

#### He Said She Said

Albuquerque New Mexico

April 9<sup>th</sup> 2014



egram sent to ADA Members November 9<sup>th</sup>, 2006

If liquid concentrate or powdered infant formula is the primary source of nutrition, it should be mixed with water that is fluoride free or contains low levels of fluoride to reduce the risk of fluorosis.





hydrofluosilicic acid

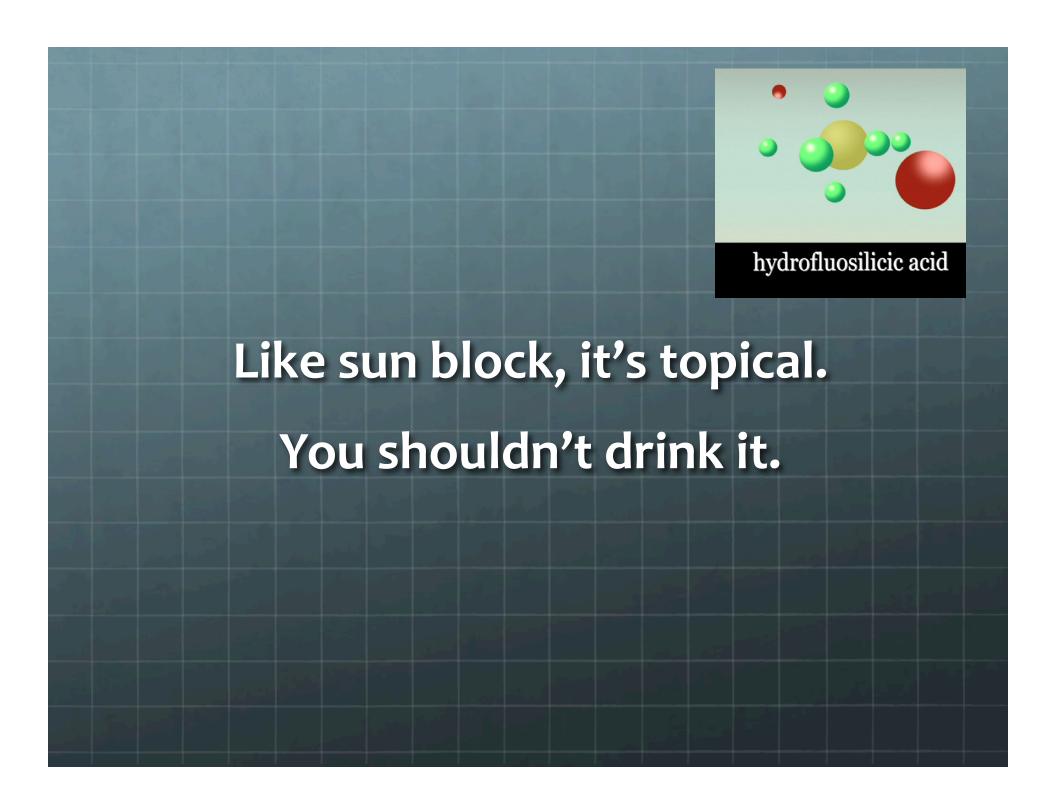
First:

Does fluoride work to reduce tooth decay if swallowed?

No, it does not. 1

The only measurable dental effects are topical. 2

- 1 Featherstone, J Journal of the American Dental Association 7/2000
- 2 Morbidity and Mortality Weekly Report CDC on Fluoride August, 2001







August 17, 2001 Vol. 50/No. RR-14

The prevalence of dental caries in a population is not inversely related to the concentration of fluoride in enamel (37), and a higher concentration of enamel fluoride is not necessarily more efficacious in preventing dental caries (38).

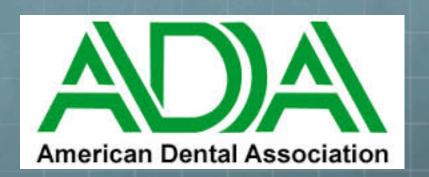
37. Clarkson BH, et al., Rational use of fluorides in caries control. In: Fejerskov O, Ekstrand J. Burt BA, eds. Fluoride in dentistry. 2<sup>nd</sup> ed. Copenhagen 38. Munksgaard, 1996, Nature and roll of loosely bound fluoride in dental caries. Journal of Dental Research Vol. 69 1990





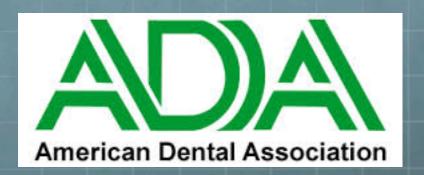
August 17, 2001 Vol. 50/No. RR-14

# Fluoride's predominant [anti-cavity] effect is posteruptive and topical . . .



"Even when the outer level of enamel has higher fluoride levels, such as 1000 ppm, it does not measurably withstand acidinduced dissolution any better than enamel with lower levels of fluoride."

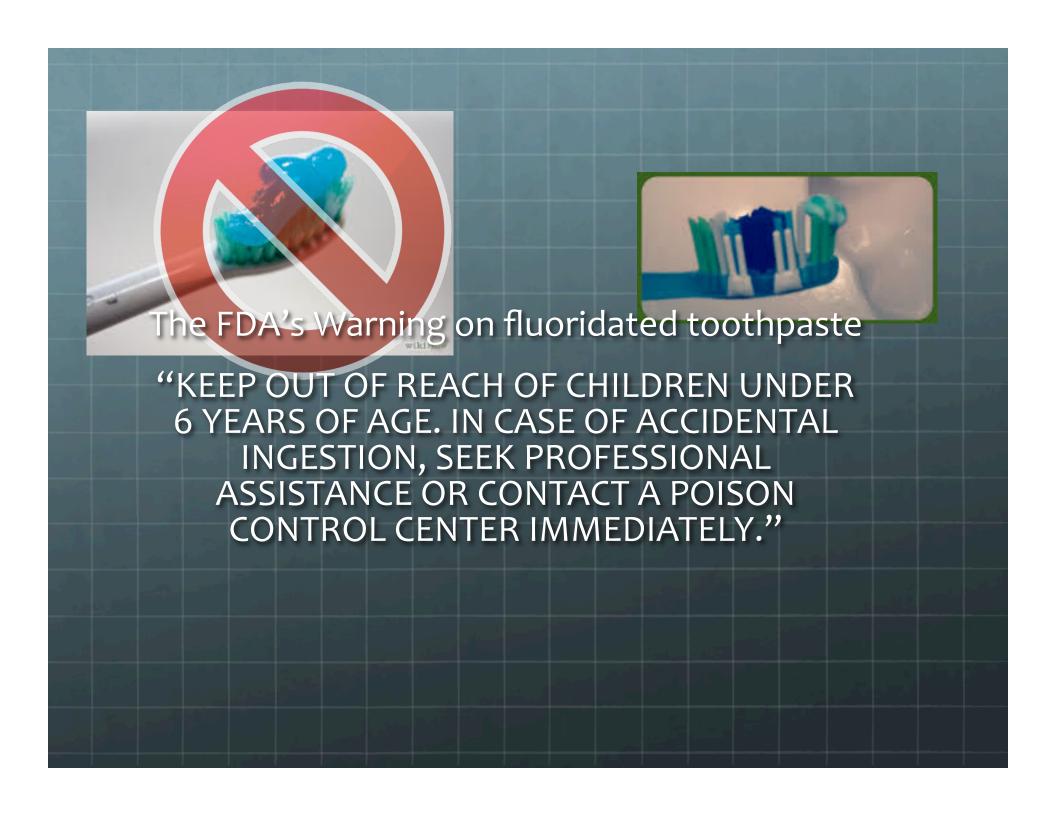
Featherstone J., Journal of the American Dental Association 2000



"The fluoride incorporated developmentally—that is systemically in to the normal tooth mineral – is insufficient to have a measurable affect on acid solubility."

Featherstone J., Journal of the American Dental Association 2000

## Fluoride's anticaries effects are topical







It's decay inhibition effects are topical on the germs that cause decay.

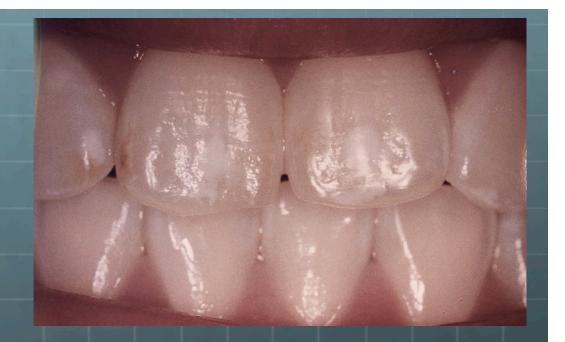




Because Fluoride inhibits the bacteria's ability to breathe and digest.



Just like Fluoride inhibits the cells in a child's body making new teeth and bones.



Dental Fluorosis is due to systemic inhibition of matrix metalloproteinase-20 (MMP-20).

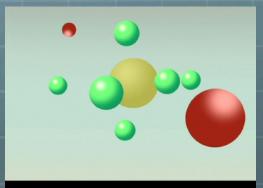
DenBesten et al., Effects of fluoride on rat dental enamel matrix proteinases. Archives of Oral Biology Nov. 2002



#### **Function:**

Proteins of the matrix metalloproteinase (MMP-20) are involved in the breakdown of extracellular matrix in normal physiological processes, such as embryonic development, reproduction, and tissue remodeling, as well as in disease processes, such as arthritis and metastasis. Most MMP's are secreted as inactive proproteins which are activated when cleaved by extracellular proteinases.

http://en.wikipedia.org/wiki/MMP20#Clinical\_significance



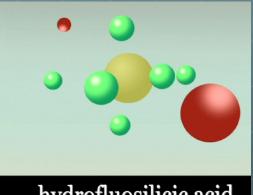
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Second:

Is fluoride safe for babies or the handicapped?

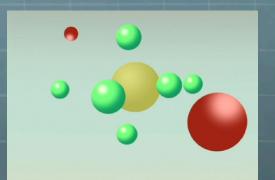
No, it is not. Just do the math.<sup>3</sup>

3. Levy SM et al Sources of fluoride intake in children. J Public Health Dent. 1995



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Fluoridation advocate Admits F tap-water can Poisons Babies http://youtu.be/OUzEJoW1U2s

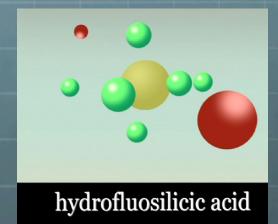


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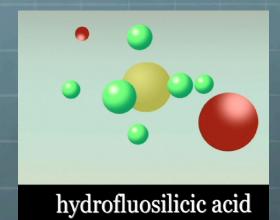
#### Table 1. DIETARY FLUORIDE SUPPLEMENTATION SCHEDULE

Age	<0.3 ppm F	0.3 to 0.6 ppm F	>0.6 ppm F
Birth to 6 months	0	0	0
6 mo to 3 years	0.25 mg	0	0
3 to 6 years	0.50 mg	0.25 mg	0
6 to at least 16 years	1.00 mg	0.50 mg	0

American Academy of Pediatric Dentistry Guideline on fluoride Therapy 2013



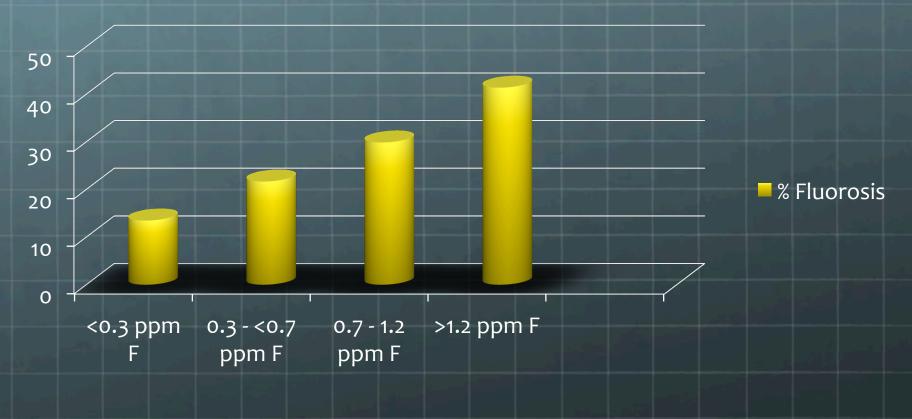
Research has shown that mother's milk has almost no fluoride and breastfeeding is the baby's best food.



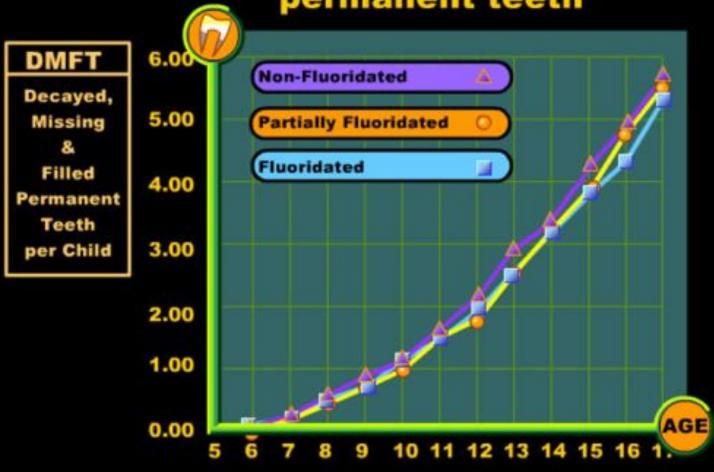
Fluoride in tap water is responsible for a substantial percentage of dental fluorosis. 1987 National Institute of Dental Research study found that 66% of the children in fluoridated areas of the U.S. had at least one tooth visibly damaged by dental fluorosis. 4

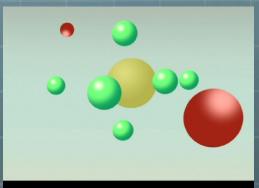
4. Heller et al Dental Caries and Dental Fluorosis Journal of Public Health Dentistry July, 1997





4. Heller et al Dental Caries and Dental Fluorosis Journal of Public Health Dentistry July, 1997 Fig. 1 Tooth decay in fluoridated (F), partially fluoridated (PF) & nonfluoridated (NF) areas: permanent teeth



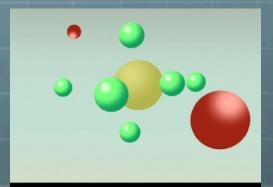


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Is fluoride safe for everyone?

No it is not. 5

5. Agency for Toxic substances and Disease Registry (ATSDR) Toxicological Profile ATSDR TP-91/17



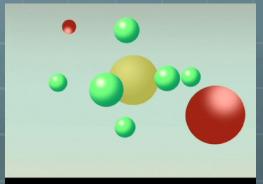
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#### 2.7 POPULATIONS THAT ARE UNUSUALLY SUSCEPTIBLE

Existing data indicate that subsets of the population may be unusually susceptible to the toxic effects of fluoride and its compounds. These populations include the elderly, people with deficiencies of calcium, magnesium, and/or vitamin C, and people with cardiovascular and kidney problems.

Because fluoride is excreted through the kidney, people with renal insufficiency would have impaired renal clearance of fluoride.

5. Agency for Toxic substances and Disease Registry (ATSDR) Toxicological Profile ATSDR TP-91/17



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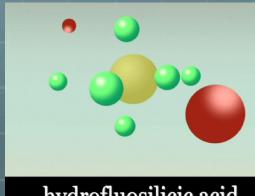
2.7 POPULATIONS THAT ARE UNUSUALLY SUSCEPTIBLE

Poor nutrition increases the incidence and severity of both dental fluorosis and skeletal fluorosis.

(Murray and Wilson 1948; Pandit et al. 1940, Pandit et al. 1940).

5. Agency for Toxic substances and Disease Registry (ATSDR) Toxicological Profile ATSDR TP-91/17

Third:

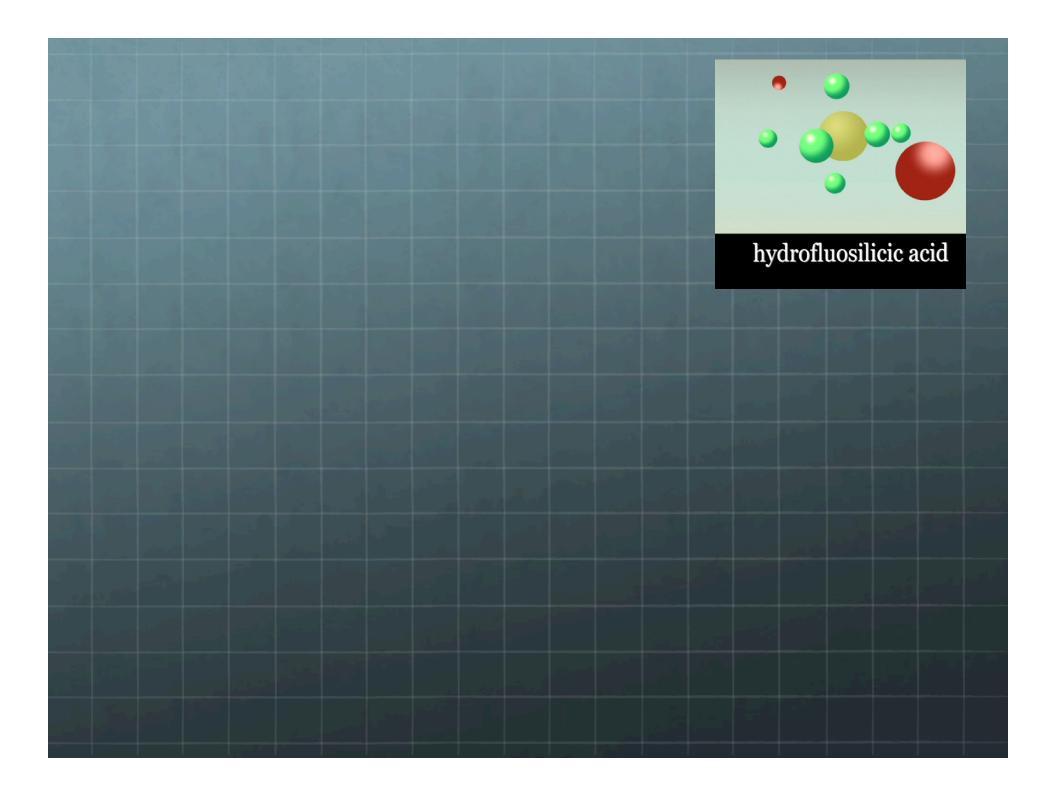


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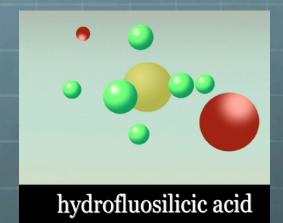
Is ingested fluoride approved by the Food and Drug administration for the purpose of reducing tooth decay?

No, it is not. <sup>7</sup>

7. Congressional Investigation 2000 FDA response to inquiry by congressman Ken Calvert www.keepers-of-the-well.org



### The FDA Says

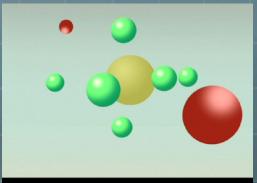


The U. S. Food and Drug Administration has never approved any fluoride containing substance intended to be ingested to reduce tooth decay.

1975 the FDA had rejected a new drug application for fluoride vitamins and supplements and allowed 35 to be voluntarily withdrawn stating that: There is no substantial evidence of drug effectiveness as prescribed, recommended, or suggested in its labeling. 8

8. Drug Therapy NDA withdrawn for fluoride and vitamin combinations 1975

#### I Say



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It is just as simple as 1, 2, 3.

- 1) Dental benefit, if any, is only TOPICAL.
- 2) The ADA agrees that tap water formula is **NOT** safe for small babies.
- 3) **NOT** FDA Approved as safe or effective because that is not how it works.

#### What dentists are told



#### Water Fluoridation Safety, Efficacy And Value In Oral Health

By News Staff | March 21st 2014 10:02 AM | 63 comments | ☐ Print | ☑ E-mail | Track Comments

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During the 43rd Annual Meeting&Exhibition of the American Association for Dental Research, held in conjunction with the 38th Annual Meeting of the Canadian Association for Dental Research, Stephen H. Abrams of Cliffcrest Dental Office in Toronto chaired a symposium titled "Water Fluoridation: Safety Efficacy and Value in Oral Health Care."

Community water fluoridation (CWF) and other fluoride modalities historically have been and remains the cornerstone for the prevention and control of dental caries. There is extensive evidence on the efficacy and cost-effectiveness of these interventions as well as assessments of the risks associated with fluoride ingestion.

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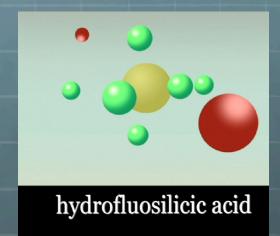
#### What dentists are told

#### Is not simply true

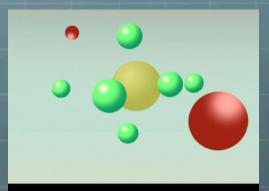
Numerous dental articles claim:

In 2006, the National Research Council identified severe fluorosis as the only documented health effect of fluoride at 2 – 4 mg/L in drinking water.

Concentrations recommended for CWF and current dosage schedules for other modalities ensure safety.



2006 National Academy of Science
Review of the EPA's
Safe for everyone for a lifetime standard
Maximum Contaminant Level Goal
MCLG



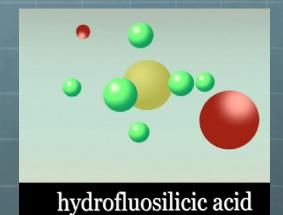
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The toxicology and risk assessment experts voted unanimously to reject the EPA's MCLG.

on the basis of "known" effects:

- 1. skeletal fluorosis
- 2. bone fractures
- 3. severe dental fluorosis
- 4. Therefore 4 mg/L is "not safe".

National Academy of Science NRC 2006 Review of EPA's MCLG for Fluoride



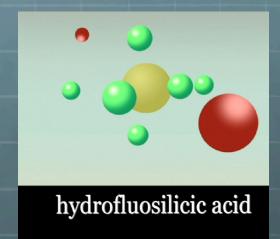
The toxicology and risk assessment experts voted unanimously to reject the EPA's MCLG

They did not say that "fluoridation" is safe

They did not evaluate the safety or efficacy of fluoridation.

They pointed out lots of areas that need research.

Personal communication with Dr. Kathleen Thiessen NRC panelist and risk assessment expert



The toxicology and risk assessment experts voted unanimously to reject the EPA's MCLG.

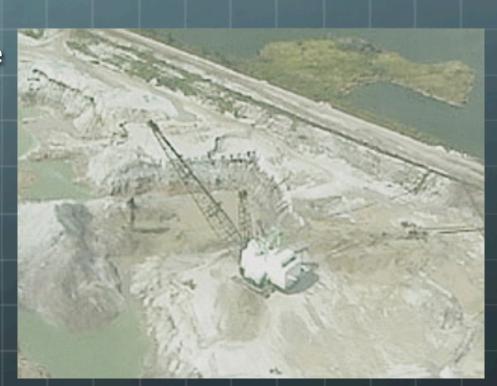
They pointed out that some effects (e.g., endocrine/thyroid) can occur at exposure levels (in terms of mg/kg/day) that are reached by people at fluoride concentrations in drinking water of 1-4 mg/L especially infants.

Putting even a small amount of "safety factor" between "unsafe" and "possibly safe" puts "possibly safe" below the CWF levels.

Personal communication with Dr. Kathleen Thiessen NRC panelist and risk assessment expert

#### And it's not fluoride!

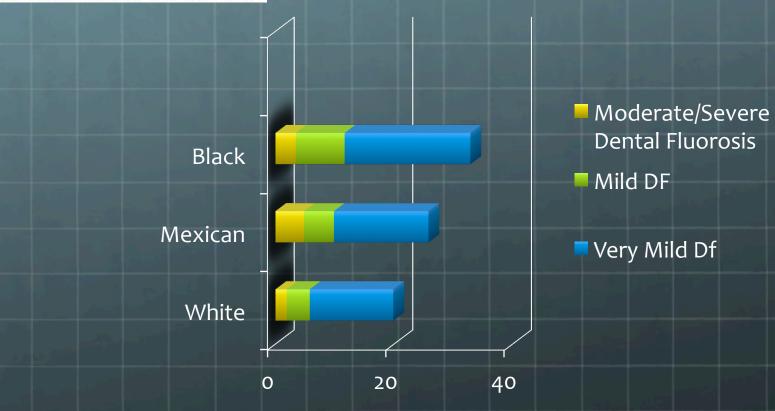
- The product used in 91% of the water fluoridation schemes is raw untreated hazardous waste from the pollution scrubber systems of the phosphate fertilizer mining industries called Hydrofluosilicic Acid
- Fluorida
- China
- Mexico
- Japan
- Belgium





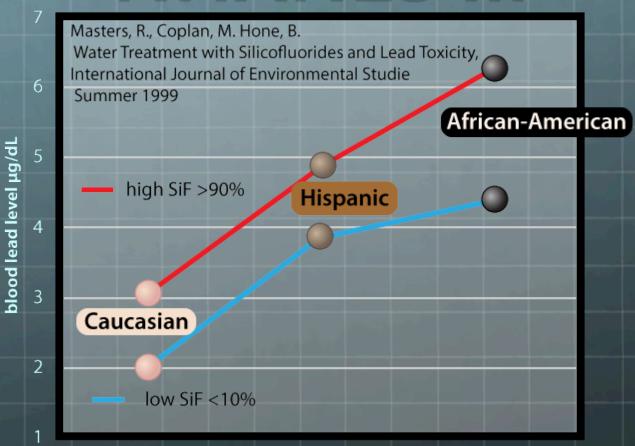


August 26, 2005 Vol. 54/No. 3 Table 23

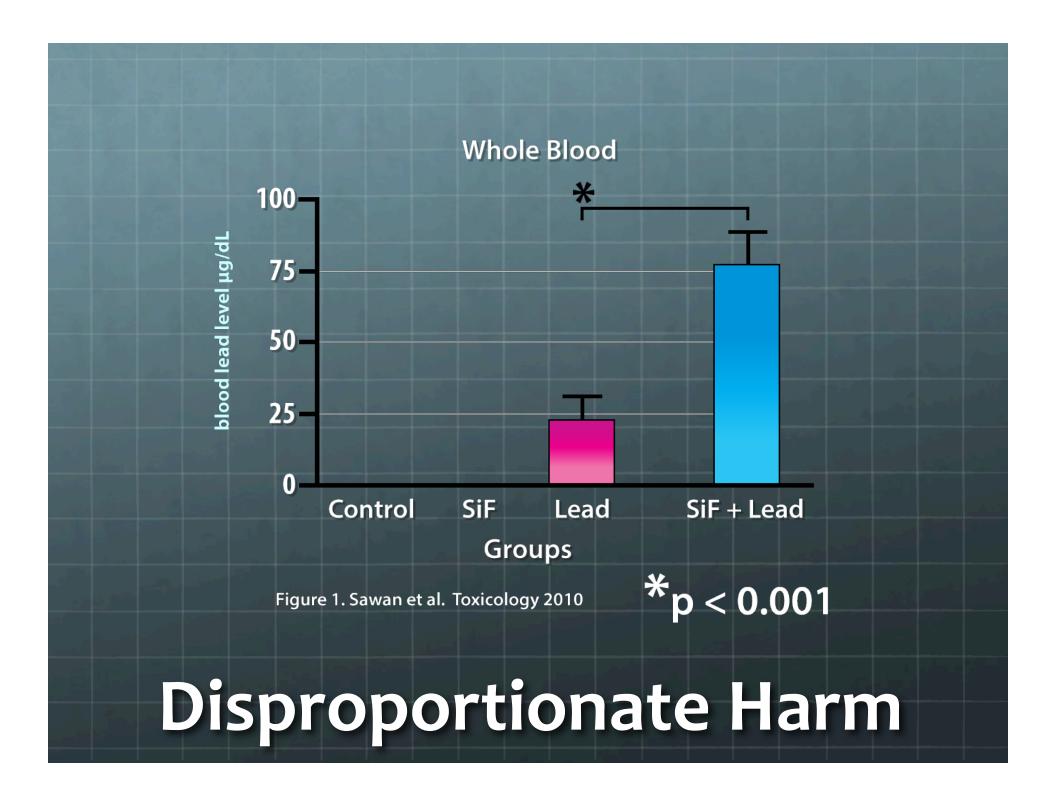


Disproportionate Harm

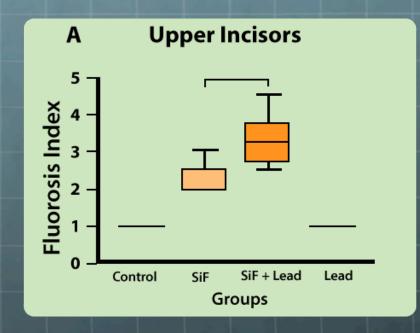
### NHANES III



### Disproportionate Harm



### Leiti et al. 2011



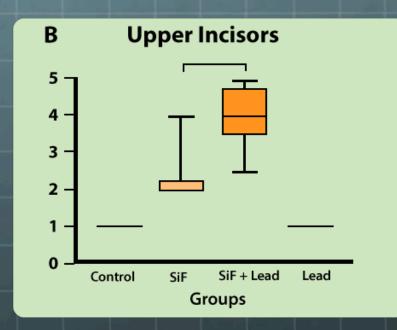


Fig. 4 - Median box and whiskers plot showing median, 25th, 75th, maximum and minimum values for fluorosis index for upper (A) and lower (B) incisors. \*P<0.0001.

#### Disproportionate Harm



