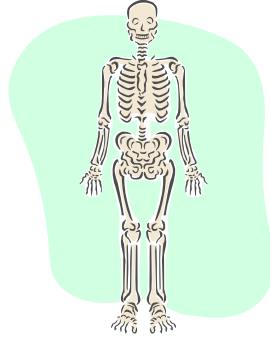


Facts About Fluoride¹

Anne Kendall²

Why do we need fluoride?

Fluoride is important for healthy bones and teeth. Fluoride increases the density of bones and also can stimulate the growth of new bone. Fluoride increases the amount of minerals in our teeth and even can reverse the progression of dental cavities.



People with very low intakes of fluoride also may have low bone density. This can increase their risk for bone fractures due to osteoporosis later in life.

For fluoride to be incorporated into our teeth and bones, we also must get enough vitamin D and calcium. See *Facts about Vitamin D* (FCS8640) and *Facts about Calcium* (FCS8703) in this publication series for information about these two important nutrients.

What happens if we don't get enough fluoride?

People who don't get enough fluoride have much greater rates of dental decay and cavities than those who get enough fluoride. Due to water fluoridation, almost one-half of American children never have had a cavity in their permanent teeth.

Because of this success, water fluoridation has been called one of the ten great public health achievements of the twentieth century. Water fluoridation is especially important for children who do not have access to dental care.



How much fluoride do we need?

This table shows the recommended daily intake for fluoride.

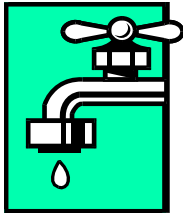
Life Stage	Amount
Children 7-12 mos.	0.5 mg*
Children 1-3	0.7 mg
Children 4-8	1.0 mg
Children 9-13	2.0 mg
Children 14-18	3.0 mg
Men, ages 19 +	4.0 mg
Women, ages 19 +	3.0 mg

* mg = milligrams

1. This document is FCS8798, one of a series of the Department of Family, Youth and Community Sciences, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Publication date: July 2006. Please visit the EDIS Web site at <http://edis.ifas.ufl.edu>.
2. Anne Kendall, PhD, RD, LD/N, lecturer, Food Science and Human Nutrition Department, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611.

The Institute of Food and Agricultural Sciences is an equal opportunity/affirmative action employer authorized to provide research, educational information and other services only to individuals and institutions that function without regard to race, color, sex, age, handicap or national origin. For information on obtaining other extension publications, contact your county Cooperative Extension Service office. Florida Cooperative Extension Service/Institute of Food and Agricultural Sciences/University of Florida/Larry Arrington, Dean.

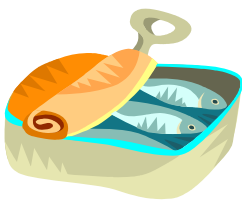
How can I get enough fluoride?



The most important source of fluoride in the U.S. diet is fluoridated drinking water. Drinking fluoridated tap water or beverages made with it will provide you with fluoride. Toothpastes and mouthwashes with fluoride contribute to fluoride intake. These products may provide as much or more fluoride to young children than the foods they eat.

Children from six months to sixteen years of age who live in areas where the fluoride content of water is less than 0.3 mg/liter should take a multivitamin supplement with fluoride, under a doctor's supervision.

Check with your local water company for the amount of fluoride in your drinking water. Many home water filtration systems remove fluoride from tap water. Check with the manufacturer if you have a water filter. Also, most brands of bottled water do not contain added fluoride.



Most foods contain little fluoride. Foods usually contribute only 0.3 to 0.6 milligrams of fluoride each day. Fish

that are eaten with bones, like canned sardines and canned salmon, are higher in fluoride than most other foods. A three-ounce serving of canned sardines has about 0.3 milligrams of fluoride.

An eight-ounce glass of brewed tea may contain 0.2 to 1.4 milligrams of fluoride, depending on the source of water used.



How much is too much?

Children who get too much fluoride before their teeth erupt will have teeth that look stained or "mottled." This is cosmetic and has no effect on the health of the teeth. Children should be taught to brush properly and to **never** swallow toothpaste, mouthwash, or fluoride rinses.



Very high intakes of fluoride for periods greater than ten years can cause pain and stiffness in joints. It also causes abnormal hardening of the bones that can result in fractures. The upper limit for fluoride for children older than eight years and adults is 10 mg/day.

Where can I get more information?

The Family and Consumer Sciences (FCS) agent at your county Extension office may have more written information, and nutrition classes for you to attend. Also, a registered dietitian (RD) can provide reliable information to you. The American Dental Association has publications about fluoride and other information that is available on their Web site (see box).

Reliable nutrition information may be found on the Internet at the following sites:

www.fycs.ifas.ufl.edu

www.ada.org

www.solutionsforyourlife.ufl.edu

www.nutrition.gov

