

MINUTES OF THE HOUSE COMMITTEE ON HEALTH AND HUMAN SERVICES.

The meeting was called to order by Chairperson Carlos Mayans at 1:30 p.m. on February 8, 1996 in Room 423-S of the State Capitol.

All members were present except: Representative Merritt
Representative Morrison

Committee staff present: Norman Furse, Revision of Statutes
Emalene Correll, Legislative Research Department
Bill Wolff, Legislative Research Department
Francie Marshall, Committee Secretary

Conferees appearing before the committee:
Representative Gwen Welshimer
Dr. Corrine Miller, Health & Environment
Carl Schmittenner, Kansas Dental Association
Dr. Phil Zivnuska, President of the Wichita District Dental Society
Dr. Nevin Waters, President of the Kansas Dental Association
Betty Smith-Campbell, Kansas State Nurses' Association
Ruth Wolfram, Kansas School Nurses Organization
Ann Koci, SRS Adult Medical Service

Others attending: See Guest List: Attachment 1.

HB 2714 - Public water supply systems, fluoridation required

Chairperson Mayans opened the hearing on **HB 2714** announcing that due to the number of the conferees, each person will be allowed up to four minutes to present their testimony so that there will be enough time for question and answers.

The following proponents presented testimony supporting **HB 2714**:
Representative Gwen Welshimer (Attachment 2),
Dr. Corrine Miller, Health and Environment (Attachment 3),
Carl Schmittenner, Kansas Dental Association (Attachment 4),
Dr. Phil Zivnuska, President of the Wichita District Dental Society and Chairman of the Fluoridation Committee of the Kansas Dental Association (Attachment 5),
Dr. Nevin Waters, President of the Kansas Dental Association (Attachment 6),
Betty Smith-Campbell, Kansas State Nurses Association (Attachment 7),
Ruth Wolfram, President of the Kansas School Nurse Organization (Attachment 8),
Ann Koci, Commissioner of Adult and Medical Services, SRS (Attachment 9).

A question and answer period followed the proponents' presentation. Several questions regarding the cost factor, the benefits, and the risks of fluoride were addressed. Ms. Koci stated that a study revealed the cost for fluoridation was \$.51 per person, per year. There was discussion addressing the fluoride levels, the benefit factors of having fluoride in the water, and the toxic affects it would have on people. Comments were directed to Representative Welshimer regarding the water fluoridation issue for the city of Wichita.

The hearing was opened for the opponents to present their testimony.

The following testified in opposition to **HB 2714**:
Dr. Albert W. Burgstahler, Ph.D., Professor of Chemistry, The University of Kansas (Attachment 10),
Dennis Schwartz, Kansas Rural Water Association (Attachment 11),
Rondi Dale, Manhattan Ks (Attachment 12).

The hearing was opened to the opponents for questions by members of the committee.

Discussion followed pertaining to fluoride studies on children. The issue of using fluoride tablets were also

addressed.

Dr. Burgstahler gave a brief summary of his involvement with the study of fluoride. He stated that the scientific community is concerned about the safety of fluoridation at the toxicity level. When asked if there would be a better way to distribute fluoride, Dr. Burgstahler questioned the use of fluoride and its benefits to teeth.

Further discussion of **HB 2714** concerned questions as to whether the bill should be handled as a local issue, rather than as a mandate, and as well as the costs that would be involved in local actions.

The hearing on **HB 2714** was closed.

The meeting was adjourned at 3:15 p.m.

The next meeting is scheduled for February 12, 1996.

House Health & Human Services COMMITTEE GUEST LIST

DATE February 8, 1996

NAME	REPRESENTING
Philip S. Zivnuska DBS	KDA
David Hartzel	KDA
Herbert Seberg	KDA
Rich Gattis	Health Medwest
Betty Smith Campbell	KSNA
Terri Roberts	KSNA
Albert W. Broughton	Self
Randy Dale	Self
Kimberly Ashley	League of KS Women
Wendy	KS Medical Society
Jane Schuchter	KSNA
Diane Oleson	KSNA
Lashonda Ellington	Rep. Broderick Henderson's Legislative Intern
Nancy Rockswold	Box 37 Greeley KS 66033
J. B. Tubing	Delta Dental
Melissa Wang	Home
Carl Schmitt-Henrich	Kansas Dental Assn.

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2-8-96
Attn # 1

STATE OF KANSAS

GWEN WELSHIMER
REPRESENTATIVE, EIGHTY-EIGHTH DISTRICT
SEDGWICK COUNTY
6103 CASTLE
WICHITA, KANSAS 67218
316-685-1930
DURING SESSION
LEGISLATIVE HOTLINE
1-800-432-3924



TOPEKA

HOUSE OF
REPRESENTATIVES

COMMITTEE ASSIGNMENTS
MEMBER: TAXATION
LOCAL GOVERNMENT
ADMINISTRATIVE RULES & REGULATIONS

DATE: FEBRUARY 8, 1996

TO: THE HON. CARLOS MAYANS, CHAIRMAN,
HEALTH AND HUMAN SERVICES COMMITTEE
AND COMMITTEE MEMBERS

FROM: REP. GWEN WELSHIMER

SUBJECT: HB 2714, FLUORIDATION FOR KANSAS KIDS

NEARLY ALL ORGANIZED PROFESSIONS, CORPORATIONS, AND LOBBYISTS COME BEFORE THE LEGISLATURE FOR TAX BREAKS, TAX CREDITS, MERGERS AND OTHER LEGISLATION TO MAKE THEM MORE MONEY. THIS IS THE POPULAR AND PROPER THING TO DO, BOTH ON THE STATE AND FEDERAL LEVEL, EVEN IF IT HARMS THE EDUCATION AND GOOD HEALTH OF KANSAS KIDS.

IT IS MY OPINION THE DENTISTS OF KANSAS ARE HEROES. THEY ARE ACTUALLY SUPPORTING LEGISLATION THAT WILL NOT INCREASE THEIR INCOME. IN FACT, IT WILL REDUCE THEIR INCOME *AND* PROVIDE BETTER HEALTH FOR KANSAS KIDS. THERE'S ANOTHER BONUS: A SAVINGS IN SRS EXPENDITURES FOR DENTAL CARE FOR POOR CHILDREN. I HAVE BEEN INFORMED BY THE DEPT. OF SRS THAT WE SPEND APPROXIMATELY \$7.2 MILLION ANNUALLY ON DENTAL CARE FOR POOR CHILDREN.

IT IS IN MY CITY OF WICHITA WHERE A VOTE WAS TAKEN SOME YEARS AGO ON THE FLUORIDATION QUESTION. THE ISSUE DIDN'T PASS AND WICHITA'S KIDS LOST. I THINK WE HAVE GROWN UP SINCE THEN AND WE HAVE SEEN THE SUCCESS OF FLUORIDATION ELSEWHERE WITHOUT A DOWNSIDE. A SURVEY OF MY DISTRICT IN S.E. WICHITA HAS PRODUCED AN 86% IN SUPPORT OF FLUORIDATION RESPONSE.

I HOPE YOU WILL CONSIDER THE WONDERFUL BENEFITS THIS BILL WILL PROVIDE FOR KANSAS' KIDS AND WITH HAT'S OFF TO KANSAS' DENTISTS, PASS THIS BILL OUT FAVORABLY.

THANK YOU.

A handwritten signature in cursive script that reads "Gwen Welshimer". The signature is written in dark ink and is positioned above the printed name.

GWEN WELSHIMER

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atm #2

State of Kansas



Department of Health and Environment

Testimony Presented to

House Health and Human Services Committee

by

The Kansas Department of Health and Environment

House Bill 2714

The Kansas Department of Health and Environment appreciates this opportunity to present testimony regarding fluoridation of public water supplies in order to improve the oral health of Kansas children. Given some technical issues embodied in HB 2714, we are proposing a balloon amendment to make more clear to us how fluoridation of public water supplies will be implemented.

Numerous studies have shown the relationship between fluoride and prevention of dental decay. Early studies indicated that water fluoridation decreased decay by 40% to 60%. In the most recent national study, when all sources of fluoride were adjusted for, children living in fluoridated communities had a mean caries score that was 25% lower than children living in non-fluoridated communities. Fluoride is a natural element and is found in water, soil and rocks. Its effects on reducing tooth decay were first noted more than 60 years ago. Some cities have naturally occurring fluoride in their water at levels that prevent tooth decay. Over 50 years ago, the first city added fluoride to its drinking water to prevent dental decay. As other cities fluoridated their water, information was published in dental journals on the dramatic reduction in tooth decay. Marked differences in the proportion of children with dental decay were noted between fluoridated and unfluoridated communities, both in this country and around the world.

The public health impact of water fluoridation has been profound. Prior to community water fluoridation close to one half of 15 year olds were missing

H+H S Comm
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at least one permanent tooth due to decay. Results were similar in Kansas. Today, after many U.S. communities have fluoridated their water, nearly 50% of children have no dental decay. These benefits have been specifically demonstrated in community after community in the United States. Since 1951, every U.S. Surgeon General has strongly endorsed water fluoridation as a preventive public health measure. The U.S. Public Health Service considers water fluoridation the most important prevention program in dental health for children.

Fluoridation has prevented needless pain, infection, suffering and loss of teeth, as well as saving billions of dollars. A recent study of 1993 Medicaid expenditures in Nebraska indicated annual dental costs for children living in unfluoridated communities were \$120 to \$150 per child, while dental costs for children living in fluoridated communities were \$60 to \$80. They found that the annual Medicaid costs for children's oral health care were twice as high in unfluoridated communities as in fluoridated ones. Clearly, individuals making out-of-pocket payments for oral health care, or those having dental insurance, also save money. Once a tooth becomes carious, Public Health Service estimates show that, over a lifetime, \$1,000 will be required to maintain that tooth. Participants in the last national oral health survey (1985-1986) of employed adults and seniors had on average 9.8 decayed or filled teeth. If dental decay in even half of these adults could have been prevented, cost savings to the individual would have been significant.

Fluoridation of public water continues to have significant oversight. Continuous and considerable efforts have been made to document the health benefits of fluoride, assess the potential side effects, and to improve fluoride technology. Based upon numerous studies and expert panels, the U.S. Public Health Service has continued to endorse water fluoridation as safe and effective. Extensive research has been conducted over the years on the benefits and safety of water fluoridation.

Fluoridation has received very close scrutiny. Given the concerns expressed by some over water fluoridation, numerous reviews by public health agencies and researchers have been conducted to assess the health benefits and risks of fluoridation, and there is no evidence to suggest that the Public Health Service should change its recommendations. Based on history, we anticipate that questions will be raised about fluoridation. The critical point to remember, however, is that no single finding should be interpreted alone given the enormous amount of scientific evidence available.

Today, there is great public concern regarding the cost of health care. It seems quite appropriate that emphasis be placed on prevention which reduces

such expenditures. Economic studies have estimated that for every \$1 spent on water fluoridation, the community saves \$80 in dental care costs. Teeth becoming decayed rarely need one treatment. Dental restorations are not permanent and require repair or replacement as they are placed under constant stress.

To date, over 144 million people in the United States are supplied with drinking water containing enough fluoride to protect teeth. Currently, 51% of Kansans who get their water from public water systems receive fluoridated water. The importance of community water fluoridation to the health of the Nation is evidenced by the U.S. Department of Health and Human Service's goals for Healthy People 2000. These goals include having fluoridated water available to 75 percent of a state's population by the year 2000. House bill 2714 would help Kansans achieve that goal.

We fully support the intent of this bill which is to reduce health care costs, improve dental health, and alleviate unnecessary pain and suffering in all Kansans, especially children.

Thank you for this opportunity to provide testimony. I will be happy to answer any questions you have.

Testimony presented by: Corinne Miller, D.D.S., Ph.D.
State Dental Director
Division of Health
February 8, 1996

HOUSE BILL No. 2714

By Committee on Health and Human Services

1-24

9 AN ACT concerning public water supply systems; requiring the addition
10 of fluorides; amending K.S.A. 65-171m and repealing the existing
11 section.
12

13 *Be it enacted by the Legislature of the State of Kansas:*

14 Section 1. K.S.A. 65-171m is hereby amended to read as follows: 65-
15 171m. The secretary of health and environment shall adopt rules and
16 regulations for the implementation of K.S.A. 65-162a, 65-163, 65-163a,
17 65-170b and 65-171m et seq., and amendments thereto. In addition to
18 procedural rules and regulations, the secretary may adopt rules and reg-
19 ulations providing for but not limited to: (a) Primary drinking water stan-
20 dards applicable to all public water supply systems in the state. The pri-
21 mary drinking water standards may (1) identify contaminants which may
22 have an adverse effect on the health of persons; (2) specify for each con-
23 taminant either a maximum contaminant level that is acceptable in water
24 for human consumption, if it is economically and technologically feasible
25 to ascertain the level of such contaminant in water in public water supply
26 systems; or the treatment techniques or methods which lead to a reduc-
27 tion of the level of the contaminant sufficient to protect the public health,
28 if it is not economically or technologically feasible to ascertain the level
29 of the contaminant in the water in the public water supply system; and
30 ~~(b) establish the~~ (b) *the establishment of* requirements for adequate mon-
31 itoring, maintenance of records and submission of reports, sampling and
32 analysis of water, citing criteria and review and inspections to insure com-
33 pliance with the contaminant levels or methods of treatment and to insure
34 proper operation and maintenance of the public water supply system; and
35 (c) the definition of different categories of public water supply systems
36 such as community water supply systems and noncommunity water supply
37 systems and may provide for varying requirements for monitoring, main-
38 tenance of records and reporting, sampling and analysis of water, citing
39 criteria, and review and inspections based on numbers of persons served,
40 source of supply whether surface or groundwater or other conditions as
41 the secretary may determine to be in the interest of public health and
42 welfare and economic benefits.

43 The standards established under this section shall be at least as strin-

3-4

1 gent as the national primary drinking water regulations adopted under
2 public law 93-523. No primary drinking water standard or rule and reg-
3 ulation may require the addition of fluorides to public water supplies.

4 ~~New Sec. 2. (a) In order to promote the public health through the
5 protection and maintenance of dental health, the secretary of health and
6 environment shall adopt rules and regulations requiring the fluoridation
7 of public water systems. By July 1, 1997, each public water supply system
8 which regularly serves an average of more than 3,300 individuals daily at
9 least 60 days out of the year shall provide to the secretary an estimate of
10 the total capital costs to install fluoridation treatment. The rules and reg-
11 ulations adopted by the secretary shall take effect on January 1, 1998.~~

12 ~~(b) The rules and regulations shall include, but not be limited to, the
13 following:~~

14 ~~(1) Minimum and maximum permissible concentrations of fluoride
15 to be maintained by fluoridation of public water supply systems.~~

16 ~~(2) The requirements and procedures for maintaining proper con-
17 centrations of fluoride, including equipment, testing, recordkeeping, and
18 reporting.~~

19 ~~(3) Requirements for the addition of fluorides to public water supply
20 systems in which the natural level of fluorides is less than the minimum
21 level established in the regulations.~~

22 ~~(4) A schedule for the fluoridation of public water supply systems
23 which regularly serves an average of more than 3,300 individuals daily at
24 least 60 days out of the year, based on the lowest capital cost per con-
25 nection for each system.~~

26 ~~New Sec. 3. (a) A public water supply system scheduled to fluoridate
27 pursuant to paragraph (4) of subsection (b) of section 2 may comply with
28 the rules and regulations adopted by the secretary pursuant to that section
29 at any time, but is not required to comply until funds sufficient to pay
30 capital costs for the system have become available from any source other
31 than the public water supply system itself. For any year that funds are
32 not appropriated or made available from any source other than the public
33 water supply system itself for the costs described in subsection (g), a
34 public water supply system shall not be required to comply with rules and
35 regulations adopted by the department pursuant to section 2.~~

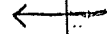
36 ~~(b) The secretary shall enforce this section and section 2, and all rules
37 and regulations adopted pursuant to these sections, unless delegated pur-
38 suant to a local primary agreement.~~

39 ~~(c) If the owner or operator of any public water supply system subject
40 to section 2 fails, or refuses, to comply with any rules and regulations
41 adopted pursuant to section 2, or any order of the secretary implementing
42 these regulations, the attorney general, upon the request of the secretary
43 shall institute mandamus proceedings, or other appropriate proceedings,~~

Balloon Amendment

Fluoridation of Community Water Systems

Insert



New Sec. 2. (a) In order to promote public health through the protection and maintenance of dental health, the secretary of health and environment shall adopt rules and regulations requiring fluoridation of all community public water systems serving more than 3300 individuals, where natural fluoride levels are less than the minimum level necessary to protect and maintain dental health. All public water supply systems required to fluoridate their drinking water, shall do so no later than July 1, 2001. Upon request by the public water supply system, KDHE may offer technical assistance and training on system installation, operation, and funding.

(b). The rules and regulations shall include, but not be limited to, the following:

(1) The minimum level of natural fluoride to be provided by a public water supply system to be exempted from the requirement to install fluoridation equipment.

(2) Minimum and maximum permissible concentrations of fluoride to be maintained by fluoridation of public water supply systems.

(3) Requirements and procedures for maintaining proper concentrations of fluoride, including equipment, testing, record keeping, and reporting.

(4) Requirements for the addition of fluorides to public water supply systems where the natural level of fluorides is less than the minimum level specified in the regulations for exemption from fluoridation requirements.

1 ~~in order to compel compliance with the order, rule or regulation. This~~
 2 ~~remedy shall be in addition to all other authorized remedies or sanctions.~~
 3 ~~(d) Neither this section nor section 2 shall supersede subsection (b)~~
 4 ~~of section 2.~~
 5 ~~(e) The secretary shall seek all sources of funding for enforcement of~~
 6 ~~this section and section 2, including, but not limited to:~~
 7 ~~(1) Federal block grants; and~~
 8 ~~(2) donations from private foundations.~~
 9 ~~(f) A public water supply system which regularly serves an average of~~
 10 ~~less than 3,300 people daily at least 60 days out of the year may elect to~~
 11 ~~comply with the rules and regulations for fluoridation established pur-~~
 12 ~~suant to this section and section 2.~~
 13 ~~Sec. 4.~~ K.S.A. 65-171m is hereby repealed.
 14 ~~Sec. 5.~~ This act shall take effect and be in force from and after its
 15 publication in the statute book.

Sec. 3.
 Sec. 4.



Statement in support of H.B. 2714
by Carl C. Schmitthenner, Jr.
Executive Director
February 6, 1996

Mr. Chairman and members of the Committee, I am Carl Schmitthenner. I am the Executive Director of the Kansas Dental Association.

I am pleased to be here with you today to share with you information on one of the most thoroughly tested and successful preventive health measures in the field of public health -- water fluoridation.

The dental profession has been an ardent advocate of water fluoridation for the past fifty years. The dental profession's support is based on water fluoridation's proven ability to improve the health and quality of life for the public and save billions of dollars in dental treatment costs by reducing cavities in children by 40 to 60 percent.

I am extremely pleased that the Kansas Dental Association is joined in our support of water fluoridation by the Kansas Department of Health and Environment, which also has a fifty-year history of supporting good health through water fluoridation.

Other supporters of this legislation include:

Kansas Department of Social and Rehabilitation Services
Kansas Dental Hygienists Association
Kansas State Nurses Association
Kansas Association of Osteopathic Medicine
Delta Dental Plan of Kansas
Kansas Chamber of Commerce and Industry
Kansas-National Education Association
Kansas Hospital Association
Kansas Medical Society
Kansas Pharmacists Association
Kansas Academy of Family Physicians

I am pleased to have with me today, two members of the dental profession who will provide you with valuable information on the importance of adequate water fluoridation. Dr. Philip Zivnuska, Chairman of the KDA Fluoridation Committee and President of the Wichita District Dental Society and Dr. Nevin Waters of Olathe, who is President of the Kansas Dental Association. I would also like to introduce Dr. G. Herbert Seberg, a nationally known expert on fluoridation who is serving as a resource for us today.

5200 Huntoon
Topeka, Kansas 66604
913-272-7360

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Statement by Philip S. Zivnuska D.D.S.
In Support of HB 2714
February 8, 1996

Mr. Chairman and Members of the Committee:

My name is Philip Zivnuska. I have been a practicing general dentist in Wichita for 18 years and currently serve as President of the Wichita District Dental Society and Chairman of the Fluoridation Committee of the Kansas Dental Association (KDA).

The Kansas Dental Association strongly supports the adoption of House Bill 2714. Fluoridation is one of the great public health measures of our time. A half century of experience has proven fluoridation to be the single most effective action to prevent tooth decay and to improve oral health over a lifetime. In all of medicine, there are only a few advances (pasteurization, water purification, and immunization) that can compare with the success of fluoridation.

Twenty five years ago, 28% of children aged 5-17 years had no dental decay in their permanent teeth. In 1980, that number had risen to over 36%. In June 1988, the National Institute of Dental Research reported the 49.9% of children in this age group were caries(decay) free, largely because of water fluoridation.

The benefits are not limited to one age group. A review of 113 studies in 23 countries showed average reductions of caries in primary teeth was 40-49%, and 50-59% in permanent teeth. It is important to note that adults and seniors show a reduction in caries of 15 to 35%. Seniors are keeping teeth longer and since older people tend to take more prescription drugs they also suffer the side effects. These include reduced saliva flow and subsequent cavities on the roots of their teeth that can be reduced by fluoridation. Water fluoridation benefits everyone with teeth.

Other sources of fluoride are helpful adjuncts but not suitable replacements. Fluoride toothpastes, gels, rinses, and tablets have improved the decay rate. Nonetheless, studies continue to show the need for water fluoridation even with declining decay levels. Because Wichita has insufficient fluoride levels, I will be giving fluoride tablets to my four year old for 12 more years, and my one year old will be taking fluoride until 2011. I possess the determination to do this, but even with my training and motivation, there is no way that I can tell you that my kids will take their tablet every day. Other children in my community may not have parents with the financial resources to afford this prescription item.

Fluoridation saves money. The benefit/cost ratio for fluoridation is 80/1. At a national average of 51 cents per year, a lifetime of protection will cost less than one filling. The provisions for funding by federal block grants and private foundations assures that an undue financial burden will not be incurred by the water supply system. Lack of an

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optimally fluoridated water supply hits the poor especially hard. Alternative sources of fluoride are more expensive and the poor have the least access to dental care when excessive decay does occur. California projects the savings in state dental programs for children will more than pay for costs of fluoridation in that state.

Fluoride is a naturally occurring constituent of food and water. Fluorine ranks thirteenth in abundance in the earth's crust and in the human body. It is the twelfth most abundant element in the oceans. Natural sea water has a higher concentration of fluoride (1.2-1.5 ppm) than would be needed for Kansas water supplies. Fluoride is a natural nutrient for the prevention of disease.

Fifty years of success has allowed for numerous studies of fluoride's success in preventing cavities. Fluoridation is endorsed by a remarkable number of organizations (see attached). The CDC, FDA, AMA, NIH and dozens of other leading national and international organizations support water fluoridation.

Mr. Chairman, members of the committee, I am proud to be a member of a profession that attempts to prevent disease and improve the health of the public. It is rare that a group will work against its own economic interest to serve the public interest. I enjoy doing dentistry, but there is nothing enjoyable about performing dental treatment that could have been prevented so easily and inexpensively. Save the citizens of Kansas money and discomfort. Improve their health. Please approve this bill to bring the benefits of fluoride to nearly 700,000 more Kansans.

Thank you.

Philip S. Zivnuska D.D.S.
2424 N Woodlawn #119
Wichita, KS 67220
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O-316-683-0411

**NATIONAL AND INTERNATIONAL
ORGANIZATIONS THAT ENDORSE OR SUPPORT
WATER FLUORIDATION:**

American Academy of Pediatrics
American Academy of Pediatric Dentistry
American Association for the Advancement
of Science
American Association for Dental Research
American Association of Dental Schools
American Association of Public Health
Dentistry
American College of Dentists
American Council on Science and Health
American Dental Assistants Association
American Dental Association
American Dental Hygienists Association
American Dietetic Association
American Federation of Labor and
Congress of Industrial Organizations
American Hospital Association
American Institute of Nutrition
American Medical Association
American Nurses' Association
American Osteopathic Association
American Pharmaceutical Association
American Public Health Association
American Public Welfare Association
American School Health Association
American Society of Clinical Nutrition
American Society for Dentistry for Children
American Veterinary Medical Association
American Water Works Association
Association for Academic Health Centers
Association of State and Territorial Dental
Directors
Association of State and Territorial Health
Officials
British Dental Association
British Fluoridation Society
British Medical Association
Canadian Association of Accident and
Sickness Insurers
Canadian Dental Association
Canadian Medical Association
Canadian Nurses Association
Canadian Public Health Association

Center for Science in the Public Interest
Consumer Federation of America
Department of National Health and Welfare (Canada)
Delta Dental Plans Association
European Organization for Caries Research
Federation of American Societies for
Experimental Biology
Federation Dentaire Internationale
Food and Nutrition Board
Great Britain Ministry of Health
Health Insurance Association of American
Health League of Canada
International Association for Dental Research
Mayo Clinic
National Academy of Sciences
National Cancer Institute
National Confectioners Association
National Congress of Parents and Teachers
National Health Council
National Institute of Dental Research
National Research Council
New York Academy of Medicine
Royal College of Physicians (London)
Travelers Insurance Company
U.S. Department of Agriculture
U.S. Department of Defense
U.S. Environmental Protection Agency
U.S. Junior Chamber of Commerce
U.S. Public Health Service:
Centers for Disease Control and Prevention
Food and Drug Administration
Health Resources and Services
Administration
Indian Health Service
National Institutes of Health
World Health Organization
Pan American Health Organization

Statement in support of H.B. 2714
by Nevin Waters, D.D.S.
President of the Kansas Dental Association
February 8, 1996

Mr. Chairman and members of the Committee, I am Dr. Nevin Waters. I am a dentist in general practice in Olathe and President of the Kansas Dental Association. I am extremely pleased to express the long-standing support of organized dentistry for adjusting the level of fluoride in our public water supplies to a level that is adequate to prevent tooth decay.

I am a life-long Kansan, who grew up in a community that was not and still is not fluoridated. I have practiced my entire dental career in the city of Olathe that is fluoridated. The lack of access to adequately-fluoridated water results in unnecessary suffering, especially for children. It also costs money -- frequently public money -- that could otherwise be put to other uses.

Each summer I spend two weeks as a volunteer dentist in Mexico. When I see those people with severe decay, I am reminded of how glad I am that my children grew up with the benefits of adequate fluoridation.

I have attached to my testimony information taken from a recent U.S. Public Health Service publication that summarizes the history of water fluoridation in America and estimates that over the lifetime of the individual, the cost of restoring carious (decaying) teeth may well exceed \$1,000 per tooth. Fluoridated water very cheaply prevents tooth decay.

Kansas currently ranks 31st of the fifty states in the percentage of the public water supply that uses fluoridated water -- 58.4 percent. I believe we can and must do better. I have also attached the state rankings for your review.

I mention my Kansas roots because I am proud of our state's traditional position at the forefront of public health measures. Dr. Samuel Crumbine was a pioneer Kansas public health officer who felt, like dentists do today, that disease is best fought through prevention.

Under Dr. Crumbine's leadership in the early 1900s, the state government instituted a number of requirements to improve and protect public health. The common towel was banned from restrooms, and the public drinking cup was banned. Dr. Crumbine also proved that river water that is polluted by raw sewage does not purify itself every seven miles.

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The state of Kansas recognized that state government has an important role to play in protecting and promoting public health. At times, that role involves requiring individuals and local governments to take certain actions for the public good.

For example, public water systems are required by the state to add chemicals to the water to inhibit bacteria growth. As a dentist, I am required to be licensed, to fulfill continuing education requirements, and to meet state infection control regulations in my office. In these cases, the state is acting appropriately by imposing requirements that protect public health.

Similarly, we believe the state has a responsibility to promote public health and reduce tooth decay by bringing fluoridated water to an additional 700,000 Kansans. Children who have painful, rotting teeth -- whether in Wichita, or Liberal, or Leavenworth, or Mexico City -- don't understand complex political questions. They just know they're in pain. As a dentist, I know that such pain can largely be prevented easily and cheaply with community water fluoridation. I believe the state very properly has a role in improving the health of its people, particularly our children.

Again, Mr. Chairman and members of the Committee, I appreciate your time and consideration of this important public health measure.

For a
Healthy
N A T I O N

**RETURNS ON INVESTMENT
IN PUBLIC HEALTH**

U.S. Department of Health and Human Services
Public Health Service

A Community Lead Abatement Program in Lynn, Massachusetts

Community-based public health efforts, with strong participation by local public health departments, can substantially reduce the incidence of lead poisoning among children. In 1989, 72% of the children under six years of age in Lynn, Massachusetts, were screened. 59 children were found to have high blood-lead levels, the highest rate in the state. A coalition of parents, tenants, health care providers, and public health officials attacked this problem through a combination of legislation, screening, outreach, and public education.

All children in Lynn are now tested for blood-lead levels before they enter school or daycare. The homes of children with high blood-lead levels are inspected. If lead is detected, surfaces must be abated by a technician who is trained and certified by the state health department. Treatment is provided for children whose lead levels require medical intervention.

The local health department also deals with other sources of lead. In one instance, the transit authority neglected to use proper shrouding when it sandblasted lead paint from a bridge in a residential neighborhood. Residents were tested for elevated lead levels, and the health department took action to ensure that the lead dust was cleaned up.

As a result of its campaign, Lynn has seen a substantial reduction in the number of children exposed to high levels of lead. In 1993, 92% of the children were screened and only 19 children—fewer than 0.4%—were found to have elevated blood-lead levels.

remaining source of lead exposure in the United States. Although it was known since the early 1900s that lead in paint can cause high blood-lead levels among children, it was not until 1977 that the Consumer Product Safety Commission prohibited the addition of lead to paint used for residential purposes. Today, an estimated 57 million residences in the United States still contain leaded paint, and young children live in 3.8 million housing units with deteriorating lead paint (HUD, 1991).

Local public health departments across the nation have taken an active role in combating exposure to lead in paint. Screening programs identify children with high blood-lead levels; follow-up programs provide appropriate medical treatment to children as needed and work to reduce lead paint and dust levels in their homes. In 1993 alone, state and local health departments screened 1.7 million children and identified 70,000 who were at risk of having lead poisoning (Binder, personal communication). At the federal level, the Public Health Service is conducting research to identify low-cost ways of removing lead paint in older buildings and to assess the ability of these methods to reduce blood-lead levels among children.

Public health activities, in combination with the efforts of other public and private organizations, also have successfully reduced children's exposure to

lead from food, water, and point sources. In the 1980s, the Food and Drug Administration worked with food processing manufacturers to develop voluntary regulations to stop the use of lead-soldered cans. The source of lead in cans was minute amounts of splattered solder, which was used to close the cans, but which leached from the seams into the food. Lead-soldered food cans are no longer produced in the United States, but local health agencies in border states are increasing public awareness that glazes used in pottery purchased outside the United States can contain lead and are not safe for preparing or serving food.

Most of the lead in drinking water comes from plumbing connections in older homes, where lead can leach from the solder. Reducing the problem of leached lead involves treating water at the community or district level to make it less corrosive. This intervention also increases the life of the plumbing fixtures, which means that once again the health benefits of reducing lead exposure are accompanied by other economic benefits.

During the 1980s, an estimated 230,000 children lived close enough to an ore smelter to be exposed to lead from that source. In these communities, public health investigators documented the health effects of exposure of children to lead and developed procedures to stop pollution, including adoption of national air-quality standards.

The Lifetime Benefits of Fluoride

Between World War I and World War II, public health professionals became aware that dental decay was so prevalent that practically the entire population suffered from it—no social stratum was exempt, no age group immune, and essentially there were no proven and accepted preventive measures. Even the very young suffered from tooth decay, and many older Americans rightly assumed that they would eventually lose their teeth.

Fluoride's ability to prevent tooth

decay was discovered in the 1930s, but this only benefited those communities that had water supplies with high enough naturally occurring fluoride levels to confer protection. In most communities, the level of naturally occurring fluoride is below the level necessary to prevent dental decay. Studies conducted in the 1940s and 1950s confirmed that small amounts of fluoride added to drinking water can prevent tooth decay.

In 1945 two cities—Grand Rapids, Michigan, and Newburgh, New York—

added fluoride to their public water systems. Today fluoridation is one of the most effective public health interventions in the United States. Largely as a result of fluoridation, more than half of all U.S. children age 5 to 17 are free from dental caries (see Figure CS-5). Children who live in communities without fluoridated water can be expected to have up to 40% more dental caries than children in communities with fluoridated water (MMWR, 1992). The benefits of fluoride extend to adults as well. Studies have shown a reduction

in dental caries of 20% to 30% in adults who drink fluoridated water (Grembowski, 1992).

Approximately 62% (144 million) of the U.S. population that currently uses community water systems drinks fluoridated water. A Year 2000 Objective for the Nation is to have fluoridated water for at least 75% of the population (174 million) who are served by public water

systems. Currently 21 states and the District of Columbia have achieved this objective.

Public health initiatives directed at communities that do not currently fluoridate water encourage them to add fluoride to their public water supplies.

Increasing the number of communities that have fluoridated water in states such as California, where water fluoridation reaches less than 16% of the eligible population, could result in substantial health care savings, as well as

improved oral health. For example, in 1993 approximately \$38.7 billion was spent on dental services (White, 1993). Unlike the treatment of many other diseases, restoration of teeth affected by dental caries requires repeated treatment and can later result in substantial costs. Over the lifetime of an individual, the cost of restoring carious teeth may well exceed \$1,000 per tooth. In

contrast, the per capita expenditures for community water fluoridation for one's lifetime, as little as \$0.12 per year in large communities (Garcia, 1989), is less than the cost of one silver filling (MMWR, 1992). Drinking adequately fluoridated water represents one of the most economical preventive values in the nation.

Strategies for Vaccine Preventable Diseases

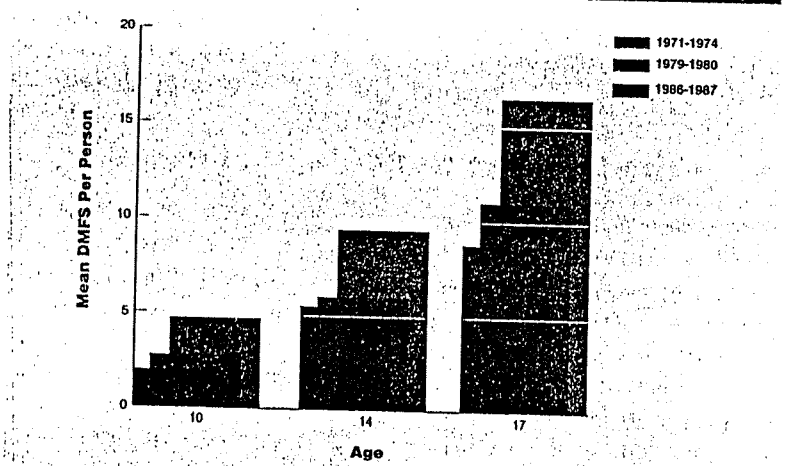
The history of childhood infectious illness in the United States shows the enormous benefits of vaccinations. Diphtheria, which once affected more than 200,000 people each year nationwide, affects less than half a dozen people today. Because of public health leadership, other once-common diseases have also been substantially contained. Moreover, childhood vaccination results in substantial economic savings. Society saves as much as \$8.80 in direct medical costs alone for every \$1 spent on childhood immunizations (Battelle, 1994).

The primary goal of vaccination is to eradicate a disease. One vaccine preventable disease, smallpox, no longer exists anywhere in the world. Likewise, polio is close to elimination in many places. There have been no cases of polio caused by wild virus strains in the United States since 1979, although a few vaccine-associated cases occur each year (MMWR, 1994c). State and local health departments play a critical role in vaccine programs by providing approximately 50% of all vaccinations in the United States. In addition, they conduct the surveillance necessary to quantify the magnitude of vaccine preventable disease and use the information to develop strategies to reduce further illness.

Experts routinely recommend that children in the United States receive vaccinations against nine diseases:

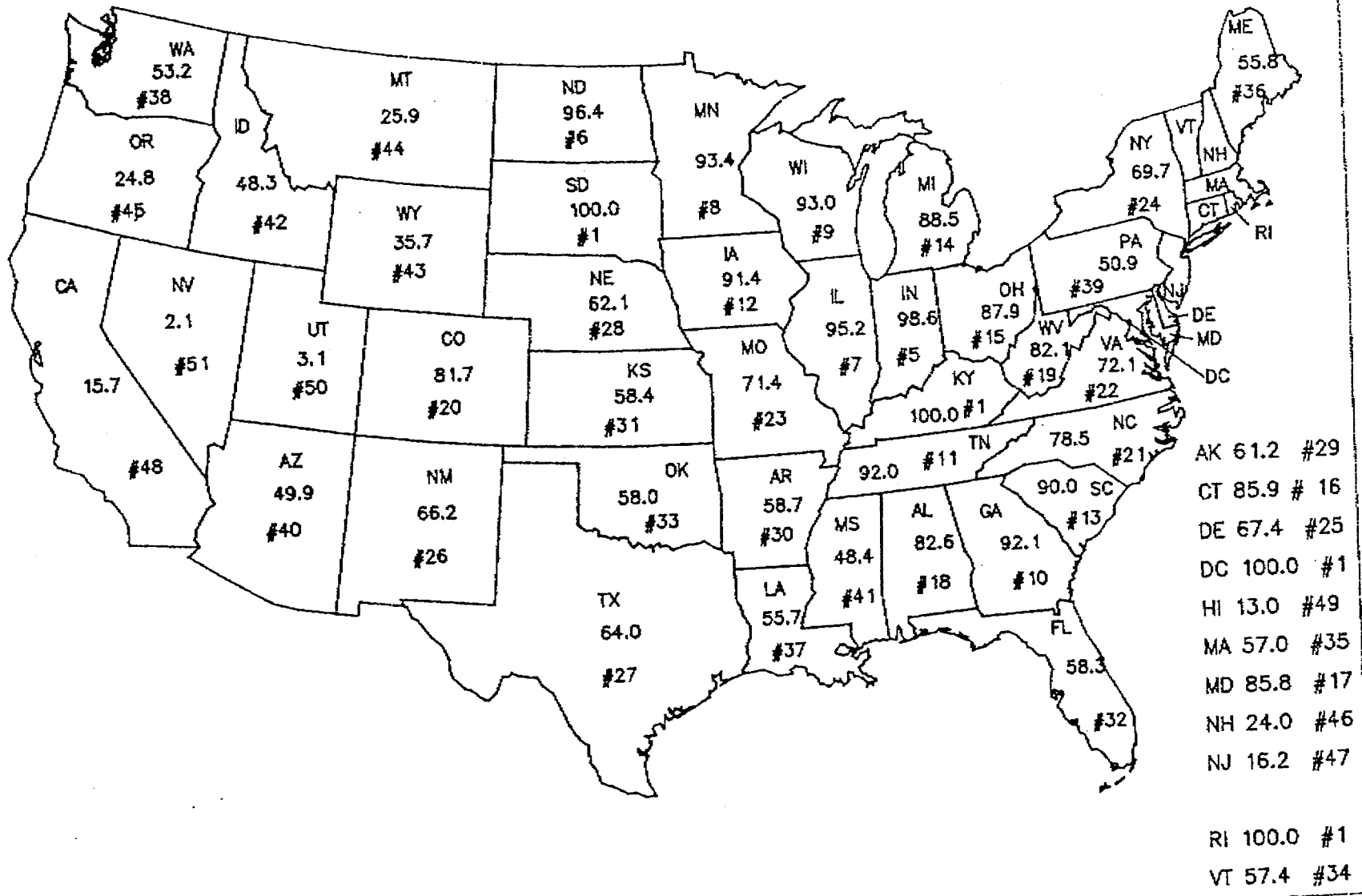
At the time of the Pearl Harbor attack on the United States in 1941, almost 10% of armed forces recruits did not qualify for service because of dental defects, primarily missing teeth that had been extracted because of dental caries. Dental criteria for selective service had to be reduced twice during World War II to ensure an adequate number of draftees.

Figure CS-5 National Decline In Tooth Decay



The mean number of decayed, missing, or filled tooth surfaces (DMFS) for children aged 10, 14, and 17 for three time periods. The estimated annual discounted expenditures for silver fillings for children aged 5-17 are \$7.7 billion for 1971-1974; \$7.2 billion for 1979-1980; and \$6.6 billion for 1986-1987. Source: PHS

Chart 1 PERCENT OF PUBLIC WATER SUPPLY POPULATION USING FLUORIDATED WATER AND STATE RANK



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the Voice of Nursing in Kansas

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February 8, 1996

H.B. 2714 FLUORIDE WATER TREATMENT

Chairperson Mayans and members of the House Health and Human Services Committee, my name is Betty Smith-Campbell, MN, RN, ARNP and I am testifying today on behalf of the Kansas State Nurses Association in support of House Bill 2714, the fluoride water treatment bill. As a registered nurse I was dismayed to discover that only 58% of Kansans receive adequately fluoridated water. The Kansas list of communities without fluoridated water was longer than I expected and involved larger communities than I anticipated, such as Wichita.

HISTORY/BACKGROUND OF FLUORIDE

In 1945, the United States Public Health Service artificially fluoridated the water supply of Grand Rapids, Michigan, for a period of 10 years to test the theory of Trendly Dean, DDS, that fluoride could prevent tooth decay. Dean had found that those areas where the water supply had a natural fluoride content of 1 part per million (pmp) had about 50% less tooth decay than those areas that had less than .3 ppm. Dean felt that the expected 10% of very mildly mottled teeth caused by this level of fluoridation would be an "acceptable tradeoff." Five years later the Public Health Service endorsed artificial fluoridation. Today, 50% of the American population drinks artificially fluoridated water. (1994 Keats Public Inc.)

Since 1945, fluoride has reduced cavities by as much as 40 percent. Despite all of the negative fluoride rumors, fluoridated water has never been shown to be harmful to health. The National Research Council studies say that current levels of fluoride added to water are not linked with the myriad ills for which the nutrient was previously blamed, including cancer, kidney disease, stomach and intestinal problems, infertility, and birth defects or genetic mutations. (Tufts University Diet and Nutrition Letter, 1993)

The mission of the Kansas State Nurses Association is to promote professional nursing, to provide a unified voice for nursing in Kansas and to advocate for the health and well-being of all people.

Constituent of The American Nurses Association

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NURSING ISSUES

The nursing focus on this issue is this: Children who live in communities without fluoridated water have forty percent (40%) more cavities than children that live in communities with fluoridated water. Dental cavities lead to tooth decay which can be both painful and lead to further injury to the mouth and jaw. A child who experiences increased sensitivity and mouth pain from the decay will not eat properly, which means they will receive inadequate nutrition, which means increased chance of malnutrition and susceptibility to illness and disease. This ultimately leads to increased health complications and ultimately health care costs.

One important aspect of nursing care is patient education and that includes nutrition. Nurses stress to parents the importance of adequate nutrition and the intake of fruits and vegetables. We teach parents of the need to do all they can so that their children's bodies will remain healthy and grow strong. While parents may be nutritionally aware of their child's needs, this may not be enough to save them from future dental complications. While many toothpastes on the market contain fluoride and good dental hygienic practices are important, this too is not enough. This is a health condition that is easily prevented. With a lifetime cost of \$1000 per cavity, a cost of fifty-one cents per person per year is no comparison. Let's save our children from a lifetime of tooth and mouth pain, and future dental and medical expense. On behalf of the professional nursing organization, we urge your support of HB 2714.

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Kansas School Nurse Organization

Ruth Wolfram
President - KSNO

Testimony in Support of HB 2714
to the
House Health and Human Services Committee
February 8, 1996

Mr. Chairman and Members of the House Health and Human Services Committee, I am Ruth Wolfram, President of the Kansas School Nurse Organization and I stand before you today in support of HB 2714.

The philosophy of School Nurses is the physical and emotional well-being of students. Healthy attitudes and behaviors developed during childhood are likely to be sustained throughout life. Included in these healthy behaviors are personal hygiene and grooming. Promotion of correct dental care and hygiene is one of the many wellness habits stressed to students. Even with our best efforts, many children do not have the resources to utilize the professional maintenance needed for their oral hygiene.

The one resource that is available to everyone, without bias, is the public water supply. Children do benefit from the fluoridation in water for the protection to their teeth. Studies conducted in the 1930's and 1940's by the U.S. Public Health Service indicated a correlation between the higher fluoride concentrations and lower rates of tooth decay. The fact remains, the average child today has decay on three (3) tooth surfaces, as opposed to ten (10) in a child of prefluoridation days.

The Kansas School Nurse Organization has been, and continues to be principally concerned about one thing -- the overall health and well-being of our Kansas schoolchildren. As a school nurse who has seen many families without the resources for dental treatment, I can support a bill that would allow these and all children the additional protection that the fluoridation in the water could provide.

Thank you for allowing me the opportunity to testify today and I would be happy to respond to any questions that the Committee might have.

H+HS Comm
2-8-96
Attm # 8

**Kansas Department of Social and Rehabilitation Services
Rochelle Chronister, Secretary**

**House Committee on Health and Human Services
Testimony on House Bill 2714
Pertaining to Adding Fluoridation to the Public Water Supply Systems in Kansas**

February 8, 1996

Mr. Chairman and members of the committee, I am Ann Koci, Commissioner of Adult and Medical Services. Thank you for the opportunity to testify concerning House Bill 2714. This bill would add fluoridation to public water systems in Kansas that serve more than 3300 people. This would affect approximately 680,000 Kansans.

The Kansas Department of Social and Rehabilitation Services (SRS) supports this bill along with the American Dental Association (ADA), and national "Healthy People 2000" goals which are to have fluoridated water available to 75% of a state's population by the year 2000. In addition, we want to work with public health and the Kansas Dental Association in an effort to improve the lives of all Kansans and the oral health of the Kansas Medicaid population.

National studies on the addition of fluoride to public water systems have shown that fluoridation reduces tooth decay rates. The most recent studies supported by the American Dental Association shows tooth decay rates in children are reduced by as much as 40%, with the addition of fluoridation to drinking water.

In FY95, Kansas Medicaid expended \$443,000 on dental fillings for Sedgwick County Medicaid beneficiaries. Based on the above mentioned studies, if Sedgwick County water had been fluoridated, SRS would have saved \$177,000 in Sedgwick County on dental procedures. With the addition of fluoride to the drinking water in many other Kansas cities besides Wichita, such as Leavenworth, Liberal, and Abilene, SRS could realize considerable cost savings in the Medicaid children's dental program. However, any reduction in SRS dental expenditures is a secondary benefit to the overall improvement of oral health to all Kansans we believe would occur with the passage of House Bill 2714.

2/7/96

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Attn #9

Summary of Statement to
THE HEALTH AND HUMAN SERVICES COMMITTEE
The Kansas State Legislature - Feb. 8, 1996

In Opposition to Proposed Legislation to Mandate Further Fluoridation

by

Albert W. Burgstahler, Ph.D.
Professor of Chemistry
The University of Kansas
Lawrence, Kansas 66045

1. Purpose. I offer this testimony out of personal concern that any legislative effort to improve public health should be based strictly on solid scientific evidence. My knowledge about water fluoridation is derived from my own independent investigations and extensive study of the scientific literature and reports on the biological effects of fluorides and fluoridation that I began over 30 years ago and have been involved in ever since. Although I am not formally representing any particular group, organization, or institution, I am aware that my views are shared by many other scientists and by a large number of well-informed individuals both in Kansas and throughout the world. Biographical information about me will be found in the accompanying material. I have lived in Kansas since late August of 1956. *AWB*
2. Fluoridation and Tooth Decay. Although small-scale studies of pre-selected communities often purport to show significantly less tooth decay, especially among children, in fluoridated than in nonfluoridated areas, the same is not true with large-scale investigations, even those conducted by public health agencies. Since the 1970s dental surveys of various randomly selected communities and of large whole populations have revealed little or no evidence of less tooth decay in fluoridated compared to nonfluoridated areas. Some of the data from several of these studies are appended.
3. Toxic Effects on Teeth. Originally it was expected that the recommended increase of water fluoride to 1 part per million of water would produce at most only about 10 percent of barely detectible dental fluorosis. In fact, current data indicate that the incidence of dental fluorosis is often 30 percent or higher and that clearly discernible, unsightly dental fluorosis is occurring in individuals born and raised in fluoridated communities to a much greater extent than in those born and raised in low-fluoride communities (see accompanying pictures).
4. Other Toxic Effects. Reversible neuromuscular, early skeletal, and urinary-gastrointestinal intoxication linked directly to the ingestion of fluoride in drinking water in the 1-ppm range that is summarized in the accompanying material has been amply confirmed by more recent clinical research, such as from the All India Institute of Medical Sciences in New Delhi. Muscular weakness, joint pain, extreme fatigue, and gastric distress were largely eliminated without medication when the patients were placed on low-fluoride water for all drinking and cooking. Other recent findings show increased bone (hip) fractures among the elderly in fluoridated communities compared to nonfluoridated ones. Still other reports reveal significantly higher rates of osteosarcoma (a type of bone cancer) in young males in fluoridated communities, in agreement with unexpected findings of increased bone abnormalities in boys in the original pilot fluoridation study in Newburgh, New York. And, for uses like hemodialysis, fluoridated water must be defluoridated to avoid toxic transfer of fluoride from the water into the patient's blood.
5. Summary. Based on the enormous amount of now well-verified and steadily growing scientific evidence for the relative ineffectiveness as well as the serious toxicity of fluoridated drinking water as a deterrent to tooth decay, this proposed measure to require extension of fluoridation in the State of Kansas clearly cannot be considered a wise and prudent course of action.

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2-8-96
Attm #10*

FLUORIDATION IN THE LIGHT OF RECENT EVIDENCE

BY ALBERT W. BURGSTAHLER, PH.D., PROFESSOR OF CHEMISTRY, THE UNIVERSITY OF KANSAS, LAWRENCE, KANSAS. PRESIDENT, INTERNATIONAL SOCIETY FOR FLUORIDE RESEARCH. TESTIMONY BEFORE THE LAW COMMITTEE OF THE CINCINNATI CITY COUNCIL, CINCINNATI, OHIO, OCT. 19, 1970.

Proponents of water fluoridation have told you that fluoridation of public water supplies is an "absolutely harmless" and scientifically sound method for the partial prevention of tooth decay, especially in children, and that it even provides "benefit" to the bones of the elderly. So positive and unqualified are these assertions, one is easily led to believe that fluoridation has the overwhelming support of all competent scientists and scientific organizations.

Not Accepted By All

However, this is not the case. A few years ago a survey of Nobel prize winners in science and medicine disclosed that more than a dozen of the 30 or so respondents who felt well enough informed to offer an opinion were either opposed to fluoridation or had strong reservations about it.

In 1966 the International Society for Research on Civilization Diseases and Vital Substances, an organization co-founded in 1954 by the late Dr. Albert Schweitzer, approved, and has since twice reaffirmed, after a careful review of all available evidence, a strong resolution advising local and state governments against fluoridation. This action has the support of over 90 per cent of the Society's 400-member Scientific Council of which more than half the members hold appointments in major academic institutions throughout the world.

Similarly, not all public health authorities agree that fluoridation is desirable. Health ministers and parliaments in such nations as Belgium, Denmark, France, Italy, Norway, Spain, Sweden, and West Germany have repeatedly declined to endorse it in view of serious adverse evidence concerning its safety and effectiveness.

Intake Exceeds Estimates

What then, is the nature of this evidence? First, fluoridation is extremely wasteful. Of the total amount of fluoride added to a water supply, less than 0.05%, on the average, is consumed by the children for whom it is primarily intended. The rest is a permanent loss of an otherwise valuable mineral resource for certain purposes and constitutes an extremely undesirable pollutant in the water supply (e.g., for artificial kidney machines, which require substantial quantities of nearly fluoride-free water).

Second, even though the amount of fluoride added to a water supply may be carefully controlled (and this is not always so, as I and others have found by analyses), the dosage to each individual consumer is not. A figure of 1 to 2 milligrams of total daily fluoride intake in a fluoridated community is still commonly cited by proponents, but recent research at the Canadian National Research Council and at Chicago's Loyola University Medical School has shown that the true figures are at least 300 per cent larger, often exceeding 5 milligrams per day when intake from foods and beverages processed or prepared with fluoridated water are included. (*J. Food Science*, Nov.-Dec. 1966; *Am. J. Clin. Nutrition*, April 1969).

For an adult, a prolonged daily fluoride intake greater than 3 to 4 milligrams is recognized even by the U. S. Public Health Service as potentially toxic (e.g., in regard to excessive fluoride retention in the body and partial inhibition of thyroid function). Three to four milligrams of fluoride is the amount present in 3 to 4 quarts of 1-ppm fluoridated water, exclusive of what is present in food and other sources. Persons with undiagnosed diabetes often find it necessary to drink this much water each day and therefore face an added risk with additional fluoride in the water. For children under age eight, the National Academy of Sciences-National Research Council cautions an upper total daily amount of 2 milligrams—a figure easily reached with the levels now present in air-contaminated foods as well as in the drinking water. Beyond this level dis-

figuring dental fluorosis and other entirely undesirable side effects are often observed.

Nondental Toxic Effects

Next, despite repeated assurances by proponents that fluoridation is "absolutely harmless," numerous cases of nondental illness from the use of 1-ppm fluoridated drinking water have been reported in more than a dozen reputable medical journals.* Many of these have been confirmed by appropriate blind and even double blind tests. (For leading references, see my review, *Trans. Kansas Academy of Science*, 63:223-243, 1965.)

The symptoms in the earlier, reversible stages are the same neuromuscular and gastrointestinal effects that have been reproduced in sensitive individuals from 1-milligram fluoride tablets, namely: headaches, muscular weakness, numbness in arms and legs, visual disturbances, gastric distress, skin irritation, polydipsia (excessive thirst), stomatitis (mouth sores), low back pain, and related symptoms.

Complete disappearance of these effects is reported to occur within a few days or weeks after the patients simply changed to a low-fluoride water source for drinking and cooking. The effects are then found to return promptly on resuming the use of fluoridated water.

Unlike fluoridation proponents, the U. S. Food and Drug Administration evidently takes these reports seriously. Although this agency has been deprived of any jurisdiction over water fluoridation, it has, since May 1963, required that vitamin and mineral preparations dispensing as little as 0.5 milligram of fluoride per day (the amount in one pint or two glasses of 1-ppm fluoridated water) must carry labeling warning of the possibility of such side effects. More recently, further cases of such harm have been reported, including two from fluoridated tooth paste (*Annals of Allergy*, July 1967).

In addition, the FDA no longer approves (since October 1966) the administration of 1-milligram-per-day fluoride supplements to pregnant women. In this action, evidence suggestive of possible harm to the fetus was cited, along with lack of adequate proof of benefit to the teeth of the child.

LABORATORY STUDIES CONFIRM HARM

Then we also have toxic effects of fluoride in water at the recommended 1-ppm fluoridation level in numerous laboratory studies. Altogether, hundreds of papers have been published reporting various forms of damage ranging from inhibition of enzyme activity to shortening of animal lifespan.

Sensitive enzymes, such as esterase and lipase, suffer serious loss of activity from fluoride even at concentration below 1 ppm. Adverse blood changes have been noted in certain animals such as rabbits. The valuable fur-producing chinchilla is particularly susceptible to serious ill effects, especially in the form of a high incidence of still births. (I have first-hand knowledge of an experiment with Topeka's fluoridated water confirming this.)

In a study involving 991 mice, "a statistically significant acceleration" (15-20 per cent) of growth in tumor transplants was found from 1-ppm fluoride in the drinking water. In another study, with 645 mice, a 9 per cent decrease in lifespan was observed. Even such common flowers as gladioli and roses exhibit significant damage after a few days when cuttings are placed in fluoridated water as compared with those in fluoride-free water.

Evidence is Undeniable

Such plain and unequivocal proof of harmful effects of 1 ppm fluoride in water demonstrates beyond question that the claim that fluoridated water is "perfectly safe" is simply not valid. A great deal less evidence than what is known about the toxic effects of fluoridated water was considered sufficient by the FDA in its recent decision to withdraw cyclamates from general use. Cyclamates are effective as sweeteners,

but this fact did not override a toxic effect demonstrated at 50 times the normal consumption level.

The harm already demonstrated from fluoride in drinking water, however, occurs at, or even below, the 1-ppm level. Even if fluoridation is accepted as conferring some degree of dental benefit, the definite harm it has been shown to cause, along with the unnecessary waste and added pollution it creates, should be of paramount concern.

Interestingly, cyclamates were first approved by the FDA in 1950, the same year the Public Health Service gave its "unqualified recommendation to municipal water fluoridation. Today, in the light of new evidence, the FDA has not hesitated to restrict the use of cyclamates. But the FDA is a regulatory, not a "promoting" agency. The Public Health Service, on the other hand, has been actively promoting fluoridation for the last 20 years, not merely "regulating" it.

Whereas the prestige of FDA officials has not been diminished by their change of mind on cyclamates, PHS officials evidently feel they would lose face if they were to retreat on their recommendation of fluoridation. Their directors, being human, are apparently unwilling to admit that what they once thought would be "perfectly safe" has turned out not to be so. (For further discussion of this problem, see Michael Wollan, "Controlling the Potential Hazards of Government-Sponsored Technology," *The George Washington Law Review*, July 1968.)

Only a few years ago the insecticide interests railed against those who contended that DDT and similar pesticides were causing more harm overall than good. But now it is admitted, even by these experts, that DDT is doing just that, and in the end may prove to be far more damaging than anyone had imagined. Already the unforeseen effects on fish and predatory birds are a matter of grave concern among ecologists.

If such lessons as these are to be useful as guides to the future, then the plain evidence of the toxic properties of fluoridated drinking water and the unnecessary deliberate pollution it entails should not go unheeded. A society that fails to profit by the mistakes of its past will find itself forced again and again, to learn by the painful lessons of experience. A wise society fosters and eagerly exercises foresight.

Bone Benefit Disproved

To return now to the evidence. You have been told of investigations indicating that fluoridated water will help prevent bone deterioration or osteoporosis in adults as well as reduce the amount of decay in teeth. Although there is some evidence of short-term benefit from the therapeutic application of fluoride, along with calcium, for the treatment of osteoporosis, the supposed benefit from fluoride in drinking water has not been found to be valid.

In a recent study headed by bone specialist B. E. C. Nordin, the British Medical Research Council has reported (*Medical News*, London, Sept. 26, 1969) that bones of cadavers of lifetime residents of the low-fluoride city of Leeds and high-fluoride Hartlepool showed expected differences in fluoride content (fluoride does accumulate in the body!), but "there was no statistically significant difference in the numbers or degree of osteoporosis."

The British investigators conclude that an American study claiming 50 per cent less osteoporosis in a supposedly high-fluoride area of North Dakota "was extremely inaccurate and did not use any objective, quantitative method." According to Dr. Nordin, in agreement with the view of many other researchers, long-term nutritional deficiency of calcium rather than fluoride is a primary cause of osteoporosis. Further strong evidence in support of this conclusion appeared in the June 1970 issue of the *Journal of Nutrition*.

(Continued on page 4)

FLUORIDATION IN THE LIGHT OF RECENT EVIDENCE

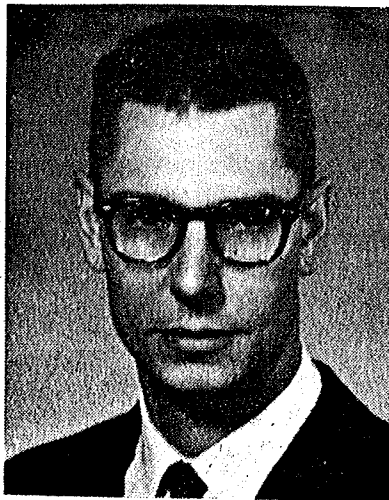
(Continued from page 3)

Although the Bartlett-Cameron, Texas, study is often mentioned by proponents as evidence for a bone benefit from waterborne fluoride, the fact is that there was an abnormally high incidence of arthritis, nerve deafness, cataracts, gingivitis (gum disease), and other chronic disabilities in both cities. Moreover, the mortality rate in the high-fluoride Bartlett group was 3½ times that of the low-fluoride Cameron group, and the AMA Council in its review of the data in 1957 stated that this difference was just within the limits of statistical significance, i.e., odds of 21 to 1 against its being due to chance.

Dental Benefits Questionable

In a recent USPHS-sponsored study, Professor Bruce L. Douglas of the University of Illinois College of Dentistry has found no evidence to support the claims of significant dental benefits and cost-savings from fluoridation. He and his co-workers found no difference in the amount or type of "dental treatment, patient loads, and dentists' incomes" in eight carefully matched pairs of fluoridated and nonfluoridated midwest cities. No significant differences in the population shifts of the two sets of cities have occurred since fluoridation began. But since over 90 per cent of the average dental practice consists in filling teeth, this study strongly suggests that fluoridation has not appreciably altered the overall dental caries picture.

As a matter of fact, fluoridation studies in the United States report about 5 to 7 decayed, missing and filled permanent teeth in 14-year-olds after a lifetime of fluoridation. But prefluoridation figures and those from areas with low-fluoride water are often in the same range, namely about 6 to 8 DMF teeth—hardly a 50 to 75 per cent decrease in the amount of tooth decay!



Albert W. Burgstahler, Ph.D.

More Effective Alternatives

Again, contrary to what we are usually told, more effective, economical, and practical alternatives to fluoridation, which are safe, are known and deserve to be promoted instead of ignored or denied. Here are three of them:

1. Wholegrain Bread — Children raised on whole-meal instead of white flour bread from early childhood have been found in a recent British study to have less than half as much dental decay as children who are reported to have drunk fluoridated water from birth and have eaten white bread. (Vickery and Turner, *Vitalstoffe*, 11:99-101, 1966).

2. Meal Enrichment — Weston A. Price, D.D.S., in his classical studies (*Nutrition and Physical Degeneration*, pp. 288-291) showed that generous mineral

enrichment of just one meal a day (high calcium, magnesium and phosphorus) achieved complete arrest of dental caries among economically deprived children as well as remarkable improvement in their overall health and school work. Similar enrichment could be adopted in local school lunch programs, and dentists should soon have far fewer teeth to fill.

3. Mineral Supplements — In Sweden in an area of uniformly high tooth decay, Dr. Alfred Aslander has found that perfect, caries-free teeth result from the administration of a broad-spectrum mineral supplement throughout the period of tooth formation and development (infancy through adolescence). (*Odont. Tidskrift*, 73:595-612, 1965). Because this led to the complete elimination of all tooth decay, dental researchers, such as Professor Pierre Laplaud of the University of Paris, consider this approach and not fluoridation as the proper solution to the problem of preventing dental caries.

Summary

In summary, we see that in contrast with their optimistic claims and endorsements, proponents of fluoridation have not proved their case. They have been shown to be mistaken about the alleged safety of fluoridation, its supposed benefits to bones, and the extent of its value for the prevention of tooth decay. Safe and practical alternatives are available which should be promoted in place of fluoridation.

Any public health measure which has been shown to have the harmful effects that have been demonstrated from fluoridation should be rescinded rather than promoted, regardless of the benefit that might be derived from it.

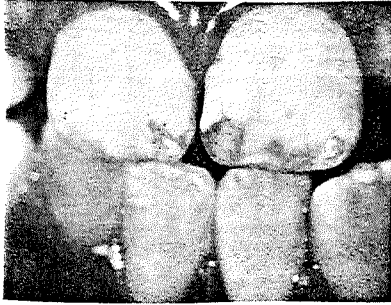
* A partial listing: *Acta Allergologica*, *Acta Medica Scandinavica*, *Annals of Allergy*, *Archives of Environ. Health*, *Brit. Medical Jour.*, *Confinia Neurologica*, *Deutsche Med. Wochschr.*, *Exper. Med. Surgery*, *Folia Clin. Internat.*, *Hautzart. Internat. Arch. Allergy Appl. Immunol.*, *J. Astha Research*, *Lancet*, *La Presse Medicale*, *Rev. Med Liege*, *Satryck Nord. Med.*

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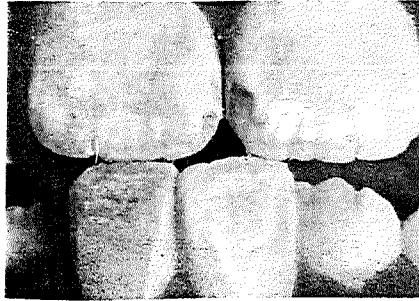
WATER FLUORIDATION: EXAMPLES OF ADVERSE FINDINGS

(Compiled by Albert W. Burgstahler, Ph.D., Lawrence, Kans.)

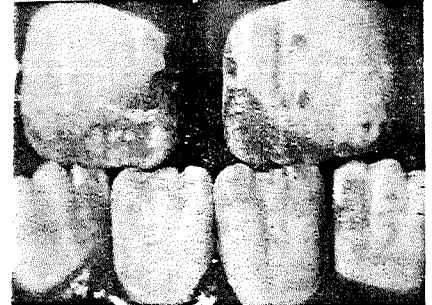
I. Disfiguring Dental Fluorosis in 1-ppm Fluoridated Auckland, New Zealand
(J. Colquhoun, FLUORIDE, 17:234-242, 1984; 18:121, 1985)



boy, age 8



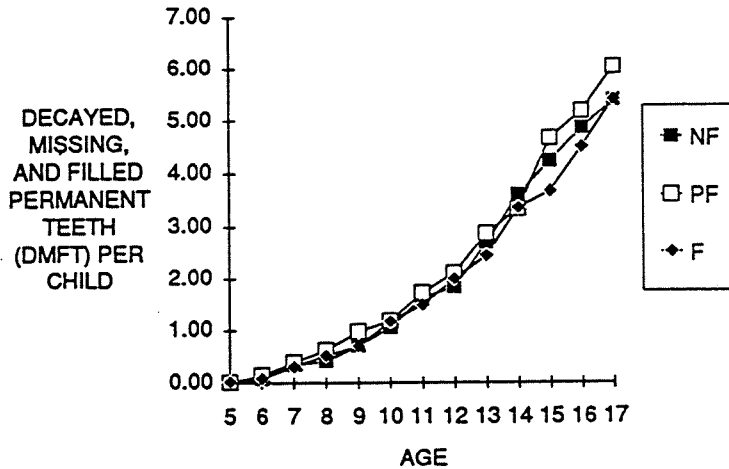
girl, age 9



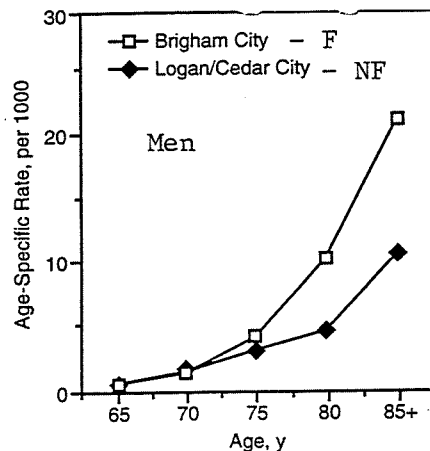
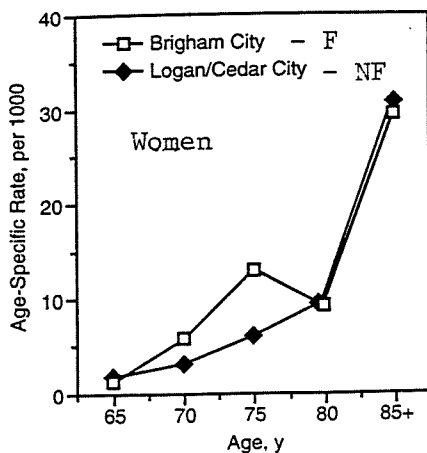
boy, age 9

II. No Significant Reduction in Tooth Decay in 1986-1987 USPHS National Dental Survey (J. Yiamouyiannis, FLUORIDE, 23:55-67, 1990; cf. similar findings in 1983-1984 Missouri Bureau of Dental Health Survey reported by C. F. Hildebolt et al., Am. J. Phys. Anthropol., 78:79-92, 1989)

Tooth decay in residents of fluoridated (F), nonfluoridated (NF), and partially fluoridated (PF) areas who lived their entire life in the same household.



III. Increased Risk of Hip Fractures Among the Elderly in Fluoridated Areas of Utah (C. Danielson et al., J. Am. Med. Assoc., 268:746-748, 1992)



10-5

Table 1

The number of children examined and the average-age-adjusted DMFT, dft, and "caries-free" rates for 5- to 17-year-olds in each of the 84 areas in the order of increasing age-adjusted DMFT rate. F refers to areas fluoridated before 1970; PF refers to areas which are only partially fluoridated; PF(x) refers to areas fluoridated in the year "x"; NF refers to areas that are not fluoridated.

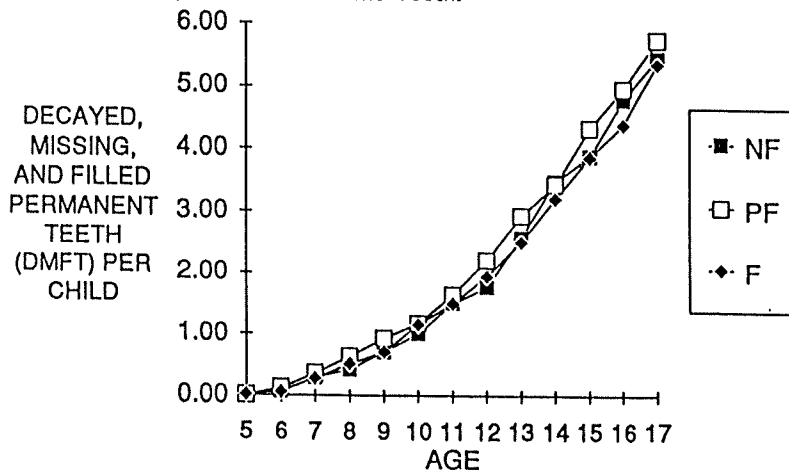
Water	Area	No.	DMFT	dft	Caries-free
NF	Buhler, KS	543	1.229	0.810	44.7%
F	El Paso, TX	451	1.321	0.777	43.5%
NF	Brooklyn, CT	410	1.420	0.693	47.6%
F	Richmond, VA	475	1.435	0.715	45.6%
F	Ft. Scott, KS	491	1.442	0.774	38.2%
F	Prince George, MD	443	1.491	0.539	48.0%
NF	Cloverdale, OR	354	1.494	0.872	40.4%
PF(71)	Alliance, OH	467	1.584	0.549	44.6%
NF	Martin Co., FL	440	1.587	0.677	41.0%
F	Andrews, TX	455	1.588	0.893	35.8%
NF	Coldspring, TX	406	1.589	1.144	33.8%
F	Tulsa, OK	504	1.602	1.075	35.5%
NF	Palm Beach, FL	476	1.613	0.896	34.5%
PF	Holcomb, MO	558	1.628	0.883	40.3%
NF	Kitsap, WA	564	1.635	0.769	42.9%
F	St. Louis, MO	491	1.638	0.711	39.1%
PF(82)	Houston, TX	488	1.662	0.819	41.8%
F	Clarksville, IN	428	1.678	0.747	40.4%
NF	Grand Island, NE	535	1.719	0.789	40.7%
F	Ft. Stockton, TX	415	1.722	0.891	33.4%
NF	San Antonio, TX	422	1.736	0.895	39.3%
F	Cherry Creek, CO	441	1.757	0.727	36.5%
F	Tuscaloosa, AL	475	1.809	0.963	32.0%
PF	Marion Co., FL	545	1.817	0.944	28.8%
F	Cleveland, OH	486	1.819	0.715	39.9%
NF	Allegheny, MD	458	1.834	0.735	38.3%
PF(78)	Norwood, MA	434	1.841	0.640	39.9%
F	Alton, IL	511	1.859	0.843	37.6%
NF	Shamokin, PA	462	1.861	1.023	32.2%
NF	Lodi, CA	573	1.878	1.197	33.0%
PF	Bullock Creek, MI	472	1.879	0.766	36.7%
PF(82)	Marlboro, MA	386	1.885	0.613	40.8%
PF(81)	Allen, TX	445	1.905	0.674	38.7%
F	San Francisco, CA	456	1.908	1.031	36.3%
NF	E. Orange, NJ	401	1.909	0.796	38.0%
PF(71/60)	Lincoln/Sudbury, MA	436	1.923	0.758	37.8%
NF	Conejo, CA	620	1.930	0.811	41.7%
NF	Lakewood, NJ	450	1.933	0.698	38.0%
F	New York City-2	336	1.953	0.812	34.9%
PF	Bethel, WA	540	1.956	1.072	34.3%
F	Beach Park, IL	518	1.970	0.878	35.2%
PF	Rising Star, TX	370	1.971	0.909	28.7%
F	Phillipsburg, PA	499	1.983	0.982	33.2%
F	Lanett, AL	503	1.994	0.978	31.9%
PF(82)	Plainville, CT	436	2.006	0.795	39.3%
NF	Wichita, KS	496	2.036	0.878	33.5%
NF	Newark, NJ	494	2.038	0.869	35.9%
PF	Knox Co., TN	530	2.056	1.152	31.3%
NF	Los Angeles, CA	540	2.063	1.039	33.0%
F	Pittsburgh, PA	415	2.064	0.781	34.1%

Table 1 (Continued)

PF(70)	Lincoln, NE	476	2.076	0.825	31.5%
NF	Newton, KS	464	2.083	1.225	31.1%
PF	Lakeshore, MI	486	2.088	0.781	32.6%
NF	New Paltz, NY	350	2.110	0.751	34.8%
F	Bemidji, MN	485	2.124	1.001	29.3%
NF	Alpine, OR	397	2.133	0.974	36.7%
NF	Canon City, CO	463	2.160	1.118	33.1%
NF	Wyandank, NY	396	2.161	0.828	34.7%
NF	Millbrook, NY	332	2.179	0.716	32.2%
NF	Chowchilla, CA	551	2.181	1.073	33.0%
F	New York City-1	503	2.190	0.627	37.9%
PF(82)	Baltic, SD	487	2.193	0.974	27.8%
PF(71/74)	Blue Hill, NE	480	2.218	0.855	29.6%
NF	Crawford, PA	492	2.222	0.996	28.5%
PF(74)	New Orleans, LA	459	2.251	0.953	27.4%
PF(70)	Memphis, TN	464	2.253	0.763	33.1%
PF	Madison Co., MS	493	2.259	1.455	26.4%
F	Milwaukee, WI	478	2.349	0.909	29.9%
NF	Tooele, UT	519	2.372	1.458	24.3%
NF	Chicopee, MA	453	2.389	0.862	34.2%
PF	Cambria, PA	532	2.460	1.039	27.1%
PF(75)	Springfield, VT	444	2.489	0.838	32.1%
F	Dearborn, MI	491	2.496	1.167	26.3%
F	Maryville, TN	466	2.512	1.287	22.9%
PF(81)	Taunton, MA	445	2.515	0.903	31.0%
F	Greenville, MI	556	2.558	1.191	25.3%
PF	Hart/Pentwater, MI	455	2.584	1.344	24.1%
F	Philadelphia, PA	463	2.649	0.824	26.0%
PF	Sup. Union #47, VT	487	2.710	0.907	26.1%
NF	Cutler/Orosi, CA	528	2.796	1.742	19.2%
F	Brown City, MI	512	2.972	1.229	22.5%
PF(83)	Lawrence, MA	339	3.012	1.262	17.6%
NF	State of Hawaii	293	3.294	1.375	23.9%
PF	Concordia Co., LA	424	3.767	1.508	12.4%

Figure 1

Tooth decay in fluoridated (F), partially fluoridated (PF), and non-fluoridated (NF) areas: Permanent Teeth.



Caries Prevalences Among Geochemical Regions of Missouri

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KEY WORDS: Epidemiology, Geochemical factors, Trace elements,
Fluoride, Water fluoridation

6819

ABSTRACT Our objectives were to determine how the prevalences of caries in elementary school children vary between geochemically defined regions of the state of Missouri and to compare this variation with that found for prehistoric Missouri inhabitants (Hildebolt et al.: *Am. J. Phys. Anthropol.* 75:1-14, 1988). Caries data on ~~6,584~~ school children were used in the study of second and sixth graders drinking optimally and suboptimally fluoridated water. Geochemical regions were based on maps recently published by the United States Geological Survey. Differences in mean caries scores and proportions of children with caries were tested by analysis of covariance, analysis of variance, Student t, and chi-squared tests. We found that caries prevalences do vary between the geochemical regions of the state. In the total sample, however, there were no significant differences between those children drinking optimally fluoridated water and those drinking suboptimally fluoridated water. We conclude that there is variation in caries rates among geochemically defined regions of the state and that geochemical factors associated with young parent materials may be antagonizing the action of fluoride.

1983-1984 MISSOURI CARIES SURVEY

1983-1984 MISSOURI CARIES SURVEY

Group (Number)	Mean Caries Score		Percent Caries Free	
	Regional	Overall	Regional	Overall
Grade 2				
F (1883)	2.88	3.29	34.89	30.70
NF (1548)	3.13	3.39	34.84	32.75
Grade 6				
F (1806)	1.93	2.13	37.88	33.22
NF (1582)	1.98	2.06	37.46	35.78

Region	Grade	Water Fluoride Status	
		Nonfluoridated	Fluoridated
QAFF	2	<u>3.51</u>	4.42
	6	2.53	<u>2.36</u>
MRMUGP	2	<u>2.48</u>	2.55
	6	0.90	<u>0.81</u>
MRMOHF	2	<u>1.44</u>	1.45
	6	2.94	<u>1.93</u>
MRNOHF	2	3.09	<u>2.73</u>
	6	2.59	<u>1.48</u>
GDOHF	2	<u>2.95</u>	3.36
	6	<u>1.81</u>	2.09
GDGP	2	3.40	<u>2.78</u>
	6	<u>1.91</u>	2.18
COSEOHF	2	3.37	<u>3.31</u>
	6	<u>2.02</u>	2.03

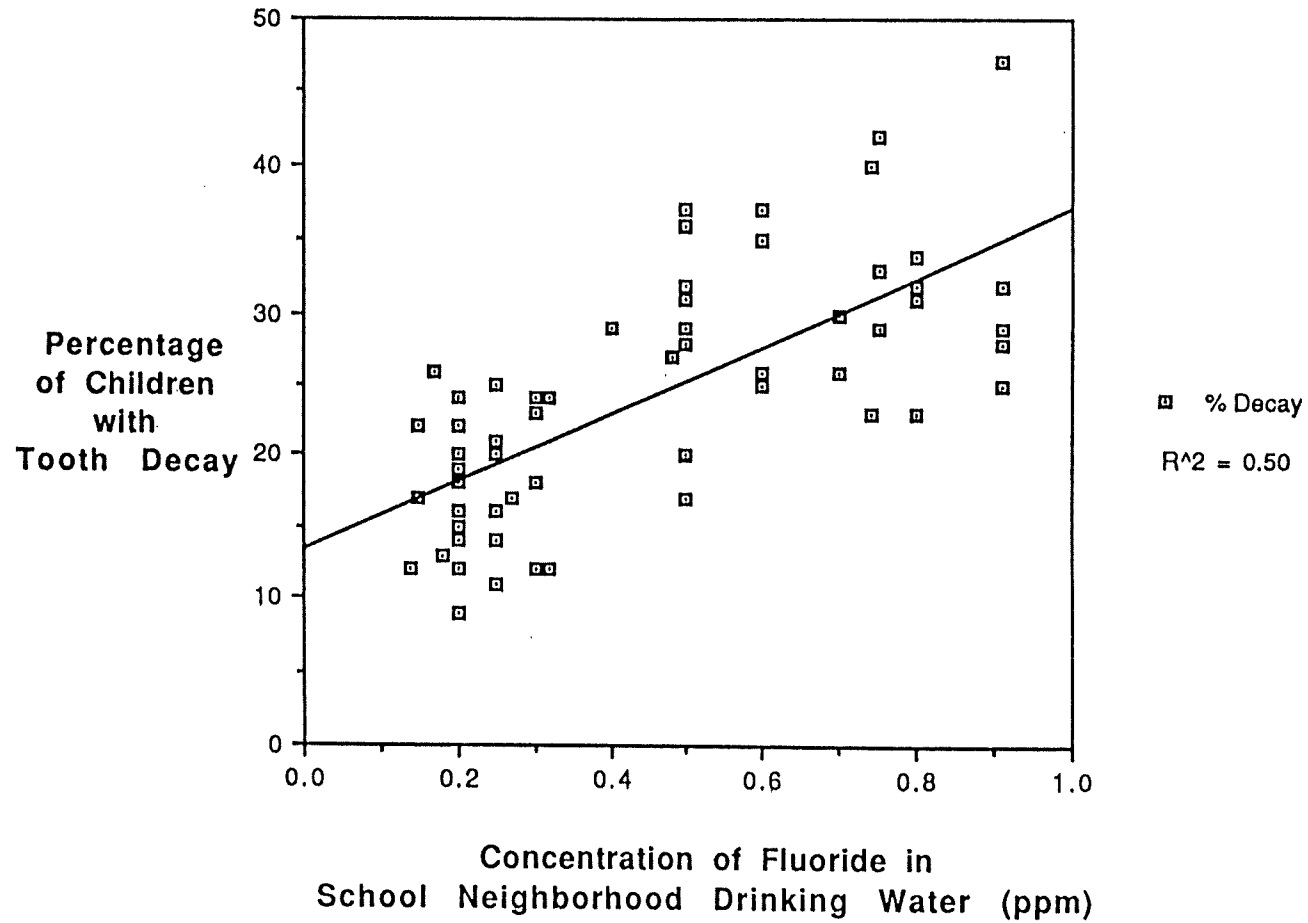
C.F. HILDEBOLT ET AL.

TABLE 1. Geochemical regions used in study

QAFF	Quaternary Alluvium, Flood Plain Forest
MRMUGP	Missouri River Middle, Unglaciaded Prairie
MRMOHF	Missouri River Middle, Oak Hickory Forest
MRNGP	Missouri River North, Glaciaded Prairie
MRNOHF	Missouri River North, Oak Hickory Forest
GDOHF	Glacial Deposits, Oak Hickory Forest
GDGP	Glacial Deposits, Glaciaded Prairie
DGDGP	Deep Glacial Deposits, Glaciaded Prairie
DGDOHF	Deep Glacial Deposits, Oak Hickory Forest
PENNOHF	Pennsylvanian, Oak Hickory Forest
MNOHF	Mississippian, Oak Hickory Forest
COSEWCG	Cambrian Ordovician Southwest, Cedar Glade
COSWOHF	Cambrian Ordovician Southwest, Oak Hickory Forest
COSECG	Cambrian Ordovician Southeast, Cedar Glades
COSEOHF	Cambrian Ordovician Southeast, Oak Hickory Forest

(Note: Lower score in each pair underlined.)

Incidence of Tooth Decay in TUSD Elementary School Children 1988



L-01

Water Fluoridation: Promise and Reality

By Albert W. Burgstahler, Ph.D.

No public health measure continues to generate more controversy than the fluoridation of drinking water. Even before its inception in 1945, leading dental and medical researchers voiced concern about potential toxic effects as well as prospects of only marginal dental benefit. But, despite such warnings and uncertainties, fluoridation rapidly gained official support, and by 1951 it had the endorsement of the United States Public Health Service and the American Dental Association, and later the backing of numerous other leading professional bodies.

Given the data publicized at that time, fluoridation seemed to be extremely inviting. It promised up to 65 percent less tooth decay with supposedly no real health risk except for mild dental fluorosis! Yet, despite initial favorable reports, a substantial body of well-documented and unrefuted scientific evidence has accumulated showing that fluoridation has produced a wide range of serious adverse health effects, and that currently it provides little or no dental benefit in comparison to nearby nonfluoridated communities.

Current Dental Findings

Recent data from a number of developed countries, including the United States, show a substantial decrease in the prevalence of dental caries "which cannot be attributed directly to intentional fluoride use." Even "in communities which do not have fluoridated water, . . . caries reductions as high as 60 percent have been observed." (1) For example, between 1958 and 1978, 12-year-old children in nonfluoridated Norwood, Massachusetts, experienced a steep (63 percent) decline in decayed, missing, and filled permanent teeth, from 12.3 to 4.6 DMFT per child (2). As pointed out by the author of the report, these decreases "approximate those expected from lifetime exposure to fluoridated drinking water. However, the drinking water supplies were not fluoridated."

Even more telling are results from Auckland, New Zealand, fluoridated since 1966. There, in 1981, annual filling requirements per child were actually higher, and fewer children were caries free, than in adjoining nonfluoridated areas for children in families of comparable socio-economic (income-level) status (3). Similar findings have since been revealed for other parts of New Zealand (4).

Besides such clear evidence for the absence of any significant dental advantage from fluoridation, the prevalence of dental fluorosis in fluoridated communities is now acknowledged, even by promoters, to be much higher than originally anticipated (1). Thus a recent survey, again in Auckland, N.Z., revealed that 486 children (24.9 percent) out of 1955 children in the fluoridated areas were afflicted with dental fluorosis, compared to only 29 (4.0 percent) out of 732 in the nonfluoridated areas. Moreover, 70 (3.6 percent) of the children in the fluoridated areas had advanced forms of dental fluorosis (clearly visible staining and/or pitting) compared to only two cases (0.3 percent), both traceable to fluoride tablets, in the nonfluoridated areas (5).

In view of these and similar findings elsewhere, as well as those above concerning dental caries, the author of the foregoing report concluded: "Thus, earlier predictions of the dental benefits of fluoridation appear to be considerably exaggerated and the possible damage, especially from dental fluorosis, greatly underestimated."

Nondental Toxic Effects

Dental fluorosis, however, is only one of the more obvious signs of fluoride intoxication. Beginning in



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The following is a brief summary of a presentation given at a meeting of the Delaware Chapter of the Foundation for Alternative Cancer Therapies on Sunday, March 24, 1985, at the Hilton Hotel, Philadelphia, PA. It was also presented at a hearing of the City Council of San Antonio, Texas, May 23, 1985. The author received his B.S. degree (1949) in chemistry from the University of Notre Dame and his M.A. (1950) and Ph.D. (1953) degrees in organic chemistry from Harvard University. His scientific interest in the biological properties of fluoride began in the early 1960's with research on the synthesis of fluorinated amino acids for study of their effects on collagen biosynthesis. Subsequently, he reviewed various dental and medical aspects of fluoridated drinking water for the *Transactions of the Kansas Academy of Science* (1965). Later, he assembled and analyzed data bearing on the incidence of Down's syndrome (mongolism) and fluoride levels in the maternal drinking water. He has also served in editorial capacities for the quarterly journal *FLUORIDE* of the International Society for Fluoride Research since its founding in 1968. Together with Professor H. Lewis McKinney he is a coauthor with the late George L. Waldbott, M.D., of the book, *Fluoridation: The Great Dilemma* (Coronado Press, Lawrence, Kansas, 1978).

1955 and continuing to the present, various clinical reports, published in peer-reviewed medical journals, have disclosed numerous reversible adverse health effects from the recommended 1-ppm fluoride in drinking water (6.)

Although many of the symptoms are often produced by other toxic agents, the peculiar pattern associated with fluoride was first delineated by Kaj Roholm in his classical studies of fluorosis in Danish cryolite workers. Among the symptoms: muscular weakness, extreme tiredness, joint and back pain and stiffness, excessive thirst, headache, involuntary muscle spasms, gastrointestinal distress, urinary tract irritation, skin inflammation, and visual disturbances of the retina.

Persons in poor health and those with allergies, asthma, kidney impairment, diabetes, gastric ulcer, low thyroid function, and nutritional deficiencies are especially susceptible to toxic effects of fluoride, regardless of the source. When due primarily to fluoride in the drinking water and not too far advanced, the illness gradually disappears or subsides without medication simply by substituting distilled or other low-fluoride water for all drinking and cooking and avoiding fluoridated beverages and high-fluoride foods such as mechanically deboned meat products. Upon resumption of the use of fluoridated water, the symptoms promptly return. In some cases the diagnosis has been further confirmed by blind or double-blind challenge tests with coded bottles of fluoridated and nonfluoridated water (6).

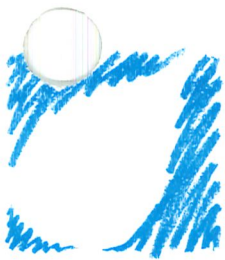
Despite the fact that such reversible toxic effects from fluoridated drinking water have been confirmed repeatedly (6,7), proponents of fluoridation are adamant in denying their validity, let alone their existence. Nevertheless, various laboratory studies on cellular, enzymatic, soft-tissue, skeletal, and other biological effects of fluoride not only provide plausible mechanisms for such findings but also lend credence to other types of adverse effects (8).

Among the latter are a number of investigations indicating that both cancer death rates and the number of Down's syndrome (mongoloid) babies born to younger mothers have increased more in cities following fluoridation than in cities that remained unfluoridated (9). Being derived from official records, the data in these studies are not in question, but the assignment of fluoridation as a primary causative agent for the increases remains in dispute. Even so, other recent investigations have not only confirmed the ability of fluoride at low concentrations to induce chromosomal abnormalities (which are associated with birth defects as well as cancer) but have also demonstrated its ability to produce cancerous cells in experimental cell cultures (10).

These and other newer findings make it clear that fluoridation has fallen far short of its promise to be a safe and effective way to reduce tooth decay. In reality, fluoridation hangs under a heavy cloud of failure and harm which its policy makers are still unwilling to face up to.

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9. For refs. cf. J. B. Bundock et al., *Science and Public Policy*, 12:36-46, February 1985; also Ch. 13 of ref. 6 above and Ch. 10 in *Fluoride: The Aging Factor* (ref. 8 above).
10. T. Tsutsui et al., *Cancer Res.*, 44:938-941, March 1984; *Mutat. Res. (Letters)*, 139:193-198, April 1984; 140:43-48, May 1984.



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Quality water, quality life

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COMMENTS ON
HOUSE BILL No. 2714
BEFORE THE HOUSE COMMITTEE ON HEALTH AND HUMAN SERVICES
February 8, 1996

Mr. Chairman and Members of the Committee:

Thank you for the opportunity to present comments on House Bill No. 2714. I am Dennis Schwartz, a member of the Board of Directors of the Kansas Rural Water Association; I am also General Manager of Rural Water District No. 8, Shawnee County, KS. The Association provides technical assistance to public water and wastewater systems and a variety of training opportunities for operators, board and council members.

The Kansas Rural Water Association opposes House Bill No. 2714. We believe that whether public water supply systems fluoridate or not should be one which they determine on their own. Having personal knowledge of the technical requirements of the fluoridation process, I hope you will take into consideration the close tolerance between the minimum dosage recommendation in the draft bill (1 ppm) and the Maximum Contaminant Level which is 4.0 ppm. Close attention must be paid to the calibration of equipment to ensure proper dosage level is maintained. For example, the plant that I am responsible for is highly sophisticated. The addition of the flouride is something that we must watch very closely. Both sources for flouride are known hazardous materials. It requires a photospectrometer for testing. I believe the capabilities of some plants and operators would be burdened with the processes associated with fluoridation and testing.

This is hardly the era when local communities need additional mandates from either the state or federal government. To that extent, we encourage your consideration that fluoridation of public water supplies be a decision left to local citizens rather than one required by the State of Kansas. If the public wants to medicate itself, then that should be their decision.

Respectfully submitted,

Dennis Schwartz
Director

H + H S Comm
2-8-96
Attm #11

Feb 7, 1996

2416 Rogers Bl
Manhattan, KS 66502

1-913-539-5767

Opposition to artificial fluoridation of public water systems. HR 2714.

1. Fluoridation is compulsive mass medication.

No Freedom of Choice

2. Cost

- City water about \$18.00 - up.
- Unfluoridated water in bottles. \$20 - \$30 + month for a family of 4.
- Increase cost of equipment to be purchased by a city to put it in - Paid for by tax payers.
- Fluoride tablet $\frac{1}{5}$ the cost of the water system.
- 99.93% goes down the drain if it is in public water supply. because of bathing, watering grass, and washing clothes, waste of money
- City governments are already strained why force the tax payers to pay more.

3. Handout

4. The trend now is less government not
more

Say No to artificial Fluoride.

Pauli Dale

BS, BS Kansas State U.
MS " " "

A+HS Comm
2-8-96
Att#12

What Some Experts Say About Fluoridation

"I am appalled at the prospect of using water as a vehicle for drugs. Fluoride is a corrosive poison that will produce serious effects on a long range basis. Any attempt to use water this way is deplorable." CHARLES GORDON HEYD, M.D. former President of the American Medical Association.

". . . It is unnecessary and unwise to wastefully add it (fluorine) to community water supplies for the following cogent reasons: Dosage is highly variable and inaccurate. Older children and adults need not and should not be dosed with the drug. W. C. BLACK, M.D., Pediatrician, San Diego, Calif. (Editorial: American Journal of Diseases of Children, Aug. 1963.)

"The excretion of fluorine through the kidneys has not been adequately studied, and middle aged and older people, particularly those who have metabolic disturbances, chronic kidney disease, etc. may suffer from long and continuous ingestion of this cumulative and toxic compound." SIMON A. BEISLER, M.D., Former Chief of Urology, Roosevelt Hospital, New York City.

". . . Never in the history of water supply has a substance with so much unfavorable evidence been considered seriously for introduction into the potable water of communities." BENJAMIN C. NESIN, Former Director of Laboratories, N.Y. City, Dept. of Water Supply. The late Mr. Nesin was an international authority on water supply and served the City of New York for 35 years.

"The Clifton Board of Health is pleased with the fluoride tablet program. Fluoridation in our city would cost over \$9,000 as compared to less than \$500 by the tablet method. Children are poor water drinkers and would not receive the proper dosage through fluoridation of the water." REUBEN FELTMAN, D.D.S., Health Commissioner, Clifton, N. J.

"The public welfare includes the welfare of dissenting minorities. More importantly it includes the right of the individual to work out his own destiny . . . so long as he does not endanger others. That is the command of the Constitution . . ." ARTHUR SELWYN MILLER, Professor of Constitutional Law, George Washington University, Washington, D.C.

"The plain fact that fluorine is an insidious poison, harmful, toxic and cumulative in its effects, even when ingested in minimal amounts, will remain unchanged no matter how many times it will be repeated in print that fluoridation of the water supply is 'safe.'" LUDWIK GROSS, M.D., Chief of Cancer Research of the Veterans Admin., Bronx, N. Y.

"Not a fluorine deficiency but deficient diets are the most important single cause of dental decay." DOUW G. STEYN, Professor of Pharmacology, Institute of Pathology, Pretoria, Republic of South Africa.

"I have found well over two hundred cases of allergy to fluorides—mainly due to fluoride in tooth paste, vitamins and tablets. Symptoms consisted of ulcers of month tissue, (stomatitis) . . . hives, eczema, abdominal pain, diarrhea, joint pains, nasal allergy." JOHN J. SHEA, M.D., Allergist, Dayton, Ohio.

"My research produced data that indicated that drinking water with as little as 1 ppm shortened the life span of mice an average of 9 per cent. Another series of investigations on the biological effects of sodium fluoride in my laboratory has shown that very low levels of sodium fluoride accelerate the growth of cancer tissue as grown in mice or embryonated eggs." ALFRED TAYLOR, Ph.D., Clayton Foundation, Biochemical Institute, University of Texas.

"I am opposed to the artificial fluoridation of community water supplies for a number of reasons. 1. It is an unscientific procedure. 2. Reports of recent investigations support previous publications which indicated the probability of long range toxic effects. 3. A number of investigators, whom I know personally are opposed to fluoridation. 4. The procedure contravenes the principle of medical ethics." PROFESSOR SIR ARTHUR AMIES, D.D.S., C.M.S., Dean of Faculty of Dental Science, University of Melbourne, Australia.

"I am opposed on principle to the deliberate addition of any substance whatever to the public water supply with the avowed intention of influencing any physiological function of the human body." SIR STANTON HICKS, M.D., Ph.D., Emeritus Professor of Human Physiology and Pharmacology, University of Adelaide, Editor of Australian Journal of Biology and Science.

"Milk and eggs are good, nutritious foods, but some people are allergic to them and develop diseases such as eczema, asthma, etc. In the case of fluoride, it is not a good item of food, in fact it is a poison! It has been proven to cause damage to the health and life of some individuals, and more cases are being discovered all the time." K. A. BAIRD, M.D., F.A.C.A., Lancaster, N.B., Canada.

"I think there is a very definite evidence that fluoridation is probably harmful in that it produces periodontoclasia (loosening of teeth) in older people." ALTON OCHSNER, M.D. Famed surgeon and mem-

ber of the New Orleans Committee of Physicians and Surgeons. Tulane University, New Orleans, La.

"Among the curiosities of this scientific age are the persistent efforts to promote the addition of fluorides to public water supplies without recourse to research that rests on the results of convincing animal experimentation." VEIKKO G. HURME, D.M.D., Former Director of Clinical Research, Forsyth Dental Infirmary for Children, Boston, Mass.

"THE SCIENTIFIC COUNCIL of the INTERNATIONAL SOCIETY FOR RESEARCH ON NUTRITION and VITAL SUBSTANCES, co-founded by the late Dr. Albert Schweitzer, . . . recommends that all governments, state parliaments, and city councils concerned with the problem of fluoridation of drinking water and protection against dental caries should refrain from fluoridating drinking water, which measure is actually a medication, as long as the scientific aspects of the problem are not satisfactorily clarified." (1st paragraph of the text of Resolution no. 39 on the Fluoridation of Drinking Water and Medication with Fluorine).

THE ASSOCIATION OF AMERICAN PHYSICIANS & SURGEONS, an organization comprised of 20,000 members adopted a resolution, April 12, 1958 which still remains their current position, on the Use of Water Supply as a Vehicle for Drugs. The Association . . . "condemns the addition of any substance to public water supplies for the purpose of affecting the bodies or the bodily or mental function of the consumers."

"As far back as 1955, the CONSEIL SUPERIEUR DE L'HYGIENE of France declared themselves against fluoridation of public supplies of drinking water and water used for cooking purposes." This government agency has not modified its position on the subject to date.

MEDICAL-DENTAL COMMITTEE ON EVALUATION OF FLUORIDATION formed to independently study this issue, A. Allen London, D.D.S., National Secretary, Boonton, N. J. Definitive studies on adults, have not been done in artificially fluoridated test cities although originally promised. "The conceivable role of fluoride as an insidious factor in chronic disease has been evaded by the proponents."

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FLUORIDATION

THE SAFE WATER COMMITTEE OF WICHITA
P.O. Box 15113
Wichita, Ks. 67216

WHAT IS FLUORIDATION?

Fluoridation is the chemical treatment of humans *en masse* instead of individually, with a substance intended to reduce dental decay in children by acting in the body. And since this is a prescription intended to have a definite and specific action in the structure of the body, it is by its very nature medication. Fluorine is not added to the water supply to make the water safe from bacteria, or more palatable for drinking. The sole purpose of the addition of fluorine is to use the water supply system as a vehicle for compulsory administration of this chemical to a captive population.

DOES IT WORK?

How effective it is is an unsettled matter. At the scientific level there has been no clear-cut research to prove the claims of 65% reduction in tooth decay or "no harm." Recent investigations by competent scientists question the validity of the claims and statistics. Dental bills of people living in fluoridated areas go on just the same. In fact the number of practicing dentists in some fluoridated cities have increased more than the populations per capita.

HOW IS FLUORIDATION PROMOTED?

High pressure methods to force artificial fluoridation on you are being used. The Dental Bureau of the U.S. Public Health Service and state and local boards have plans for compulsory mass medication programs to control non-contagious disease. Fluoridation is an entering wedge in this program. Millions of tax dollars and thousands of man-hours are being spent.

IS FLUORIDE POISONOUS?

Fluoride is an enzyme poison. One-tenth of an ounce would be acutely poisonous or fatal to most people. The one part per million (1 ppm) concentration in water, recommended by the proponents, though small in amount does not change the toxic nature of the chemical, and taken with regularity can cause chronic fluoride poisoning.

WHAT IS MOTTLING?

Dental fluorosis, more often called mottling, is chronic fluoride poisoning of the teeth. This is the first outward sign of fluorine poisoning. With fluoridated water as is proposed, one child in five will be afflicted with dental fluorosis. This now occurs in Newburgh, Grand Rapids, and other fluoridated cities. Fluorosis is not just a blemish of the teeth. While this is occurring, fluoride is also settling and acting in the bones and other tissues in the same way arsenic, lead, and other poisons do.

IS FLUORIDATION BIG BUSINESS?

Obviously the chemical interests are gleeful, and not only the chemical industry profits, but also manufacturers of equipment machinery.

Why Thinking People Oppose Fluoridation

MEDICAL REASONS:

- Fluoridation causes detectable staining or mottling of teeth and too much fluoride makes the teeth brittle.
- The artificial fluoridation program is based on the assumption that individuals drink 4 glasses of water daily. Children and adults drink different amounts of water . . . some five glasses a day, some ten, some less, some more . . . consequently some would drink too much, some too little . . . all individuals are not alike physically; some are more sensitive to chemicals than others, some are sickly, some infirm, and fluoride can be dangerous.
- Fluoride is stored in the bones, and in older people it is associated with bone diseases and damage to the kidneys, nervous system, blood system and other organs and tissues, as well as skin diseases and other allergic problems.
- Don't confuse fluoridation with chlorination. Chlorine is used to *purify* water—to kill communicable germs. You can taste it, and when used for cooking, it boils off. Fluoride is colorless, odorless and tasteless, it is not intended for purification but to medicate the drinker; boiling drives off the water and thus increases the concentration of fluoride.
- Fluoridation is compulsory mass medication for a non-contagious condition.
- Endorsements cannot be accepted as proof of safety. Neither the American Medical Association nor any other medical group, can guarantee the safety of fluoridation for all.
- Fluoridation is the most haphazard, unscientific health measure ever advanced.

MORAL AND ECONOMIC REASONS:

- There is obviously a deep moral and ethical question involved as to the right of any group to force medication on an entire population, a large number of whom are opposed for health, religious or other reasons. It is contrary to the letter and spirit of our democratic form of government and violates individual rights.
- Moneywise Fluoridation Is Absurd . . . 99.93% Goes Down the Drain. Only 1/1500 of the water supply is used for drinking purposes—and only 1/100 of 1% is consumed by children under 10 whom the proponents claim might be benefited.

FLUORIDE CAN BE PROVIDED FOR CHILDREN IN TABLET FORM AT 1/5 THE COST OF FLUORIDATING A WATER SYSTEM. IT IS ALSO OBTAINABLE IN COMMERCIAL TOOTHPASTES, MOUTHWASHES, VITAMIN DROPS WITH FLUORIDE ADDED AND OTHER METHODS.

In other words, anyone who desires fluoride can readily obtain it in controlled dosage without an entire community being forced to drink it!

WHAT IS THE DIFFERENCE BETWEEN WATER WHICH CONTAINS FLUORIDE NATURALLY AND WATER WITH ARTIFICIAL FLUORIDATION.

The difference is largely in the mineral content of the sign of fluorine poisoning. With fluoridated water as is waters which are rich in calcium and magnesium and other minerals. This affords a protective mechanism which is not present in soft water of low mineral content, where fluoride chemicals are added artificially. These other minerals, particularly calcium, as calcium fluoride, mitigate the toxicity of the fluoride ion.

CAN FLUORIDES BE CONTROLLED IN THE WATER SUPPLY SYSTEM?

Surveys have confirmed wide variations in fluoride content is water as it is delivered at the consumer's tap. Fluoridation has a history of corrosive effects in water systems, including water mains and inside piping copper, brass and iron. Riverhead, Long Island, Concord, New Hampshire; and Schenectady, New York, are among the many communities whose water problems were not solved until the fluoridation program was discontinued.

HOW MUCH FLUORIDE IS INGESTED PER DAY?

Fluoridation has a number of health hazards. One of these involves the significant increase of fluoride content of foods and beverages arising from the use of fluoridated water in their processing. An average adult consuming such foods and beverages whose drinking water contains 1 ppm of fluoride is now estimated to be ingesting a minimum of 2 to 5 milligrams of fluoride per day from his food and water, but averages do not drink water. Diabetics, compulsive water drinkers and people who work hard in hot surroundings will ingest 20 milligrams or more per day. Such daily intake continued for years produces crippling fluorosis.

WHY DOES THE U.S.P.H.S. PROMOTE FLUORIDATION?

The officials of the Dental Bureau of the U.S. Public Health Service seem obsessed with their authority, and fear that failure to achieve the universal adoption of fluoridation challenges their prestige. Past events show that many medical procedures, drugs, chemical additives, pesticides, etc. considered absolutely safe for many years, were later found to be harmful and withdrawn from use. We do not feel the Health Service should be adamant in their position on fluoridation. They are not infallible.

DO PEOPLE WANT IT?

Over 2,000 cities have turned down fluoridation, representing 60 million people. It has been forced on most large cities by government edict. Because it has been voted down in a majority of referendums, the proponents are now pressuring state legislator mandatory fluoridation. California, New York, Jersey and others have defeated such bills.