



Austin/Travis County Health and Human Services Department



The mission of the Austin/Travis County Health and Human Services Department (HHSD)

is to promote and protect a healthy community through the use of best practices and community collaborations

Fluoride Update

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EPA Drinking Water Standard

- **Primary Drinking Water Standard (Maximum Contaminant Level) is 4 milligrams per Liter (mg/L)**
 - **Enforceable standard**
 - **Set to protect the public from skeletal fluorosis.**
- **Secondary Standard (SMCL) is 2 mg/L**
 - **Not enforceable**
 - **Guideline to regulate contaminants that may cause cosmetic (dental fluorosis) or aesthetic effects (odor, taste, color)**



US EPA Dose-Response Analysis

The objective of the dose-response analysis was to:

- Identify a concentration that protects for sensitive exposed populations (children) vulnerable to severe dental fluorosis**
- Identify a concentration that would also protect against more serious adverse effects (skeletal fluorosis and skeletal fractures)**

The dose-response analysis used data from the 2006 NRC report and included data from studies identified between 2000 to 2010



US EPA Drinking Water Standards

- Reviewed every 6 years to determine the need for revising the standards
- Includes review of the new peer-reviewed data on fluoride
- National Academy of Science recommended that US EPA conduct a dose-response analysis of the data and assessment of exposure to fluoride



Relative Source Contribution

To develop better estimates of total exposure for individuals, US EPA assessments considered the following:

- Concentration of fluoride in foods and beverages;**
- Dietary exposure estimates;**
- Concentrations in tap water delivered by public water supply;**
- Estimated fluoride intakes from toothpaste; and**
- Estimated exposure to Sulfuryl fluoride (a pesticide)**



US EPA Exposure Assessment

Objective

- Determine sources of fluoride for the US population;
- Quantify exposures for age groups of concern;
- Compare oral intake with the oral Reference dose used to calculate the MCL;
- Estimate relative source contribution; and
- Provide information to reduce population risk and adjust the MCL, if necessary

Organizations That Support

Fluoridation



Academy of Dentistry International
Academy of General Dentistry
Academy of Sports Dentistry
Alzheimer's Association
American Academy of Allergy, Asthma and Immunology
American Academy of Family Physicians
American Academy of Oral and Maxillofacial Pathology
American Academy of Pediatrics
American Academy of Pediatric Dentistry
American Academy of Periodontology
American Association for the Advancement of Science
American Association for Dental Research
American Association of Community Dental Programs
American Association of Dental Schools
American Association of Endodontists
American Association of Oral and Maxillofacial Surgeons
American Association of Orthodontists
American Association of Public Health Dentistry
American Cancer Society
American College of Dentists

American College of Physicians - American Society of Internal Medicine
American College of Prosthodontists
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 Medical Association
American Nurses Association
American Osteopathic Association
American Pharmaceutical Association
American Public Health Association
American School Health Association
American Society of Clinical Nutrition
American Society of Dentistry for Children
American Society for Nutritional Sciences
American Student Dental Association
American Veterinary Medical Association
American Water Works Association
Association for Academic Health Centers



Summary of Current Recommendation

- **EPA Primary Drinking Water Standard is 4 mg/L**
 - Secondary standard is 2 mg/L
- **CDC states the Optimal fluoride level of 0.7 mg/L**
 - City of Austin fluoride level is 0.7 mg/L
- **Promotes the public health benefits of fluoride for preventing tooth decay while minimizing the adverse effects such as dental and skeletal fluorosis**



CDC Statement on Infant Formula

- **“Breastfeeding is ideal for infants”**
- **“You can use fluoridated water for preparing infant formula”**
- **“Recent evidence suggests that mixing powdered or liquid infant formula concentrate with fluoridated water on a regular basis may increase the chance of a child developing the faint, white markings of very mild or mild enamel fluorosis”**

Organizations That Support

Fluoridation (Cont.)



Association of Maternal and Child Health Programs
Association of State and Territorial Dental Directors
Association of State and Territorial Health Officials
British Dental Association
British Fluoridation Society
British Medical Association
Canadian Dental Association
Canadian Dental Hygienists Association
Canadian Medical Association
Canadian Nurses Association
Canadian Pediatric Society
Canadian Public Health Association
Consumer Federation of America
Delta Dental Plans Association
The Dental Health Foundation (of California)
European Organization for Caries Research
FDI World Dental Federation
Federation of Special Care Organizations in Dentistry
Academy of Dentistry for Persons with Disabilities
American Association of Hospital Dentists
American Society for Geriatric Dentistry
Health Insurance Association of America
Health Resources and Services Administration (HRSA)
Hispanic Dental Association Indian Health Service (IHS)
International Association for Dental Research
International Association for Orthodontics

International College of Dentists
Institute of Medicine/National Academy of Sciences
National Alliance for Oral Health
National Association of County and City Health Officials
National Association of Dental Assistants
National Cancer Institute
National Center for Fluoridation Policy and Research
National Council Against Health Fraud
National Dental Assistants Association
National Dental Association
National Dental Hygienists' Association
National Down Syndrome Congress
National Down Syndrome Society
National Foundation of Dentistry for the Handicapped
National Institute of Dental and Craniofacial Research
National PTA
National Research Council
Society of American Indian Dentists
Texas Dental Association
US Centers for Disease Control and Preventions
Department of Defense
US Department of Veterans Affairs
US Public Health Service
World Federation of Orthodontists
World Health Organization



Staff Recommendation and Next Steps

- **HHSD concurs with the CDC recommendation as it is good population based public health**
- **Post the information from the City's website at Neighborhood Centers and WIC stations**
- **Produce an annual insert to be mailed in an Austin Energy bill highlighting information from the City's website**



Current City websites

- <http://www.ci.austin.tx.us/health/healthcare/wic.htm>
- <http://www.ci.austin.tx.us/water/fluoride.htm>
- Information on website addresses:
 - “Flouridated water at a level optimal for oral health (as is used in Austin) poses no known health risks for infants”
 - “Breastfeeding is the best source of nutrition for infants. If breastfeeding is not possible, you can minimize exposure to fluoride by using ready-to-feed formula”
 - “You can also alternate using tap water and non-fluoridated water for formula preparation or mix powdered or liquid infant formula concentrate with low-fluoride water most or all of the time”
- All the information on the website is based on current information provided by the CDC