It’s the Fluoride StupiD
BOULDER VALLEY SCHOOL DISTRICT SUPPORTS REMOVING FLUORIDE FROM THE WATER
BACKGROUND AND THE TIMELINE

- New Superintendent of schools
- My Contact Susan Rowley BVSD Health Services and Medical Coordinator
- Susan sent an email to me on July 27th with a subject line, “Fluoride Concern and “Brain” effects. She asked, “What did I know about this?”
- August 3rd in the morning Susan sent a series of links to websites. Later on 8/3 she asked if I would come to a meeting at the Superintendent's office to discuss the issue with members of the Board on August 17th.
Low IQ? ... It's The Fluoride Stupid

Sayer Ji, Contributor
Activist Post

If those who believe that fluoride doesn't "make you stupid" (i.e. lower IQ) let themselves be exposed to it, or willfully consume it for its purported "health benefits," doesn't that prove the point? Could their fluoride-exposed brains and bodies lack the discernment (or IQ) needed to ascertain the obvious dangers of such exposure?
HEALTH EFFECTS: Fluoride & the Brain

Key Findings - Fluoride & the Brain: (Click for more detail)

1) Fluoride's ability to damage the brain represents one of the most active areas of research on fluoride toxicity today.

2) The research on fluoride and the brain has been fueled by 18 human studies...
Key Findings - Fluoride & the Brain: (Click for more)

1) Fluoride's ability to damage the brain represents one of the most active areas of research on fluoride toxicity today.

2) The research on fluoride and the brain has been fueled by 18 human studies from China, India, Iran, and Mexico finding elevated levels of fluoride exposure to be associated with IQ deficits in children. Fluoride's impact on IQ is exacerbated among children with low-iodine exposure.
EFFECTS OF ENDEMIC FLUORIDE POISONING ON THE INTELLECTUAL DEVELOPMENT OF CHILDREN IN BAOTOU

Yongping Li, a Xiangyi Jing, a De Chen, a Liang Lin, a Zhaojung Wang a
Inner Mongolia, China

SUMMARY: Our goal was to investigate the effects of endemic fluoride poisoning on the intellectual development of children living in Baotou, Inner Mongolia. Our methodology was to select random child subjects from endemic fluoride areas in Baotou and use the illustrated version of the Chinese Standardized Raven Test for use with children in rural areas to test their IQ. The results showed that the average IQ of 720 children in the endemic area was 92.07 (compared to 93.78 for 236 children in the control area), with 10.38% falling into the "low" IQ category versus 4.24% in the control area. Compared with the theoretical average IQ for the Chinese children from rural areas, the average IQ of the endemic fluoride area subjects was 7.93 points lower, and the rate of underdeveloped intelligence 8% higher than the average, a very significant difference. The average IQ of children with dental fluorosis was 88.67, which was 8.
Developmental Fluoride Neurotoxicity: A Systematic Review and Meta-Analysis.

Choi AL, Sun G, Zhang Y, Grandjean P.

Department of Environmental Health, Harvard School of Public Health, Boston, MA, USA.

Abstract

Background: Although fluoride may cause neurotoxicity in animal models and acute fluoride poisoning causes neurotoxicity in adults, very little is known of its effects on children's neurodevelopment. Objective: We performed a systematic review and meta-analysis of published studies to investigate the effects of increased fluoride exposure and delayed neurobehavioral development. Methods: We searched the MEDLINE, EMBASE, Water Resources Abstracts, and TOXNET databases through 2011 for eligible studies. We also searched the China National Knowledge Infrastructure (CNKI) database, as many studies on fluoride neurotoxicity have been published in Chinese journals only. In total, we identified 27 eligible epidemiological studies with high and reference exposures, endpoints of IQ scores or related cognitive function measures with means and variances for the two exposure groups. We estimated the standardized mean difference (SMD) between exposed and reference groups across all studies using random effects models. We conducted sensitivity analyses restricted to studies using the same outcome assessment and having drinking water fluoride as the only exposure. Cochran test for heterogeneity between studies, Begg's funnel plot and Egger test to assess publication bias were performed. Meta-regressions to explore sources of variation in mean differences among the studies were conducted. Results: The standardized weighted mean difference in IQ score between exposed and reference populations was -0.45 (95% CI -0.56 to -0.35) using a random-effects model. Thus, children in high fluoride areas had significantly lower IQ scores than those who lived in low fluoride areas. Subgroup and sensitivity analyses also indicated inverse associations, although the substantial heterogeneity did not appear to decrease. Conclusions: The results support the possibility of an adverse effect of high fluoride exposure on children's neurodevelopment. Future research should include detailed individual-level information on prenatal exposure, neurobehavioral performance, and covariates for adjustment.
Harvard Study – Published in National Institute of Health Journal – Finds Fluoride Lowers Children’s IQ

Yet Another Government Report Finds that Fluoride Lowers IQ in Kids The Harvard School for Public Health reports: For years health experts have been unable to agree on whether fluoride in the drinking water may be toxic to the developing ... Continue reading ➔
“each of these articles reviewed had deficiencies, in some cases rather serious, which limit the conclusions that can be drawn.”

“most reports were fairly brief and complete information on covariates was not available’

“The exposed groups had access to drinking-water with fluoride concentrations up to 11.5mg/L...”
Independent critical appraisal of selected studies reporting an association between fluoride in drinking water and IQ

A report for South Central Strategic Health Authority
Delivery date: 11th February 2009

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“As observational studies they are all subject to confounding.”

“This type of study cannot show whether an exposure preceded the outcome, a temporal sequence that is needed to support causal links.”

Most studies did not report whether IQ testing was assessed in a blinded fashion.”
Attendees were the superintendent, four Board members (3 of which are anti-fluoride), Ms. Rowley and myself.

My silent thoughts:
- Get the new superintendent on your side.
- Don’t get into an argument.
- Keep it on the science, you have done your homework.
- Don’t make a fool of yourself.

I presented why these studies did not apply to Boulder Colorado.

My plea, “Please don’t make a decision on bad science.”
WHAT HAPPENED

NOTHING!

No Headline

No School Board Anti-Fluoride Stand

Status Quo in Boulder Colorado – For Now.
During Colorado’s last legislative session Senator Jeanne Nicholson sponsored a bill expanding oral health benefits to all Medicaid eligible women in Colorado regardless of age.

Senator Nicholson needed help from dentists to build the language and the budget for the bill.

The Colorado Dental Association co-sponsored the bill.
A BILL FOR AN ACT

101 Concerning providing oral health services to pregnant
102 women who are enrolled in Medicaid.

Bill Summary

(Note: This summary applies to this bill as introduced and does
not reflect any amendments that may be subsequently adopted. If this bill
passes third reading in the house of introduction, a bill summary that
applies to the reengrossed version of this bill will be available at
http://www.leg.state.co.us/billsummaries.)

The bill includes dental services as a benefit for pregnant women
under Colorado's medicaid program. The implementation date is January
1, 2014. The dental services provided to pregnant women will include
those relevant dental services provided to children under the early and
Could we make these services to a new population group cost neutral?
- In year 1 – no.
- In year 2 – maybe.
- In year 3 – yes!

Due to the financial concerns inherent in years 1 and 2 the yearly benefit was capped at $600/per year/woman over the age of 21 year.
- The benefit package needed to be defined prior to going to the appropriations committee.
WHAT IS THE EVIDENCE

- ADA Journal February of 2011
  - Children are three times more likely to have caries when their mother has untreated caries.
  - Children are three times as likely to have caries when their mother has missing teeth.
  - This data has been corroborated in a study out of Denver Health and Hospitals by Dr. Patricia Braun.
DENTAL AID DATA

- Testimony before the Health and Human Services Committee and the Appropriations Committee

- Cohort 1 - 500 children at age three and four when their mothers received comprehensive perinatal oral health care.

- Cohort 2 - 500 children at age three and four when their mothers did not receive perinatal oral health care.

- Cohort 1 – 18% treated under general anesthesia

- Cohort 2 – 47% treated under general anesthesia
<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cost of care cohort 1</td>
<td></td>
</tr>
<tr>
<td>Mothers average $750/woman</td>
<td>$375,000</td>
</tr>
<tr>
<td>Children at CHC</td>
<td></td>
</tr>
<tr>
<td>$10,000 x (18% of 500)</td>
<td>$900,000</td>
</tr>
<tr>
<td>Children with clinic based care</td>
<td></td>
</tr>
<tr>
<td>$1,000 x (41% of 500)</td>
<td>$205,000</td>
</tr>
<tr>
<td>Children recalls only</td>
<td></td>
</tr>
<tr>
<td>$350 x (41% of 500)</td>
<td>$71,750</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$1,551,750</strong></td>
</tr>
</tbody>
</table>
Totals for Cohort 2

- Mothers – no care
  $0

- Children at CHC
  $10,000 x (47% of 500)
  $2,350,000

- Children receiving care in the clinic
  $1,000 x (18% of 500)
  $90,000

- Children prophylaxis and recall only
  $350 x (35% x 500)
  $61,250

- TOTAL
  $2,501,250
SAVINGS

- COHORT 1
  - Perinatal Care $1,551,750

- COHORT 2
  - NO perinatal care $2,501,250

- Net Savings $945,500
THANK you!

WE WILL GLADLY ANSWER QUESTIONS

Tell me your answer to my question via email dlewis@dentalaid.org