches such high concentrations in bone. One of the only studies of fluoride and non-osteosarcoma bone cancers did find a link, but this evidence was never mentioned by Douglass.
- 3) **The controls were severely mismatched to the cases.** Controls were much older (median 41 yrs) than the cases (18 yrs). The risk of osteosarcoma is highly age-dependent. Also, fluoride builds up in bone with age. Given Douglass' small sample size, it is unlikely he could have adequately compensated for the gross mismatch in age, especially because of these two simultaneous age dependencies. The groups were also mismatched on sex ratio, and osteosarcoma risk is well known to be sex dependent. Properly adjusting for sex and age would be virtually impossible.

In 2001, Douglass signed off on Elise Bassin's Ph.D. dissertation which found the strong association between fluoride and osteosarcoma. When it was later published in a peer-reviewed scientific journal in 2006, *Cancer Causes and*

Control, an accompanying letter from Douglass claimed that his "larger" study would eventually refute Bassin's findings. But Douglass also told a Fox News reporter that Bassin "... did a good job. She had a good group of people advising her. And it's a nice-it's a nice analysis. There's nothing wrong with that analysis."

Now that Douglass' study is finally published, it is clearly incapable of refuting Bassin's work. According to FAN director, Paul Connett, Ph.D., "Bassin's study was a high quality product, Douglass' study was not."

Chris Neurath, FAN's Research Director, points out "Even though Douglass collected extensive fluoride exposure histories from hundreds of other controls, that data was ignored in this paper. FAN is calling for the release of all of the Douglass data. The only way to get to the bottom of Douglass' two decade's study is to make the data available for any independent researcher to check and do the analyses which Douglass has failed to provide. The public has paid millions for this data, why is most of it still behind locked doors?"

One reason is suggested in Douglass' conflict-of-interest declaration where he says he has "... written reviews of the literature for several companies that sell, reimburse for, or do research on preventive dentistry products, most notably GlaxoSmithKline, Colgate-Palmolive, Dentsply, Quintile, Delta Dental Plans...."

Omitted was his paid editorship of Colgate's promotional dental newsletter, which regularly contains advertisements for Colgate's fluoride products.

The International Association of Dental Research (IADR), publishers of *The Journal of Dental Research*, has a history of promoting fluoridation.

Connett says, "In my opinion, it seems that Douglass is more interested in protecting fluoride than investigating this issue objectively. Bassin's work suggests fluoridation may be causing a frequently fatal cancer in teenage boys. Douglass, after five years of trying, has failed to refute this disturbing evidence. How long will fluoridation promoters be allowed to continue to spin this issue?"

"Why are dentists - especially those who have shown a strong interest in protecting the water fluoridation program - conducting and publishing cancer research, anyway?" asks Connett.

A more detailed critique of Douglass' paper will be posted soon at www.fluoridealert.org.