

# Fluoridation 101

Paul Connett, PhD

Director, Fluoride Action Network

FluorideALERT.org

FAN conference,

Crystal City, VA, Sept 6-8, 2014

# Let us remember

- 1) **Carol Patton**
- 2) **Albert Burgstahler**
- 3) **Myron Coplan**
- 4) **Louis Ronsavelli**
- 5) **Sonia Dolan**

# Outline of my presentation

1. Better ways of fighting tooth decay
2. Key arguments against fluoridation
3. The risks to the developing brain
4. An examination of the very weak evidence of benefit
5. How can we end fluoridation?

Part 1.

Better ways of  
fighting tooth decay

The vast majority of  
countries do NOT  
fluoridate their water

# 97% of Western European population now drinks Non-Fluoridated Water

Austria  
Belgium  
Denmark  
Finland  
France  
Germany  
Greece  
Iceland



Italy  
Luxembourg  
Netherlands  
Northern Ireland  
Norway  
Scotland  
Sweden  
Switzerland

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Austria\*  
Belgium  
Denmark  
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Iceland

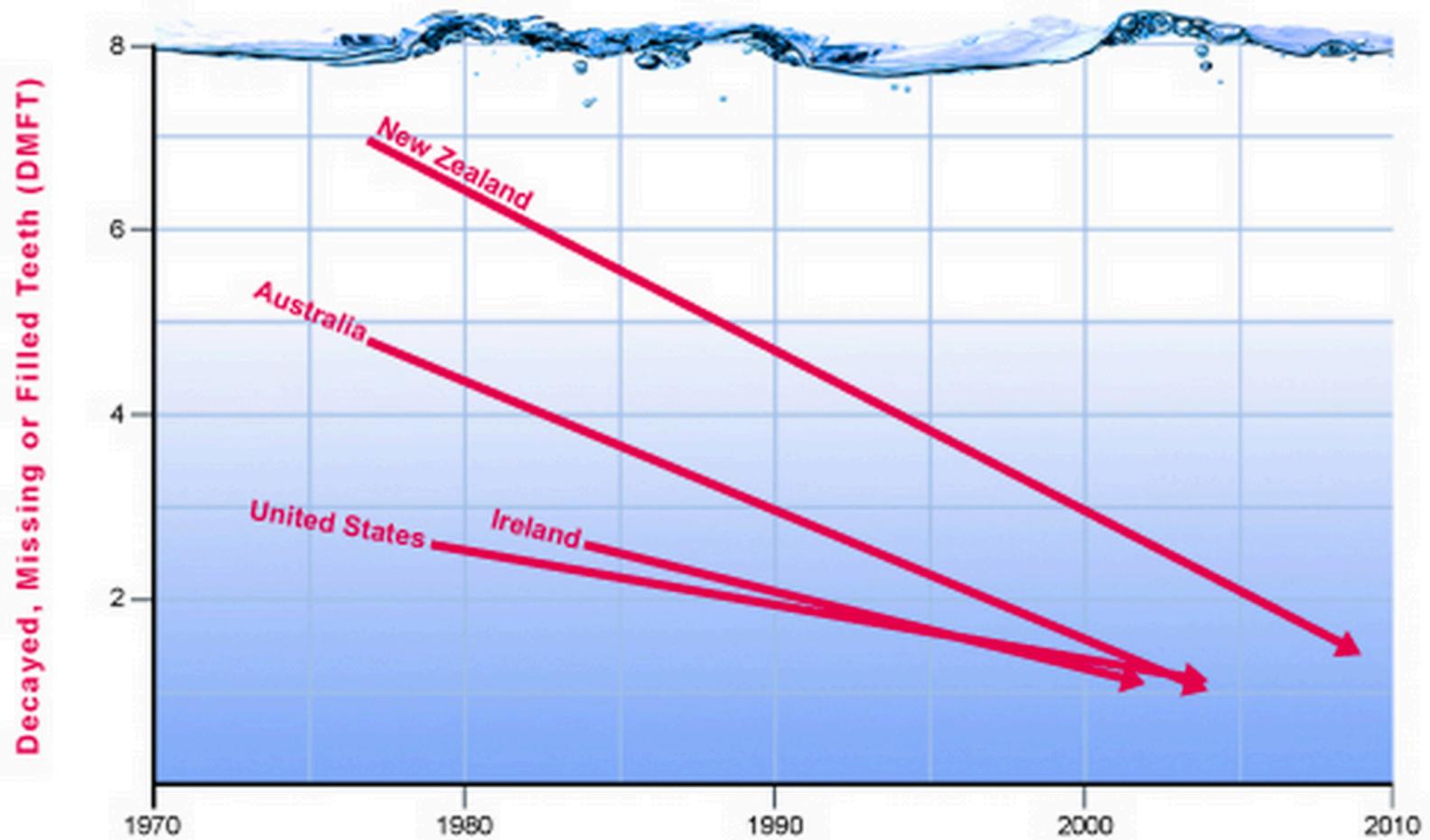


Italy  
Luxembourg  
Netherlands  
Northern Ireland  
Norway  
Scotland  
Sweden  
Switzerland\*

\*Some fluoridate their salt

According to WHO data  
tooth decay in 12-year-olds  
is coming down as fast  
in F as NF countries

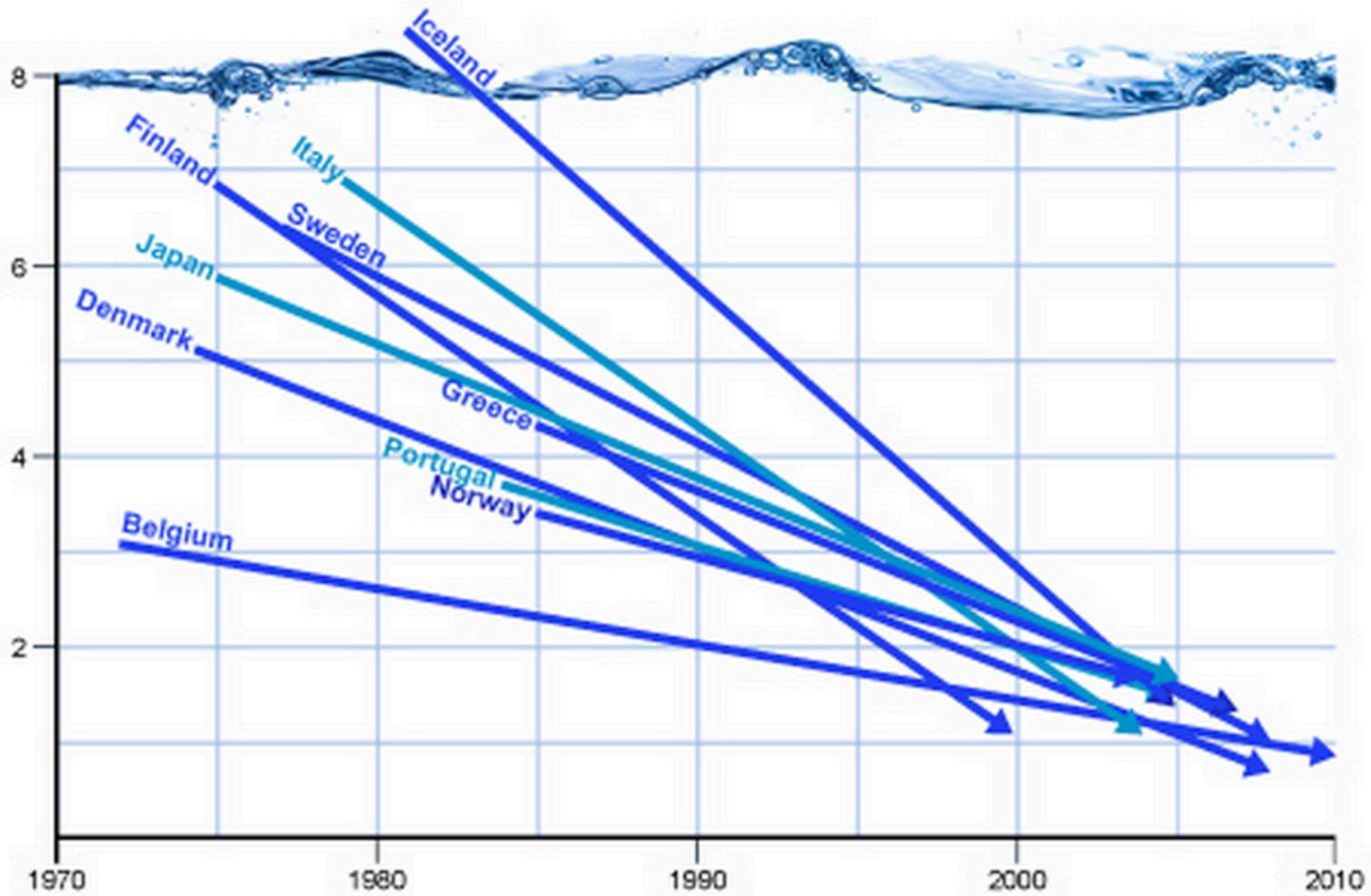
## Tooth decay in countries that fluoridate most of the water



WHO data on DMFT in 12 year olds\*

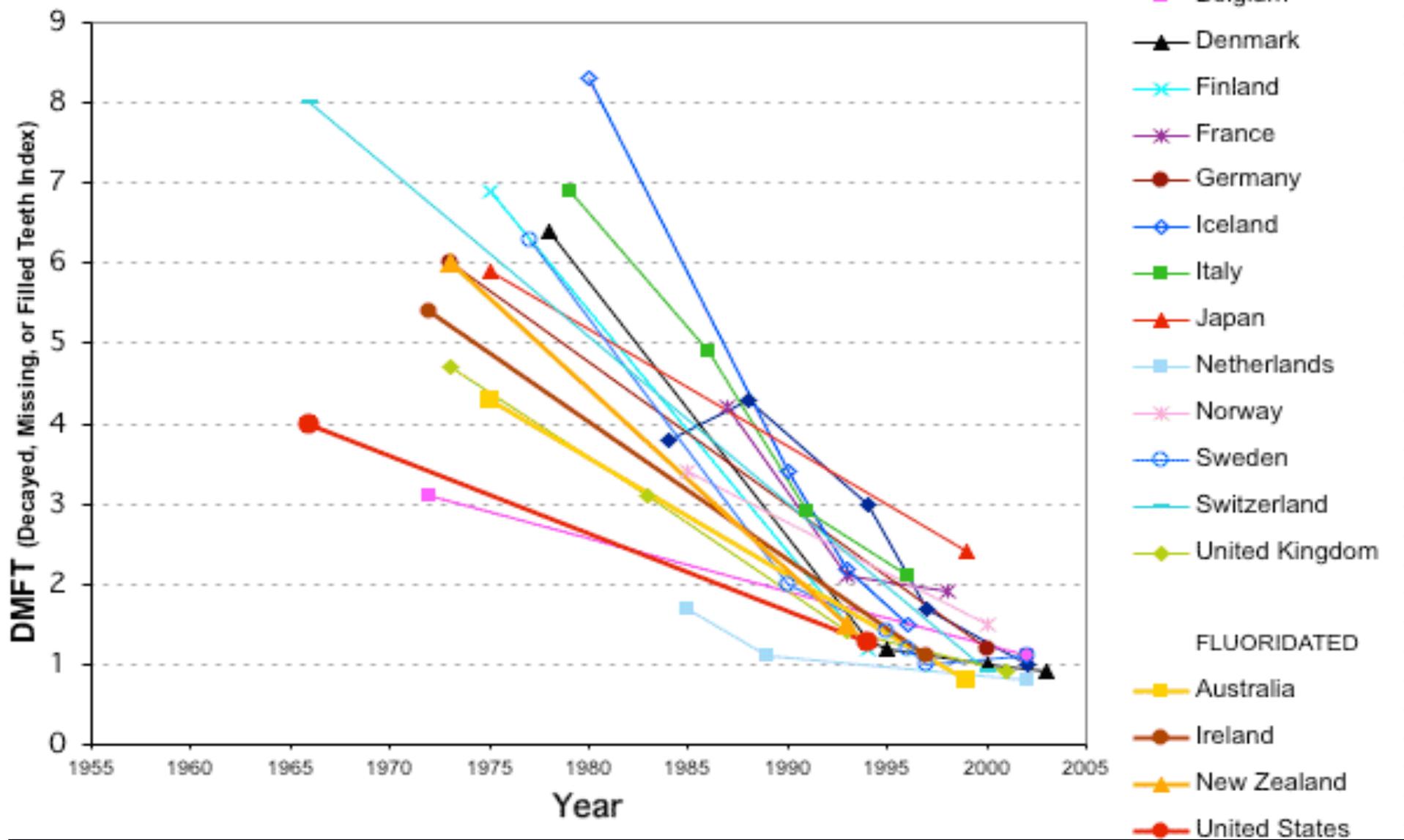
Tooth decay in countries with NO water or salt fluoridation

Decayed, Missing or Filled Teeth (DMFT)



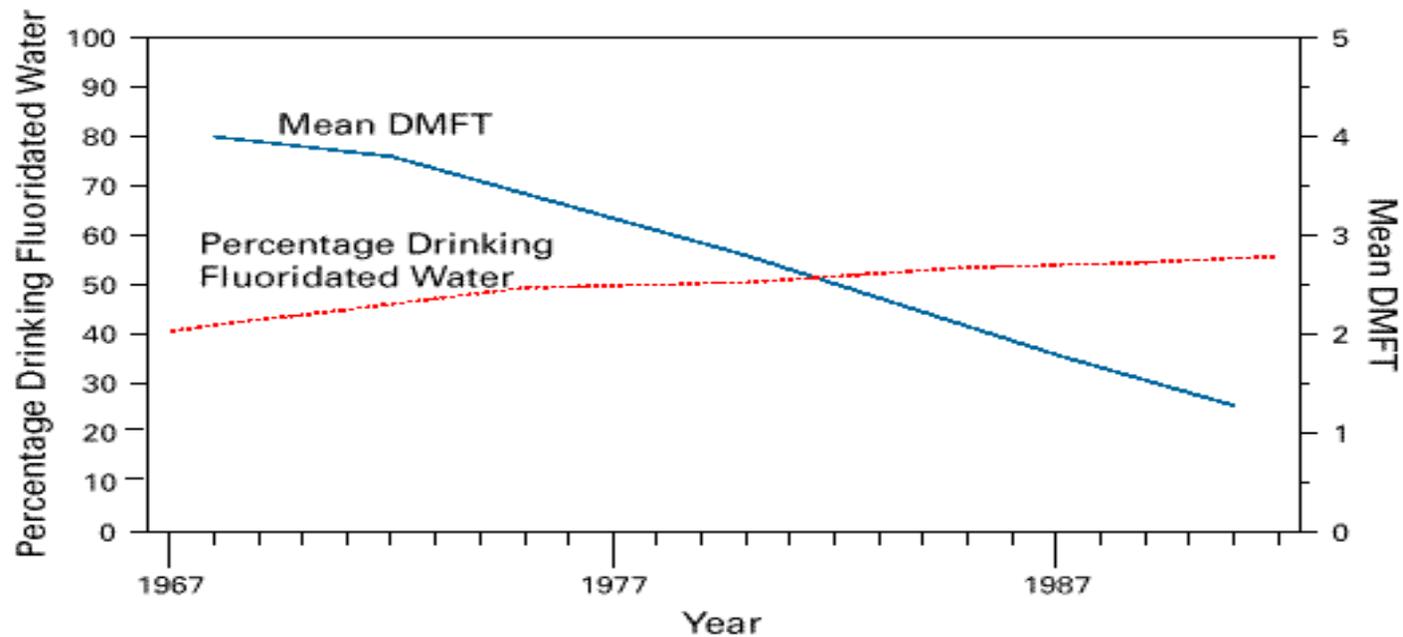
# Tooth Decay Trends: Fluoridated vs. Unfluoridated Countries

Data from the World Health Organization - [http://www.whoollab.od.mah.se/](http://www.whocollab.od.mah.se/)  
 Graph produced by Chris Neurath, FAN



SOURCE: World Health Organization. (Data online)

**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**



*Sources:*

1. CDC. Fluoridation census 1992. Atlanta, Georgia: US Department of Health and Human Services, Public Health Service, CDC, National Center for Prevention Services, Division of Oral Health, 1993.
2. National Center for Health Statistics. Decayed, missing, and filled teeth among youth 12–17 years—United States. Rockville, Maryland: US Department of Health, Education, and Welfare, Public Health Service, Health Resources Administration, 1974. Vital and health statistics, vol 11, no. 144. DHEW publication no. (HRA)75-1626.
3. National Center for Health Statistics. Decayed, missing, and filled teeth among persons 1–74 years—United States. Hyattsville, Maryland: US Department of Health and Human Services, Public Health Service, Office of Health Research, Statistics, and Technology, 1981. Vital and health statistics, vol 11, no. 223. DHHS publication no. (PHS)81-1673.
4. National Institute of Dental Research. Oral health of United States children: the National Survey of Dental Caries in U.S. School Children, 1986–1987. Bethesda, Maryland: US Department of Health and Human Services, Public Health Service, National Institutes of Health, 1989. NIH publication no. 89-2247.
5. CDC, unpublished data, third National Health and Nutrition Examination Survey, 1988–1994.

# A Better Strategy

Most of the tooth decay today is concentrated in low-income families.

We need to target those families with better dental services, better dental education and better diet.

We shouldn't be forcing them to swallow a substance that a) they can't avoid and

b) puts them at greater disadvantage, **because fluoride's toxic effects are made worse by poor diet.**

# Scotland

- Instead of water fluoridation, the Scottish Government opted for a dental action plan (their **ChildSmile** program), to pursue:
  - a) a nursery-school based toothbrushing program;
  - b) providing healthy snacks & drinks to school children;
  - c) oral health advice to children and their families on healthy weaning, diet and toothbrushing;
  - d) annual dental check-ups and treatment if required including fluoride varnish applications.

# Scotland

- The proportion of children aged 4–6 years without obvious dental decay has risen from **42.3% in 1996** to **67% in 2012**.
- The proportion of children aged 10–12 years without obvious dental decay rose from
- **52.9% in 2005** to **72.8% in 2013**
- **They are ahead of schedule!**

(Information Services Division Scotland, 2013).

## Scotland

- *“Glasgow researchers found that the scheme had reduced the cost of treating dental disease in five-year-olds by more than half between 2001 and 2010.” (BBC, Scotland)*

- In short our kids need
- MORE BRUSHING!
- MORE FRUIT AND VEGETABLES!
- LESS SUGAR!
- Less sugar means less tooth decay and less OBESITY
- Less obesity means less diabetes and fewer heart attacks
- In other words education to promote less sugar consumption is a very good investment!

We need  
EDUCATION  
not FLUORIDATION  
to fight tooth decay and  
obesity.

**FACT 1**

**MOST DEVELOPED COUNTRIES DO NOT FLUORIDATE THEIR WATER**

WESTERN EUROPE



**97%**

DO NOT DRINK FLUORIDATED WATER

**FACT 2**

FLUORIDATED COUNTRIES

**DO NOT HAVE LESS**

**TOOTH DECAY THAN NON-FLUORIDATED COUNTRIES**

**FACT 3**

**FLUORIDE AFFECTS MANY TISSUES IN THE BODY BESIDES THE TEETH**

**FACT 4**

**FLUORIDATION IS NOT A "NATURAL PROCESS"**

**FACT 5**

**40%** OF AMERICAN TEENAGERS SHOW VISIBLE SIGNS OF FLUORIDE OVER-EXPOSURE

**FACT 6**

FOR INFANTS FLUORIDATED WATER PROVIDES NO BENEFITS

**ONLY RISKS**



**FACT 7**

FLUORIDE SUPPLEMENTS **HAVE NEVER BEEN APPROVED**



**BY THE FDA**

**FACT 8**

**FLUORIDE IS THE ONLY MEDICINE ADDED TO PUBLIC WATER**

**FACT 9**

**SWALLOWING FLUORIDE PROVIDES LITTLE BENEFIT TO TEETH**



**FACT 10**

**DISADVANTAGED COMMUNITIES ARE THE MOST HARMED BY FLUORIDE**

THE CONDITIONS THAT MAKE PEOPLE MORE VULNERABLE TO FLUORIDE TOXICITY ARE MORE PREVALENT IN POOR COMMUNITIES

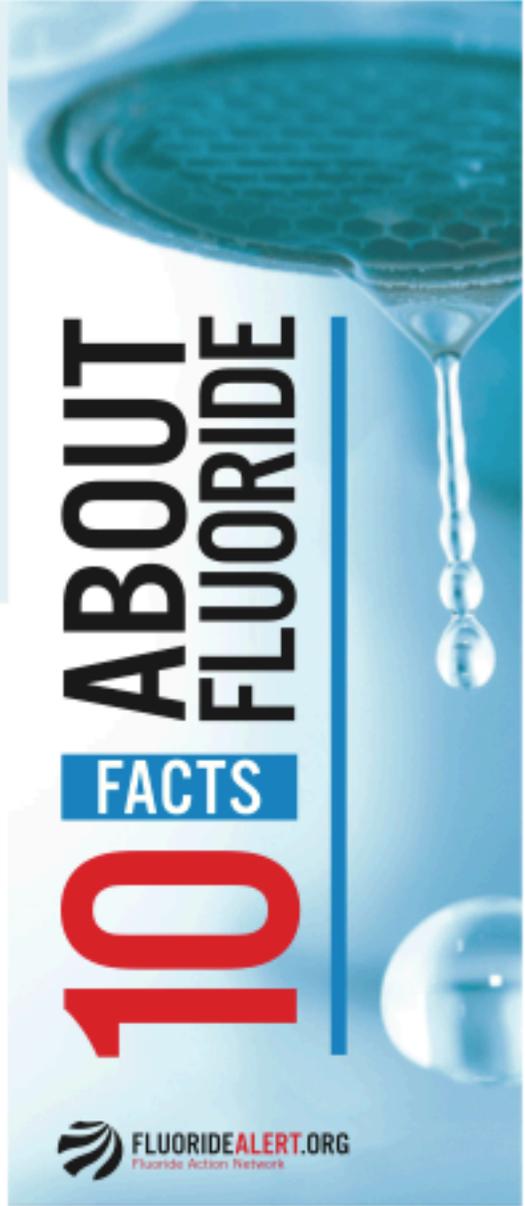
**TO FIND OUT MORE** about these facts; scan the QR code below, or enter the web address [www.tinyurl.com/fluoridationfacts](http://www.tinyurl.com/fluoridationfacts)



To continue learning more, visit our website at:



**ABOUT FLUORIDE FACTS 10**



Part 2.

A selection of arguments against  
water fluoridation

1) We should NEVER use the public water supply to deliver ANY medical treatment

a) You can't control the DOSE;

b) you can't control who gets the treatment AND

c) it violates the individual's right to informed consent to medication

2) There is no reason to SWALLOW fluoride.

There is not a single biochemical process in the human body that needs fluoride to function properly.

In other words there is no evidence that fluoride is an essential nutrient.

3) There are many biological processes that are harmed by fluoride

e.g. fluoride inhibits enzymes, switches on G-proteins etc...(Barbier et al, 2010)

Therefore there is even more reason not to swallow fluoride and not to put it in the public drinking water

# “Naturally-occurring” versus “Nature’s verdict”

- Fluoridation promoters love to stress that fluoride is “naturally-occurring” and sometimes even say that “Fluoridation: nature thought of it first.”
- They are confusing GEOLOGY with BIOLOGY
- What levels of fluoride that naturally occur in water simply reflects the vagaries of which ROCKS the water has flown through

# “Naturally-occurring” versus “Nature’s verdict”

- But because something occurs naturally in water does not mean it is safe. Arsenic also appears in some water supplies.
- Millions of people worldwide have been harmed by “naturally-occurring” arsenic and “naturally-occurring” fluoride
- So what is **Nature’s verdict** on the fluoride ion?

#### 4) **Nature's verdict.**

The baby needs very little - **if any** - fluoride. The level of fluoride in mothers' milk is **EXTREMELY LOW (0.004 ppm, NRC , 2006, p. 40)**

A bottle-fed baby in a fluoridated community (0.7 – 1.2 ppm) is getting 175-300 times the fluoride dose that nature intended.

# Mothers' milk protects our babies from early exposure to fluoride



Formula made up with  
fluoridated tap water does not!



5) American children are being hugely overexposed to fluoride (from several sources).

The evidence for this is the increasing prevalence of DENTAL FLUOROSIS.

# Context on Dental Fluorosis

Early promoters thought that at 1 ppm F they could reduce tooth decay and limit dental fluorosis to **10%** of children in its **very mild** form.

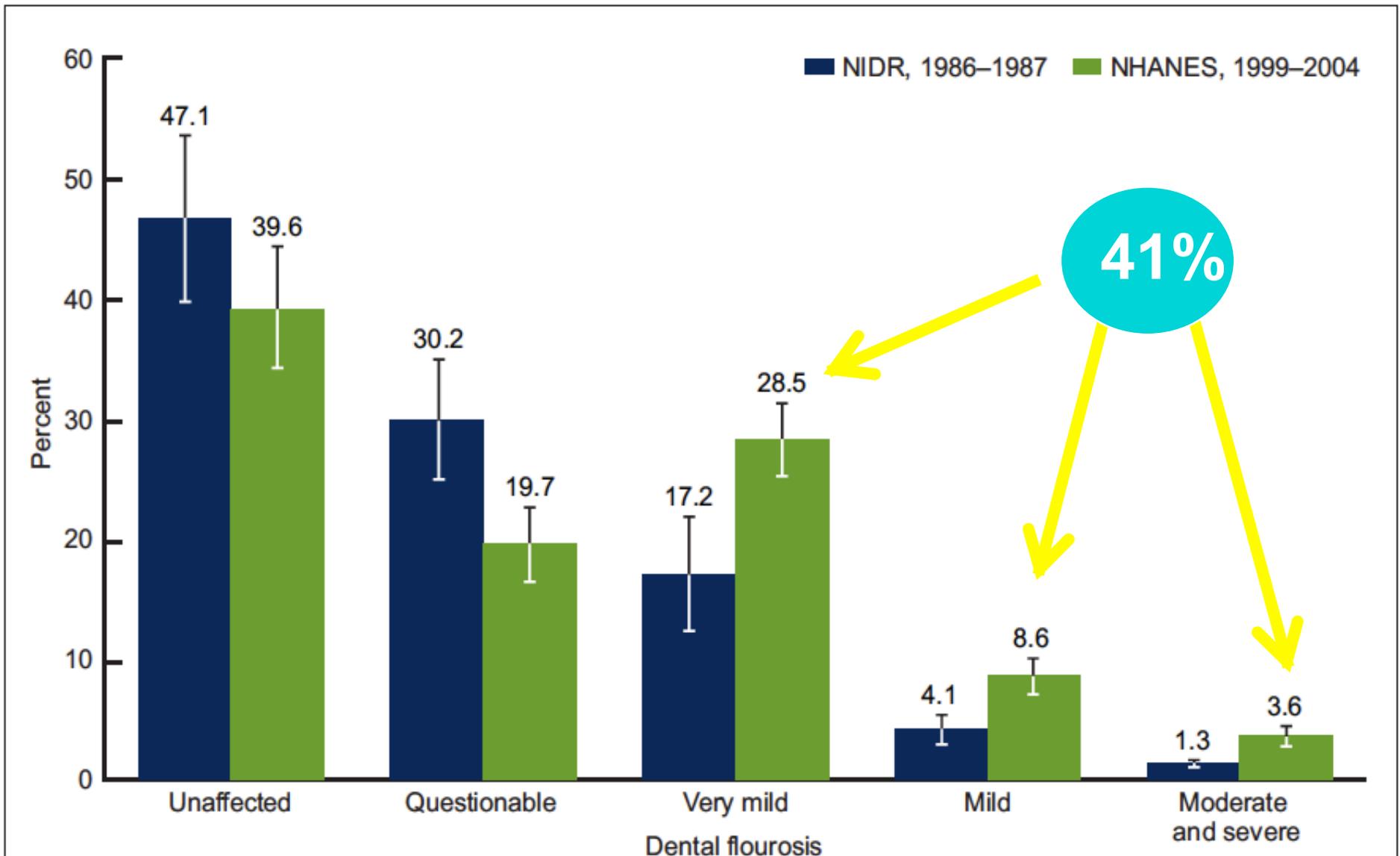
## **CDC (2010)**

**41% of ALL American children aged 12-15 (average from both fluoridated and non-fluoridated communities) had dental fluorosis**

**Beltrán-Aguilar et al. Prevalence and Severity of Dental Fluorosis in the United States, 1999-2004**

# CDC, 2010

Figure 3. Change in dental fluorosis prevalence among children aged 12–15 participating in two national surveys: United States, 1986–1987 and 1999–2004



Impacts up to 50% of tooth surface



**Mild Dental Fluorosis**

Impacts 100% of tooth surface



**Moderate- Severe  
Dental Fluorosis**

6) It would be reckless to assume that when fluoride is damaging the baby's growing tooth cells that is not damaging other developing tissues like the bone, brain and the endocrine system. In my view if it did not do so it would be a biochemical miracle!

## Part 3.

The risks that fluoride poses  
to the developing brain

Since 1991 extensive evidence has emerged that fluoride damages the brains of animals and humans

Michael Connett will be  
summarizing this evidence

# The Harvard review

- In 2012, Choi et al (the team included Philippe Grandjean) published a meta-analysis of **27** studies comparing IQ in “high” versus “low” fluoride villages .
- The study was published in *Environmental Health Perspectives* (published by NIEHS)

# Harvard meta-analysis of 27 studies

- 25 studies from China, 2 from Iran
- The Harvard team acknowledged that there were weaknesses in many of the studies, however...

- ...the results were remarkably consistent
- In *26 of the 27 studies* there was lower average IQ in the “high” versus low-fluoride villages.
- Average IQ lowering was **about 7 IQ points.**

**Promoters of Fluoridation in  
Australia, Ireland, NZ, the UK  
and the US are doing  
everything they can to  
downplay these IQ studies**

Chris Neurath will be  
responding to their  
criticisms as well as the  
Broadbent (2014) study  
from NZ

Author/year	ppm in High F village
Chen 1991	4.55
Lin 1991	0.88
An 1992	2.1 – 7.6 (mean = 4.9)
Xu 1994	1.8
Yang 1994	2.97
Li 1995	1.81 – 2.69 (mean = 2.25)
Yao 1996	2 – 11 (mean = 6.5)
Zhao 1996	4.12
Yao 1997	2
Lu 2000	3.15
Hang 2001	2.90
Wang 2001	2.97
Xiang 2003	0.57 – 4.5 (mean = 2.54)
Seraj 2006	2.5
Wang 2006	5.44 +/- 3.88 (1.52 – 9.32)
Fan 2007	1.14 - 6.09 (mean = 3.62)
Wang 2007	3.8 – 11.5 (mean = 7.65)
Li 2010	2.47 +/- 0.75 (1.72 – 3.22)
Poureslami 2011	2.38
Wang 1996	>1- 8.6 (mean = 4.8)

Mean of 20 results (using means) = 70.49 / 20 = 3.52

Taken from Choi et al, 2012 – Table 1, pp 24-26.

# **Promoters claim that concentrations in these studies are too high to be relevant to water fluoridation**

- 8 Studies were less than 3 ppm
- If you include means (for those reporting a range of values) 11 studies were less than 3 ppm
- If you include the low end of the ranges, 16 had some children less than 3 ppm

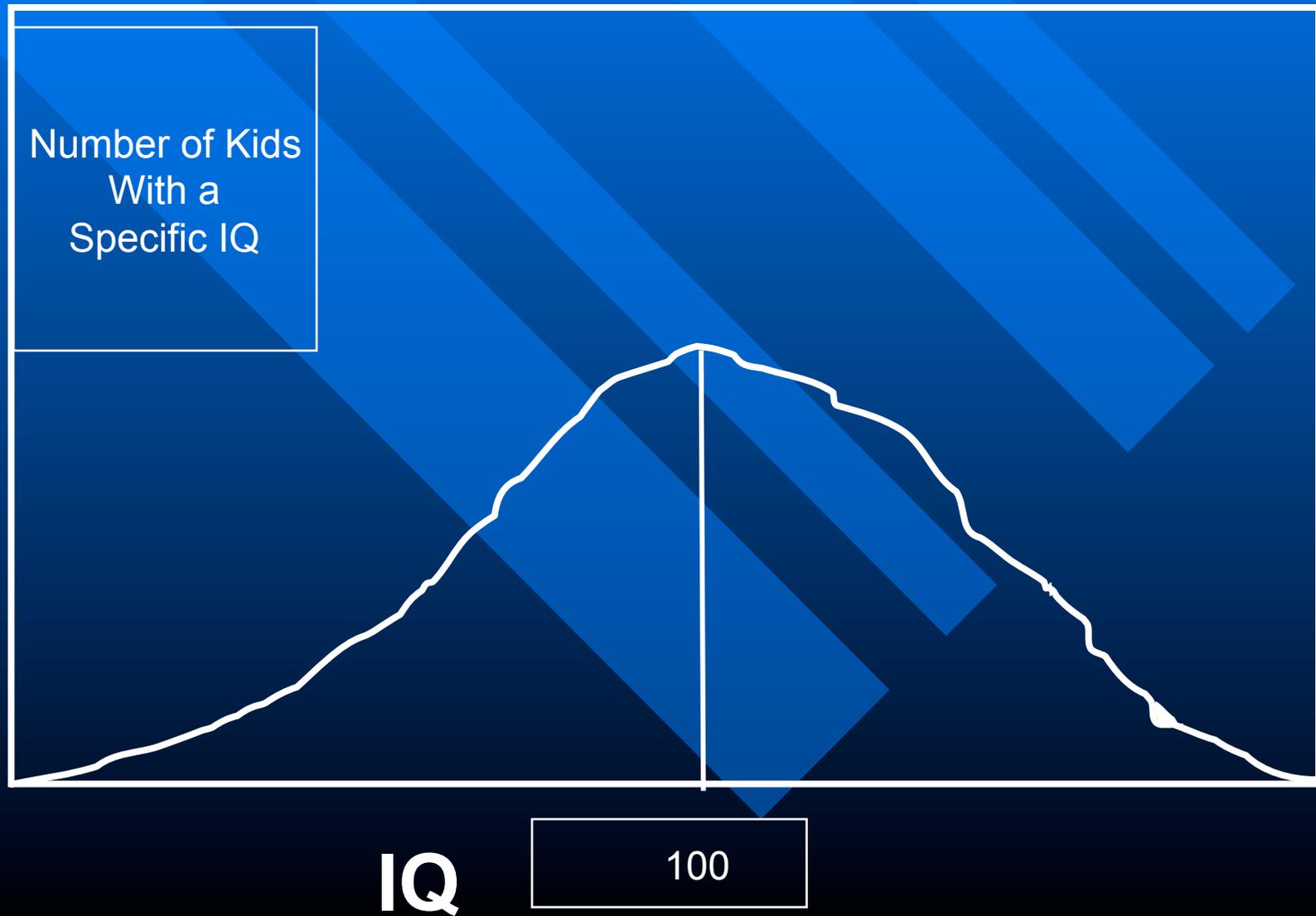
**IQ studies with water F concentration below 3 mg/L in "higher F group", and with statistically significant results**

<b>Study</b>	<b>IQ point difference</b>	<b>Water F concentration "high F group" (mg/L)</b>
Xu et al. 1994	-14.0	1.8
Yao et al. 1997	-6.5	2
Hong et al. 2001	-6.6	2.90
Seraj et al. 2006	-13.4	2.5
Poureslami et al. 2011	-6.2	2.38

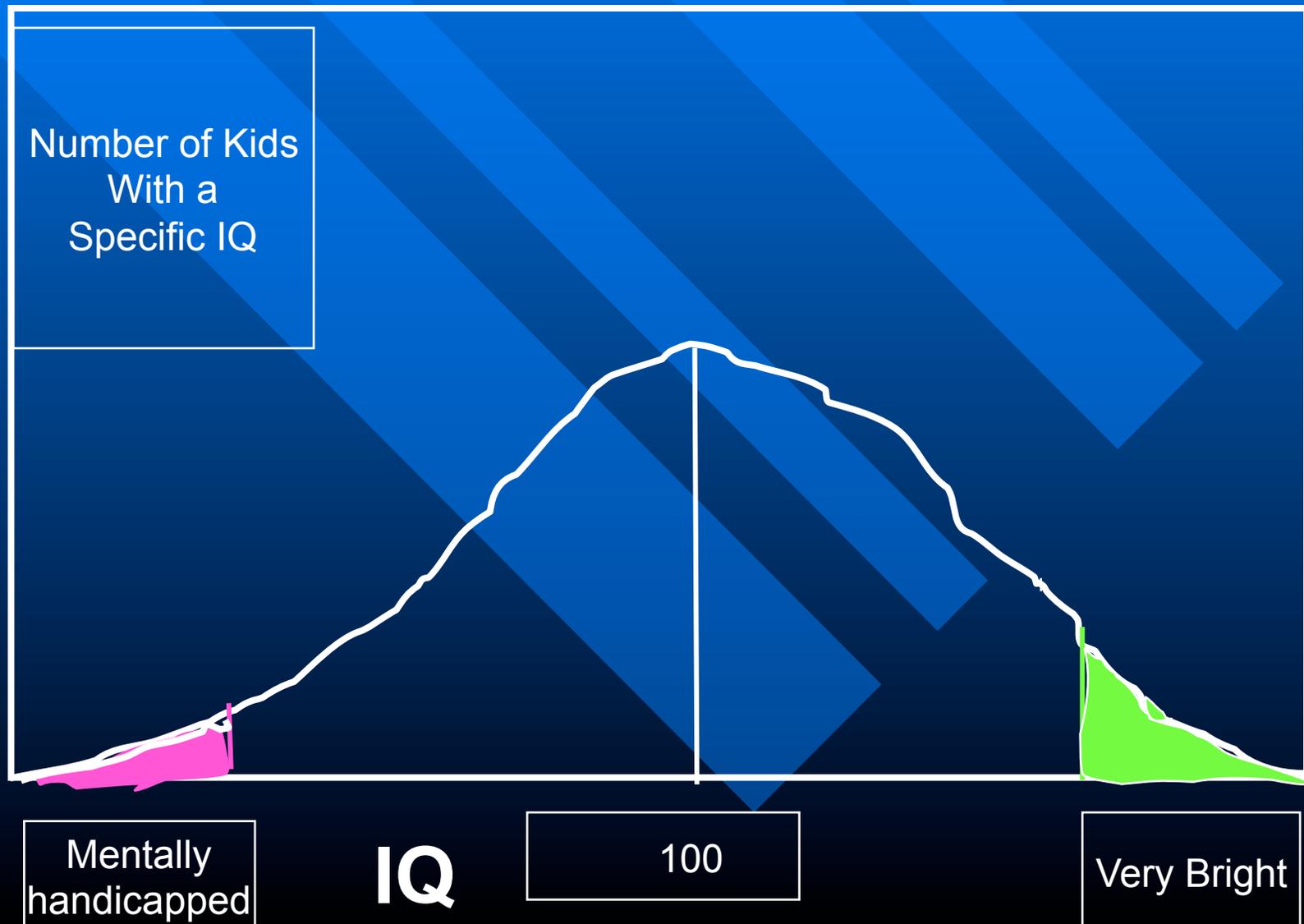
Bill Hirzy will be  
performing a standard risk  
assessment on these levels  
that lower IQ and  
determining a new MCLG  
to protect ALL US children  
from this effect

What is the significance of a downward shift in the IQ of a large population?

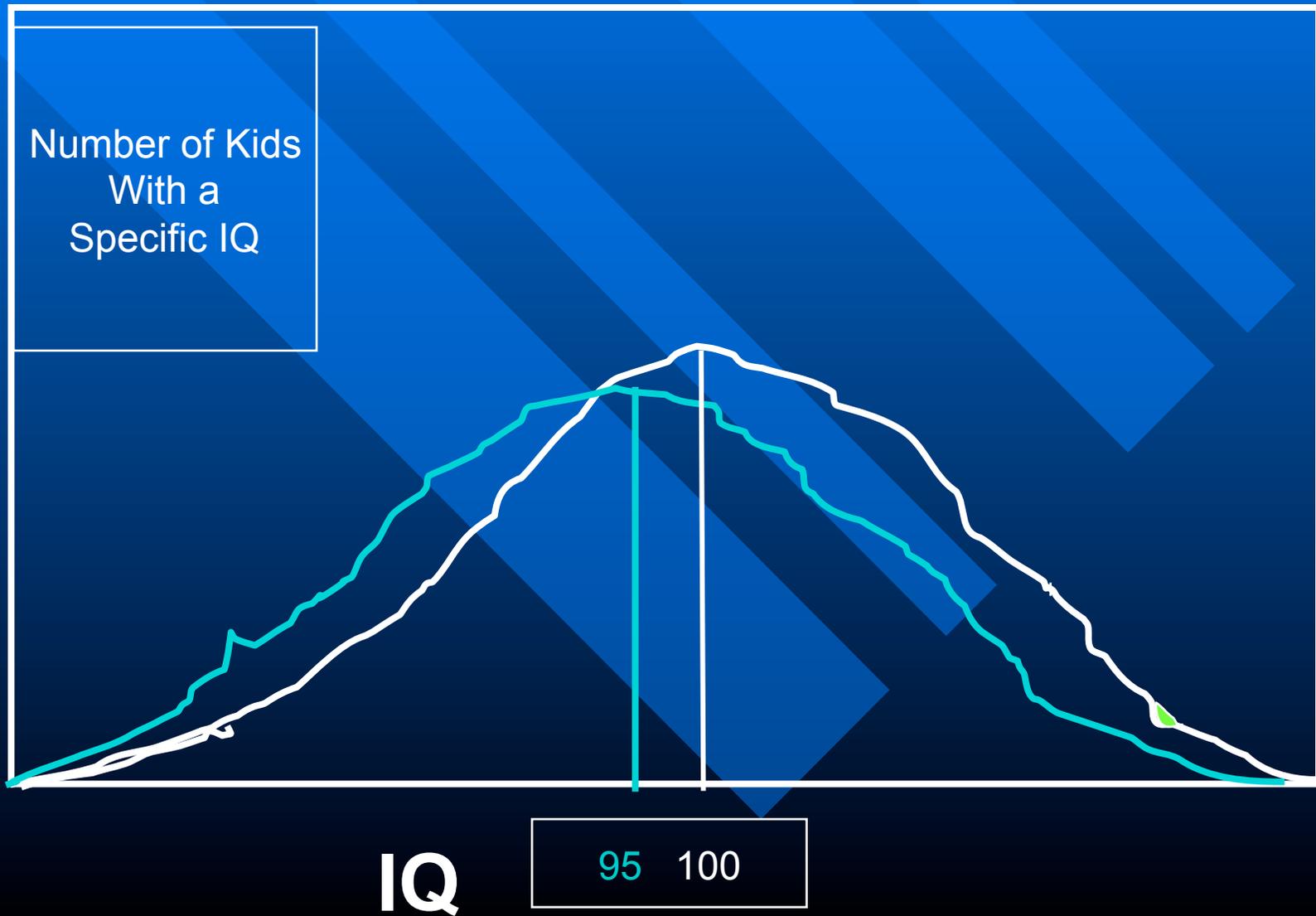
# IQ and population



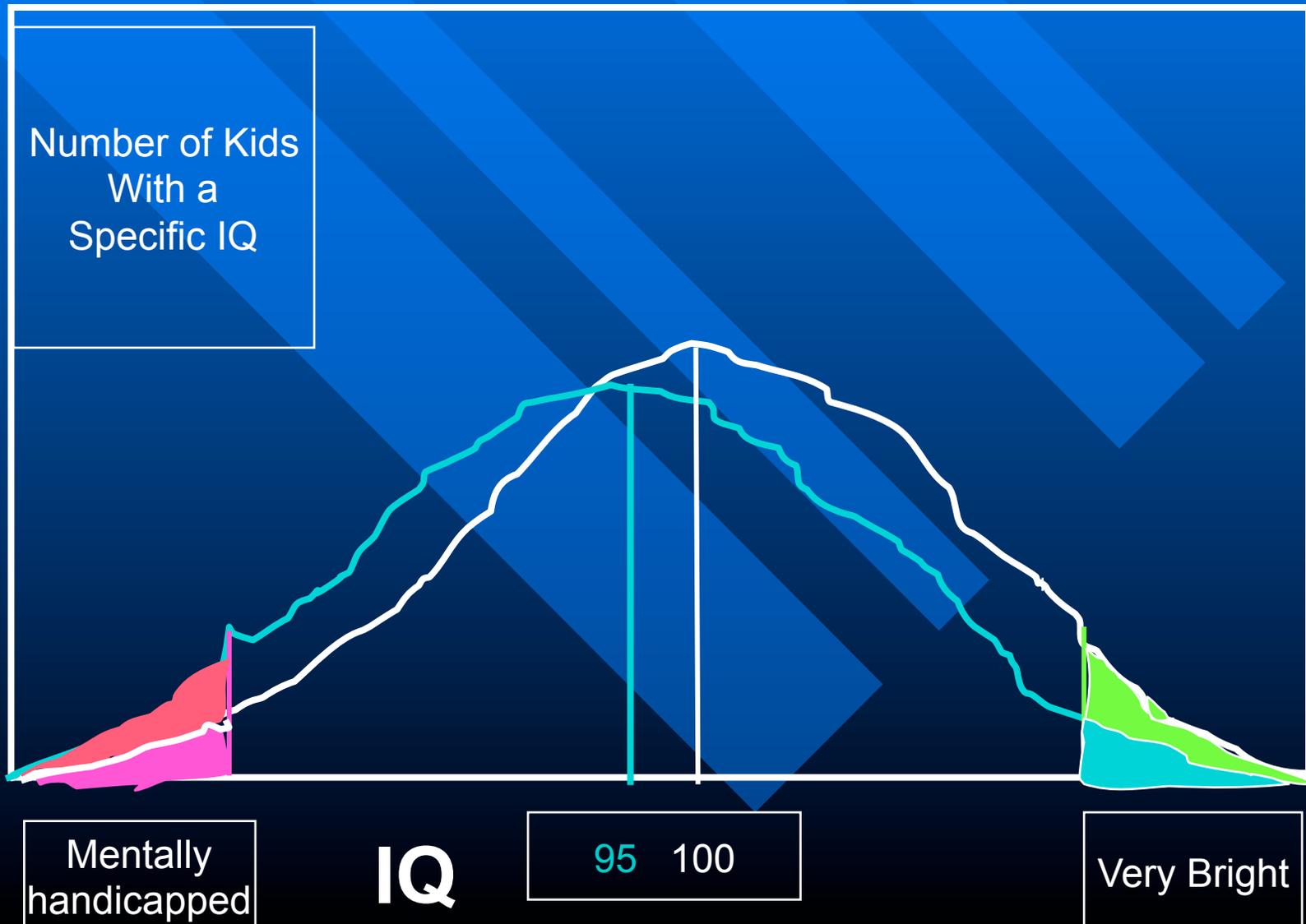
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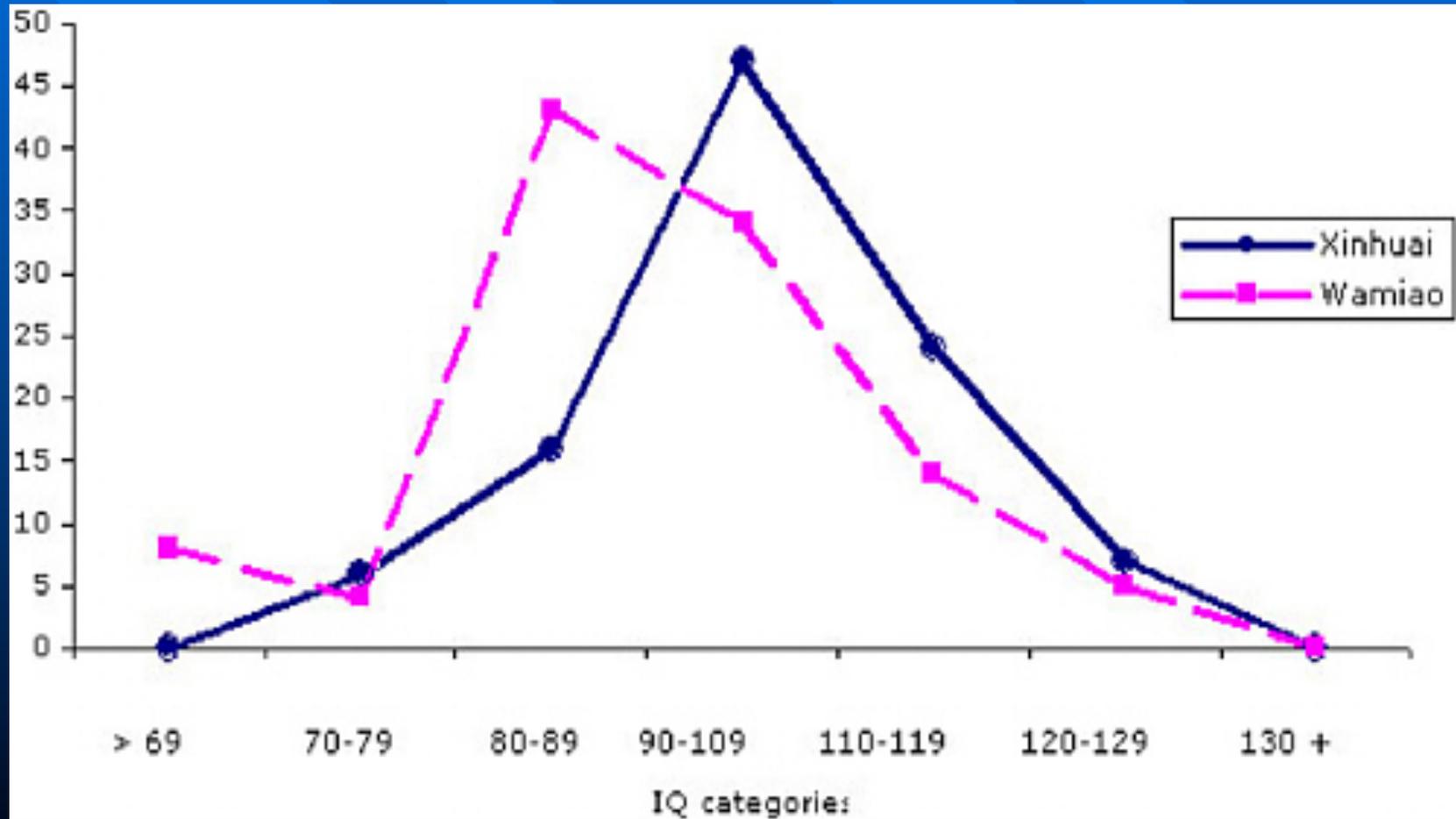
# IQ and population



Dr. Quanyong Xiang we will be giving us **an update** on his work on Fluoride and lowered IQ

# Xiang et al. (2003 a,b)

MALES



**Table 8.** Level of fluoride in drinking water and children's IQs

Village	F in drinking water (mg/L)			IQ and rate of retardation		
	Group	No. samples	Water F level (Mean±SD)	No. children	IQ (Mean±SD)	Rate of IQ<80 (%)
Xinhuai	F	290	0.36±0.15	290	100.41±13.21	6.55
Wamiao	A	9	0.75±0.14	9	99.56±14.13	0.00
	B	42	1.53±0.27	42	95.21±12.22*	9.52
	C	111	2.46±0.30	111	92.19±12.98 <sup>†</sup>	14.41*
	D	52	3.28±0.25	52	89.88±11.98 <sup>†</sup>	21.15 <sup>†</sup>
	E	8	4.16±0.22	8	78.38±12.68 <sup>†</sup>	37.50 <sup>†</sup>

\* $p < 0.05$ . <sup>†</sup> $p < 0.01$  compared with group F.

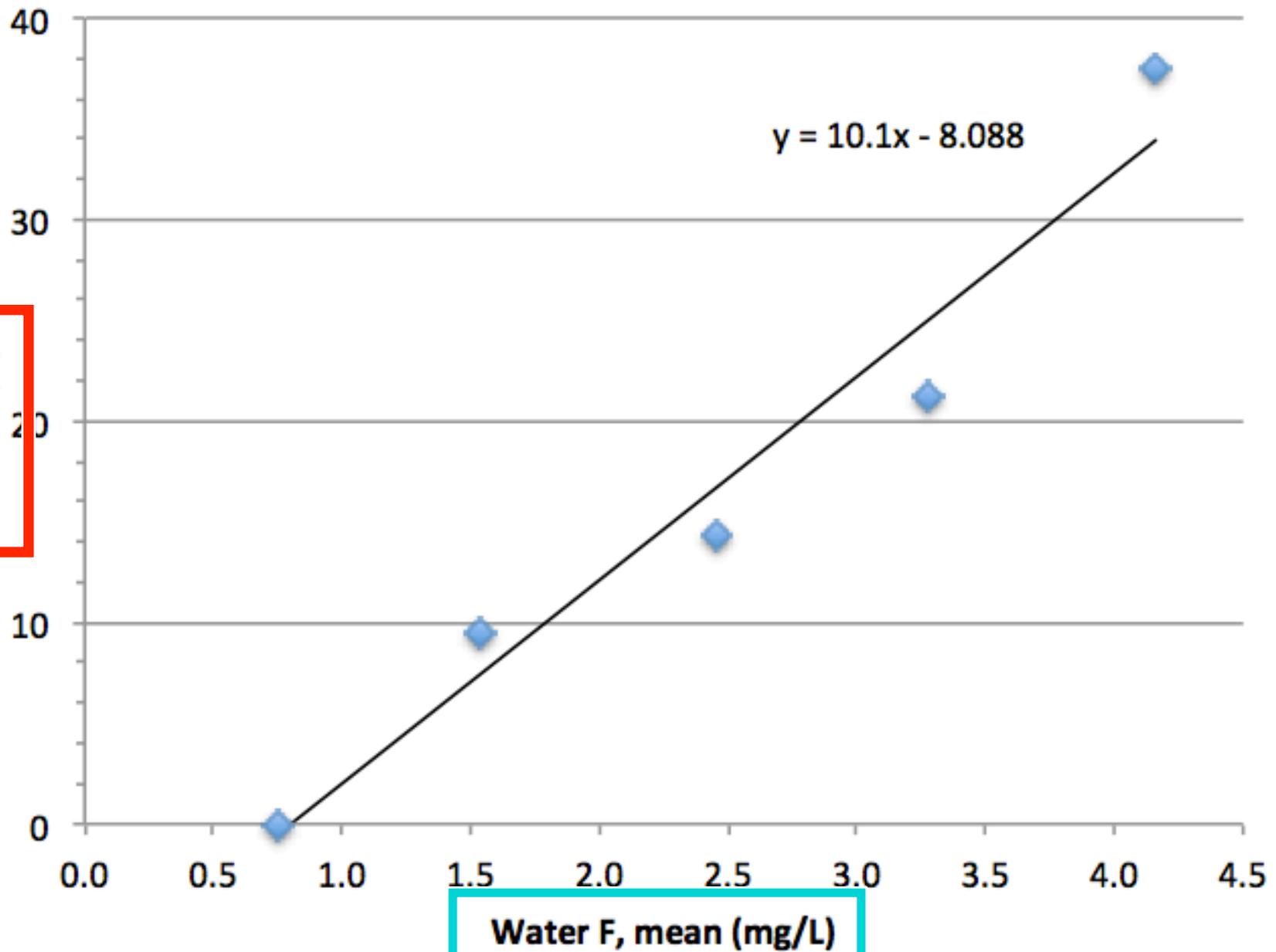
**Table 8.** Level of fluoride in drinking water and children's IQs

Village	F in drinking		Water F level (Mean±SD)	No. children	IQ and rate IQ		retardation Rate of IQ<80 (%)
	Group	No. samples			(Mean±SD)	(Mean±SD)	
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## Percent IQ<80 vs Water F

(for "high F" village Waimao, grouped by water F category)



Clearly, there are huge concerns about the risks for babies and children swallowing fluoride. What about the benefits?

Surprisingly, the evidence that swallowing fluoride lowers tooth decay is **VERY WEAK**.

Bill Osmunson will be  
summarizing this weak  
evidence

The most likely explanation for  
the weakness of the evidence for  
any benefit from water  
fluoridation

In 1999, the CDC conceded  
that the **predominant** benefit  
of fluoride is TOPICAL not  
SYSTEMIC.

The admission by the CDC  
should have ended fluoridation in  
the US and around the world

**If fluoride works primarily on the outside  
of the tooth not from inside the body**

Why swallow fluoride and expose every  
tissue of the body to a toxic substance,  
when you can brush it on your teeth and  
spit it out?

**And why put it in the drinking water and  
force it on people who don't want it?**

The background of the slide is a blue gradient that transitions from a lighter blue at the top to a darker blue at the bottom. Overlaid on this gradient are several diagonal stripes of a slightly different shade of blue, running from the top-left towards the bottom-right. The stripes are parallel and spaced evenly.

# A summary

## **Fluoridation** is:

- **Unusual** (most countries don't do it),
- **Unnatural** (the level of fluoride in mothers' milk is extremely low),
- **Unethical** (the government is violating the individual's right to informed consent to human treatment)
- **Unsafe** (dental fluorosis, lowered IQ, accumulation in the bones...) and
- **Unnecessary** (if it works at all it works topically)

**Other countries have demonstrated that there are other – and better - ways of fighting tooth decay without forcing water fluoridation on the whole population. These other ways are not only better for teeth but also for health (fighting obesity)**

**Fluoridation is an obsolete practice and it is time to end it.**

# The 1-2-3 punches that should **KNOCK** out Water Fluoridation

- 1) Fluoride Lowers IQ
- 2) MCLG should be ZERO
- 3) **IF** EPA Office of Water did its job  
then fluoridation would be over!

# How can we force the EPA to do an honest job on determining a new MCLG for fluoride?

- 1) **Legal possibilities (panel) (Today)**
- 2) **Organizing politically (Sunday and Monday)**

The background is a blue gradient that transitions from a lighter blue at the top to a darker blue at the bottom. Overlaid on this gradient are several parallel diagonal stripes of a slightly different shade of blue, running from the top-left towards the bottom-right.

Sunday Sept 7

- 1) Local campaigns**
- 2) How do we get EPA Office of water to determine an honest MCLG for fluoride?**
- 3) How do we get the FDA to regulate fluoride for ingestion? (Bill O. Sunday)**
- 4) How do we get Congress to stop funding CDC promotion/propaganda on fluoridation?**
- 5) How do we drive a wedge between CDC and ADA (Charlie Brown and Dan Stockin)?**

**Meanwhile, we have to continue to  
end fluoridation**

- 1) One open mind at a time**
- 2) One community at a time**

# Communities ending or rejecting fluoridation

Since 2010, over 156 communities in Australia, Canada, New Zealand and the U.S have stopped or rejected fluoridation

4 million people have been liberated!

In May 21 2013, Portland Oregon voted 61% to 39% to reject fluoridation despite being outspent 3 to 1.

We will hear from Rick North tomorrow on how this was done

1n Nov 2012, Queensland  
lifted mandatory requirement

In August 2014, the **Israeli** Minister of Health announced an end of fluoridation in Israel.



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Fluoride Action Network

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## ISRAEL OUTLAWS WATER FLUORIDATION



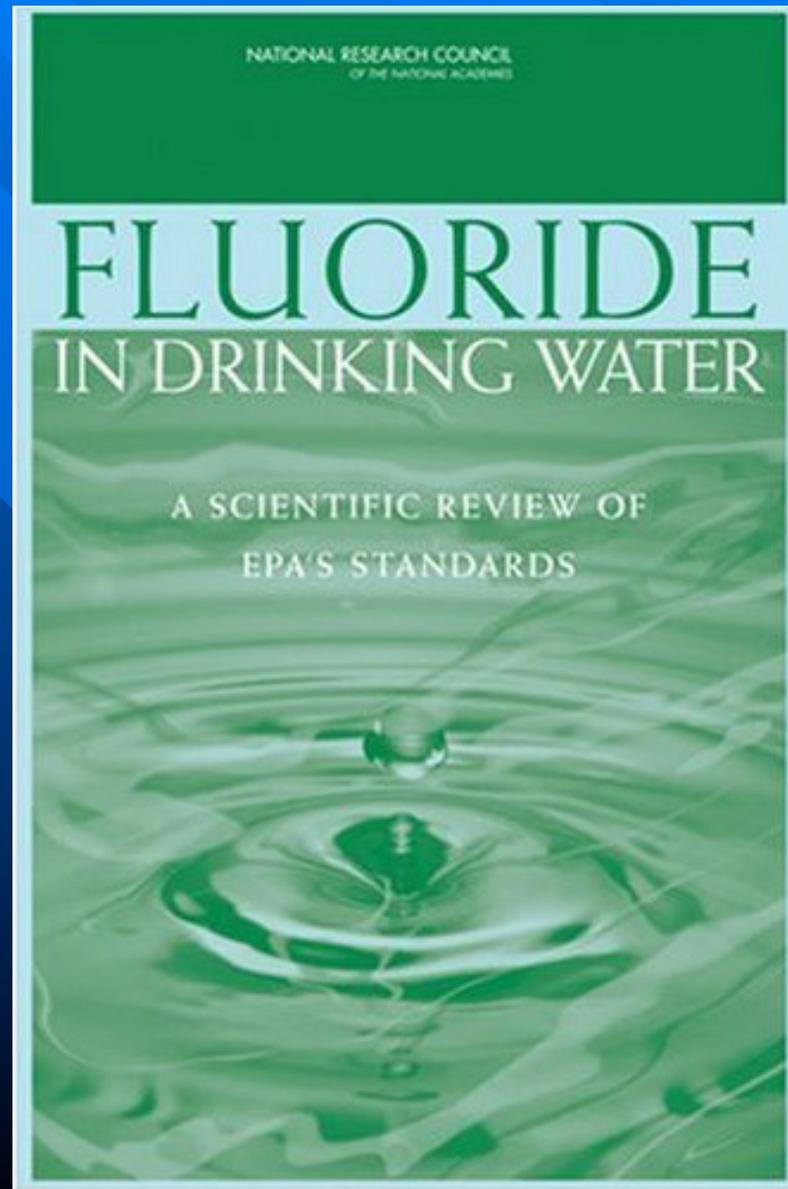
# RESOURCES

Please see

**The Professionals' Statement  
Calling for an End to  
Fluoridation worldwide**

[www.FluorideALERT.org](http://www.FluorideALERT.org)

# NRC (2006)



In 2006 the U.S. **National Research Council** published its 3-year review (NRC, 2006).

The panel chosen was the first balanced panel in the history of fluoridation in the U.S.

See Figure 2-8 on page 85  
(NRC, 2006)

- **This FIGURE shows estimated average intake of fluoride from all sources, at 1 ppm in drinking water for various age ranges**

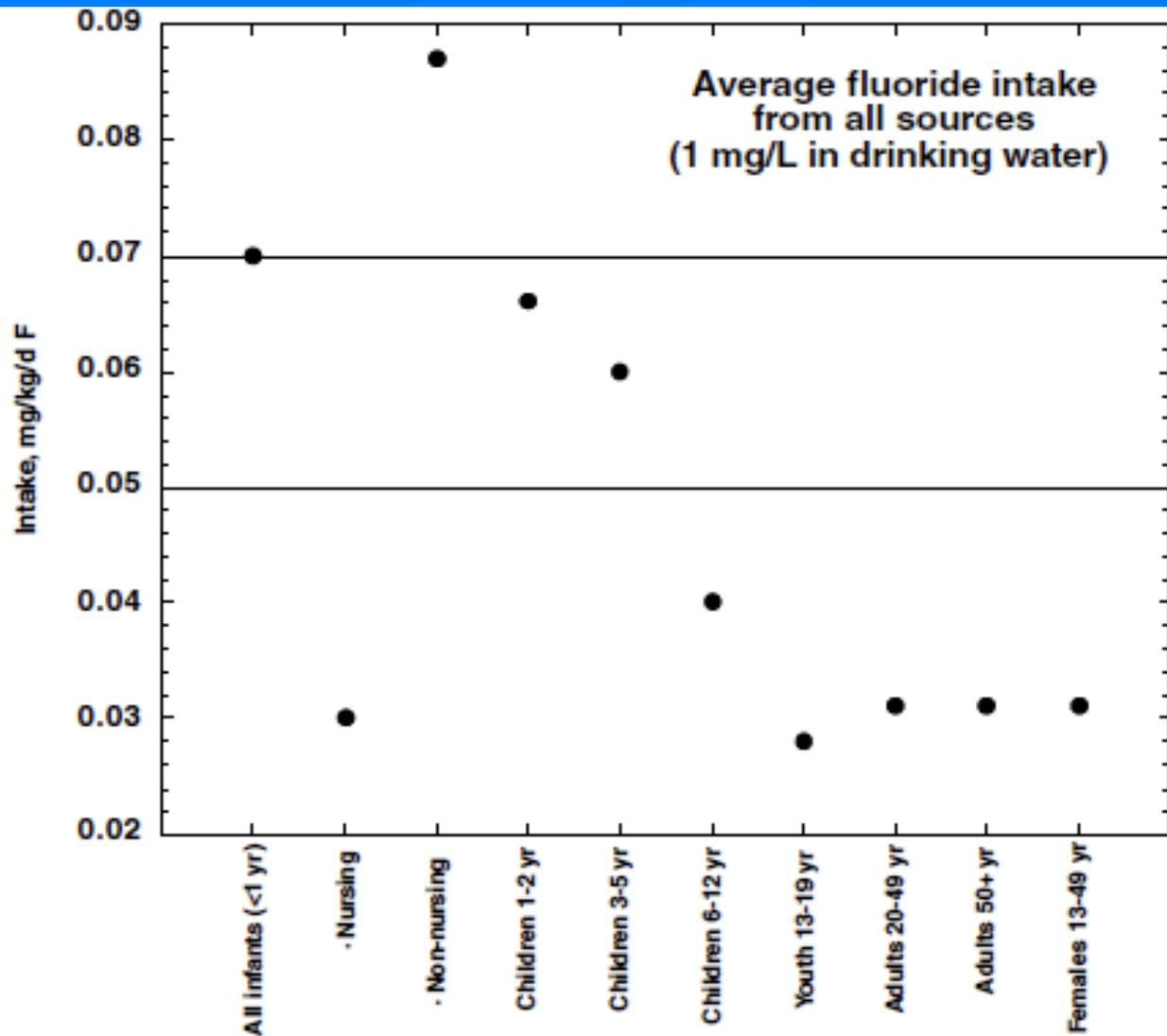


FIGURE 2-8 Estimated average intake of fluoride from all sources, at 1 mg/L in drinking water (based on Table 2-11). Horizontal lines indicate an intake of 0.05-0.07 mg/kg/day.

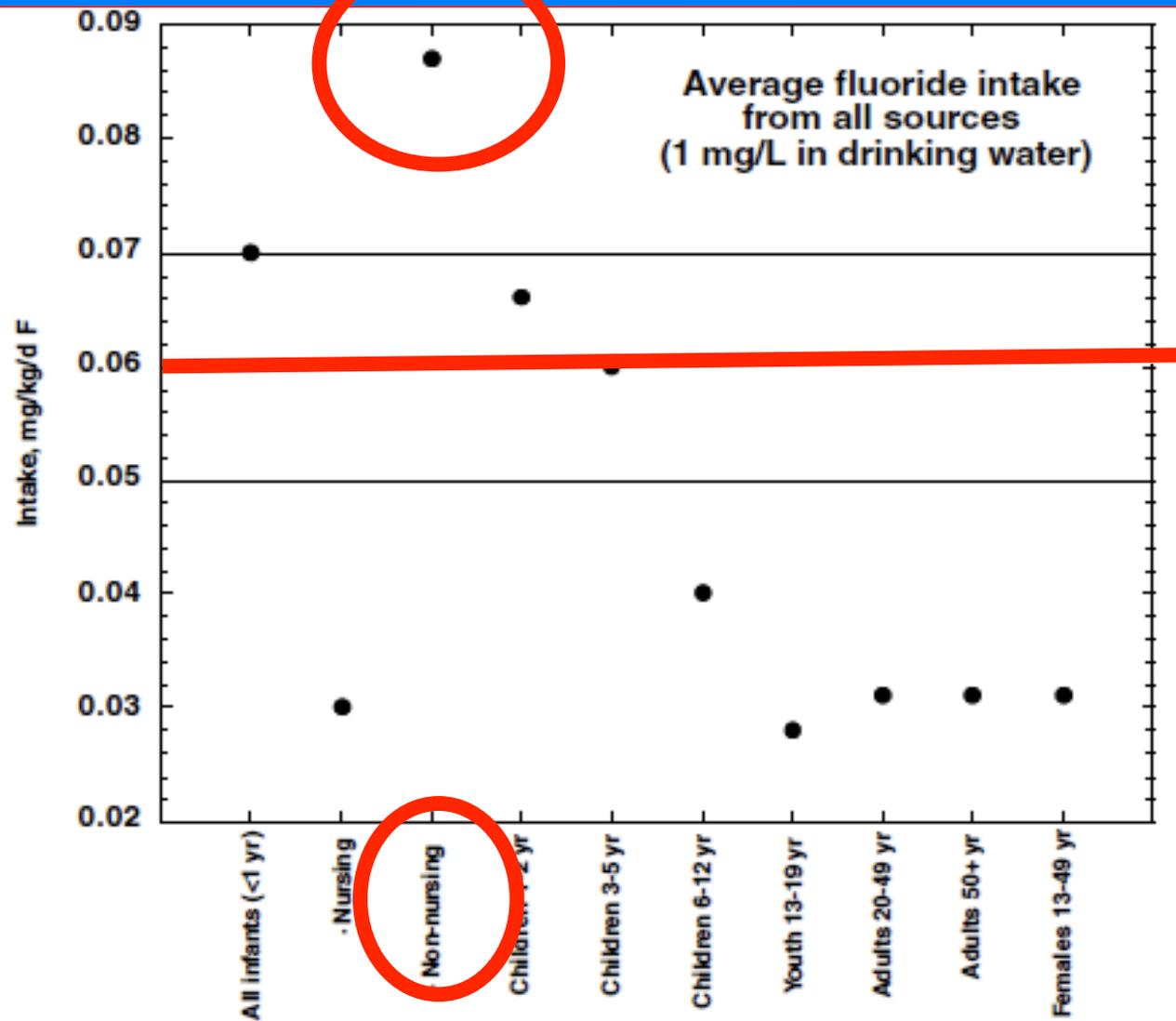
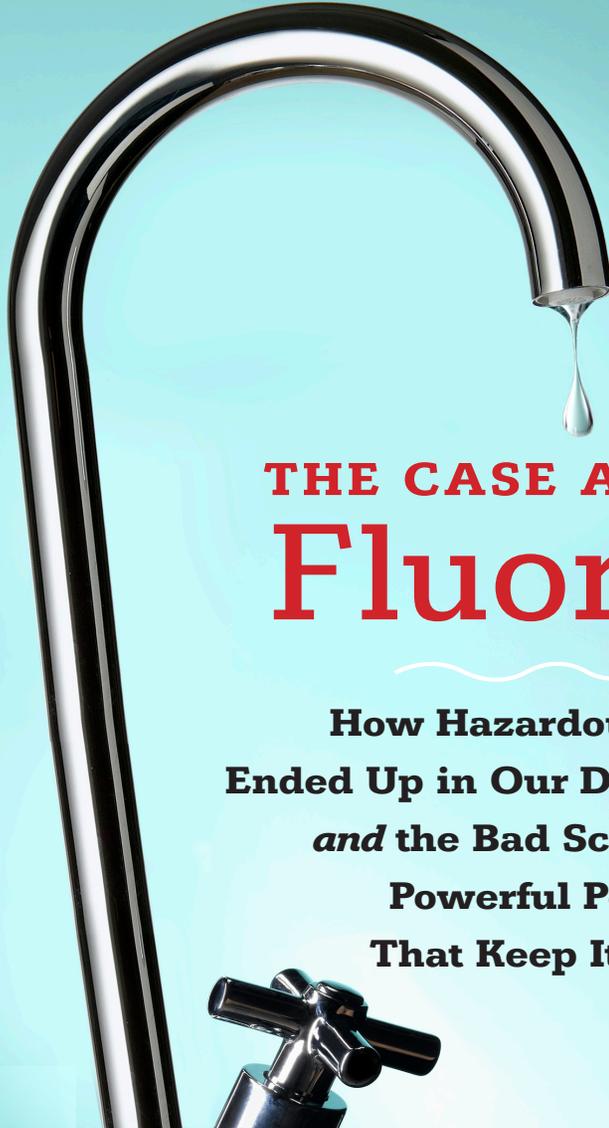


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.....  
**A New Look  
at the Scientific  
Evidence**  
.....

# **THE CASE AGAINST Fluoride**

**How Hazardous Waste  
Ended Up in Our Drinking Water  
*and* the Bad Science and  
Powerful Politics  
That Keep It There**

**PAUL CONNETT, PhD**

James Beck, MD, PhD | H. Spedding Micklem, DPhil

Book published  
by Chelsea Green

October, 2010

Can be ordered  
on Amazon.com

Contains  
80 pages  
of references  
to the  
Scientific  
literature

**See Also**

**“50 Reasons to Oppose Water  
Fluoridation”**

**Can be viewed ONLINE at  
[www.FluorideALERT.org](http://www.FluorideALERT.org)**

Please watch the  
20 minute DVD  
“TEN FACTS on FLUORIDE”  
PLUS BOOKLET

at

[www.FluorideALERT.org](http://www.FluorideALERT.org)

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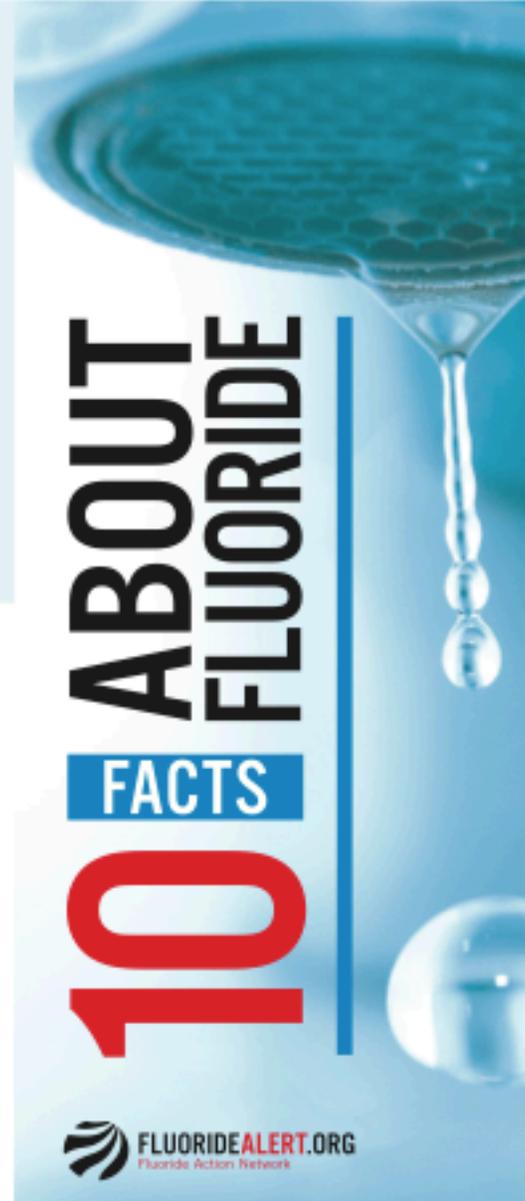
**TO FIND OUT MORE** about these facts; scan the QR code below, or enter the web address [www.tinyurl.com/fluoridationfacts](http://www.tinyurl.com/fluoridationfacts)



To continue learning more, visit our website at:



**ABOUT FLUORIDE FACTS 10**



Please become a  
**Parent Against Fluoridation**  
Details from Stuart Cooper,  
FAN's campaign manager  
stuart@FluorideALERT.org

Please get your local group to join  
the  
**Worldwide Alliance to End  
Fluoridation**

Details from Stuart Cooper,  
FAN's campaign manager  
stuart@FluorideALERT.org

Stuart Cooper will be talking  
about these new campaigns  
tomorrow

What US government  
agencies are and  
are not  
doing on fluoride  
and fluoridation

FDA REGULATES SUBSTANCES WHICH TREAT PEOPLE  
EPA REGULATES SUBSTANCES WHICH TREAT WATER

“The Safe Drinking Water Act prohibits the deliberate addition of any substance to drinking water for health-related purposes other than disinfection of the water.”

FOIA Request HQ-FOI-01418-10

“No national primary drinking water regulation may require the addition of any substance for preventive health care purposes unrelated to contamination of drinking water.” [42 USC 300g-1\(b\)\(11\):](#)

# The American Dental Association Does Not have Jurisdiction

To the Superior Court of the State of California Case  
No. 718228, Demurrer (October 22, 1992) the ADA said,

“The American Dental Association (ADA) owes no legal duty of care to protect the public from allegedly dangerous products . . . . Dissemination of information relating to the practice of dentistry does not create a duty of care to protect the public from potential injury.”



FDA "do not swallow" . . . The same amount  
CDC promotes in each glass of public water

# FDA CDER HAS JURISDICTION

FDA CDER has the experts to weigh the  
the benefits versus risks.

CONGRESS DEFINES *DRUGS*:

*“Articles intended for use in the  
... prevention of disease ...”*

21 USC 321

<sup>(g)(1)(B)</sup> FDA testified to Congress that fluoride  
is a drug.

Congressional Investigation 2001

# ARTIFICIAL FLUORIDATION

## NO (MINIMAL) CLINICAL PUBLIC HEALTH

CDC: Ingestion of fluoride is not likely to reduce tooth decay

CDC (1999). ACHIEVEMENTS IN PUBLIC HEALTH, 1900-1999: Fluoridation of Drinking Water to Prevent Dental Caries. MMWR, 48(41); 933-940, October 22

CDC: "It is not CDC's task to determine what levels of fluoride in water are safe."

<http://www.cdc.gov/fluoridation/safety.htm> 5/26/2012

## MANY HAVE EXCESS FLUORIDE IN SERUM

CDC: "Normal serum fluoride levels are <20 mcg/L (0.02 ppm) but varies substantially. . . ."

<http://www.bt.cdc.gov/agent/sulfurylfluoride/casedef.asp>

normal <0.013 ppm

Taves ('66)

Sowers controls 0.05 ppm (4<sup>th</sup> quartile)

Sandhu controls 0.042 ppm and tumors at 0.072 ppm (Xiang 0.064 ppm)

Zang controls 0.04 ppm and 8 IQ loss 0.08 ppm

Rathe controls 0.025 ppm and stones at 0.12 ppm

Heaney (2002) Mother's Milk most samples - none detected

## Part 6

The propaganda used by  
some **civil servants** in the  
promotion of fluoridation

Queensland Health's  
promotion of “mandatory”  
statewide fluoridation)  
(2007)

## This glass of water could protect your smile

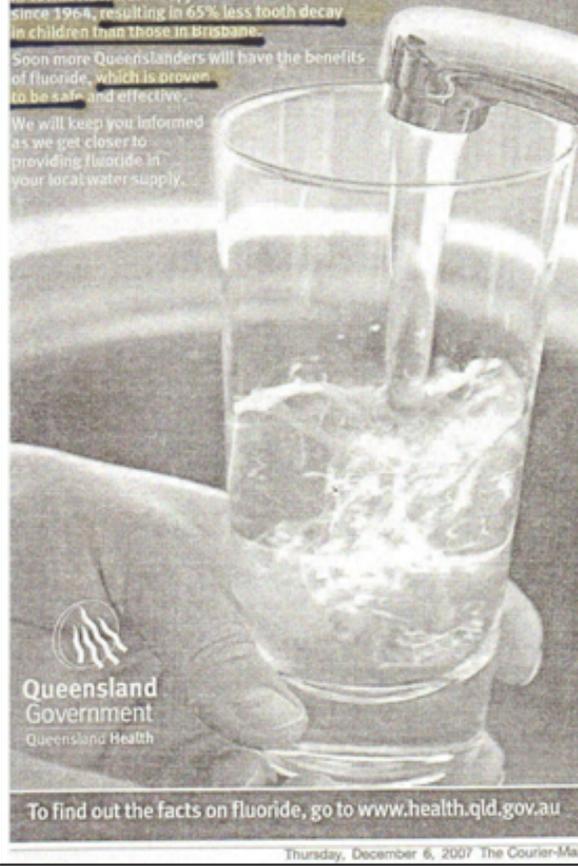
From next year the State Government will be spending \$35 million to help protect Queenslanders' teeth.

Every other Australian State and Territory has provided fluoride in water supplies to help protect people's teeth for the last 30-40 years.

In Townsville, water supplies have been fluoridated since 1964, resulting in 65% less tooth decay in children than those in Brisbane.

Soon more Queenslanders will have the benefits of fluoride, which is proven to be safe and effective.

We will keep you informed as we get closer to providing fluoride in your local water supply.



Queensland  
Government  
Queensland Health

To find out the facts on fluoride, go to [www.health.qld.gov.au](http://www.health.qld.gov.au)

Thursday, December 6, 2007 The Courier-Mail

- *“In Townsville, water supplies have been fluoridated since 1964, resulting in 65% less tooth decay in children than those in Brisbane”*

**Qld Health newspaper ads Dec 2007**

# How did they get the 65% less decay ?

Table 4: Caries experience (decayed, missing or filled surfaces) in the permanent dentition ←

Age (years)	Townsville			Brisbane			Difference		Prevalence	
	n	DMFS <sup>a</sup> Mean	SD <sup>b</sup>	n	DMFS <sup>a</sup> Mean	SD <sup>b</sup>	%	Absolute	Townsville	Brisbane
6	300	0.04	0.23	472	0.10	0.54	60	0.06	4	4
7 ←	240	0.09	0.37	440	0.26	0.83	65	0.17	6	13
8	262	0.25	0.68	375	0.52	1.09	52	0.27	15	26
9	226	0.41	0.93	403	0.51	1.05	20	0.10	24	26
10	205	0.57	1.10	387	1.13	1.96	50	0.56	29	42
11	188	0.65	1.26	370	1.45	2.25	55	0.80	31	48
12	69	0.94	1.63	205	1.80	2.79	48	0.86	36	54

Note: (a) DMFS = number of decayed, missing or filled surfaces per child. (b) SD = standard deviation



Teeth exposed to  
fluoridated water

***“Teeth exposed to  
fluoridated water”***

Qld Health 2007



Teeth exposed to  
fluoridated water

***“Teeth exposed to  
fluoridated water”***

Qld Health 2007



Teeth without exposure to fluoridated water

***“Teeth without exposure  
to fluoridated water”***

Qld Health 2007

# The state of oral health in Queensland



Teeth exposed to  
fluoridated water



Teeth without exposure to fluoridated water



Four-year-old child  
undergoing general  
anaesthetic for dental decay





**Medical officer of health Dr. Hazel Lynn holds up a picture of a child's teeth. Lynn said water fluoridation prevents tooth decay and is a safe practice. (Owen Sound, Sun Times, Jan 31, 2014)**

We must suggest to these  
civil servants that they read

Ibsens's play

An Enemy of the People

“Mayor: The matter in question is not a purely scientific one; it is a complex affair; it has both a technical and an economic side. . . . As a subordinate official, you have no right to express any conviction at odds with that of your superiors.

Dr. Stockman: What I am doing, I am doing in the name of truth and for the sake of my conscience.”<sup>1-2</sup>

—*Ibsen, An Enemy of the People, 1882*