Fluoride Use in Caries Prevention in the Primary Care Setting

2/21/2019

February is National Children’s Dental Health Month.

Dental caries -- or tooth decay -- is the most common chronic disease in children in the U.S., a silent disease that disproportionally affects poor, young, and minority populations. In a clinical report by the American Academy of Pediatrics (AAP) “Fluoride Use in Caries Prevention in the Primary Care Setting,” published online August 25 in the September 2014 Pediatrics Journal, the AAP states that fluoride is effective for cavity prevention in children. The AAP issued the following recommendations:

- Fluoridated toothpaste is recommended for all children starting at tooth eruption, regardless of caries risk.
- A smear (the size of a grain of rice) of toothpaste should be used up to age 3. After the third birthday, a pea-sized amount may be used. Parents should dispense toothpaste for young children and supervise and assist with brushing.
- Fluoride varnish is recommended in the primary care setting every 3–6 months starting at tooth emergence.
- Over-the-counter fluoride rinse is not recommended for children younger than 6 years of age due to risk of swallowing higher than recommended levels of fluoride.

Because fluoride is available in many sources, including food and tap water, and may be administered at home or professionally applied, dentists, pediatricians and primary care providers should be aware of the risks and benefits of various fluoride modalities to appropriately advise families to achieve maximum protection against dental caries, and to help counsel patients about proper oral health.

Some municipalities in the United States have added fluoride to drinking water since 1945. Currently 92% of Ohioans served by public water supplies have fluoridated water. In Ohio the target range of fluoride concentration for public systems is 0.8–1.30 mg/L. With the prolific use of bottled and reverse osmosis filtered water, much of the natural or added fluoride is gone from the drinking water offered to children.

The Maximum Contaminant Level (MCL) of fluoride is 4.0 mg/L. In Ohio, the EPA states that there are no community water systems that have natural occurring fluoride that exceeds this unhealthy level. In Logan County the natural fluoride found in four separate private wells in 1992 ranged from 1.6 - 1.7mg/L. Also Ohio’s target range of fluoride concentration for public water systems that do fluoridate their water is 0.8 - 1.3 mg/L.

For citizens living within the Logan County Health District, the fee for testing well water for fluoride is $13.00. Please call the Environmental Division at 937-651-6206.

Fluoride status in municipalities in Logan County (as of 2/2019):

- **Bellefontaine**: Fluoride is added at times with a target level of 1.0 mg/L.
- **DeGraff**: Naturally occurring at 0.49 mg/L so do not fluoridate municipal water.
- **Lakeview**: Naturally occurring range of .7 - 1.0 mg/L so do not fluoridate municipal water.
- **Russells Point**: Naturally occurring range of 0.8 - 1.4mg/L do not fluoridate municipal water.
- **West Liberty**: Naturally occurring range of 0.8 - 0.9mg/L do not fluoridate municipal water.
- **West Mansfield**: Naturally occurring at 1.1mg/L do not fluoridate municipal water.
- **Rushsylvania**: Naturally occurring no range given

The Journal of the American Dental Association (JADA) stated in the **February 2014** (Volume 145, Issue 2, Pages 190–191) that approximately 40 percent of children experience dental caries in their primary teeth. Therefore, considering the best available evidence and the continued high caries rate in children, the association recommends the following:

- For children younger than 3 years, caregivers should begin brushing children's teeth as soon as they begin to come into the mouth by using fluoride toothpaste in an amount no more than a smear or the size of a grain of rice. Brush teeth thoroughly twice per day (morning and night) or as directed by a dentist or physician. Supervise children's brushing to ensure that they use the appropriate amount of toothpaste.

  ![](image)

  *The toothbrush on the left shows a smear of toothpaste (0.1 milligram of fluoride) and the one on the right a pea-sized amount (0.25 mg of fluoride).*

- For children 3 to 6 years of age, caregivers should dispense no more than a pea-sized amount of fluoride toothpaste. Brush teeth thoroughly twice per day (morning and night) or as directed by a dentist or physician. Supervise children's brushing to minimize swallowing of toothpaste.

Visit [www.loganhealth.org](http://www.loganhealth.org) and go to the “Health Care Provider” link on front the page to see the entire article from the clinical report by the American Academy of Pediatrics (8/25/2014), American Dental Association information and facts regarding natural fluoride in Ohio’s groundwater and fluoridation of municipal water.

The following 2 pages are intended for your patients if you would like to distribute it to them.

*If you would like an electronic version of the patient handouts, email me at lalbers@co.logan.oh.us.*
Kid’s Fluoride & Oral Health

The Truth About Fluoride

According to the American Academy of Pediatrics (AAP), tooth decay is the most common chronic disease in children in the United States. The AAP states that fluoride is effective for cavity prevention in children. New recommendations are:

- to use fluoride toothpaste for all children once first tooth appears.
- A smear (the size of a grain of rice) of toothpaste should be used until age 3
- Use a pea-size amount for children 3 years and older
- Brush your teeth twice a day

Bottled and filtered water may not contain fluoride, therefore children who regularly drink bottled and/or filtered water may be missing the benefits of fluoride. Talk to your dentist or health care provider about how much fluoride water your child should be drinking.

Keeping Teeth Healthy

- Begin cleaning your baby’s mouth days after birth by using a clean, wet gauze or soft washcloth.
- As soon as your child’s first tooth appears, it’s time to make an appointment with the dentist. The American Dental Associates recommends to see the dentist within 6 months after the first tooth appears.
- Toothbrushes for infants and toddlers should be soft with a small head and large handle
- Make sure your child is eating a balanced diet, limiting sugars and starches.
- Drink plenty of water, limit juices, even all natural juices have harmful sugars

Quick Facts:

- Fluoridated toothpaste is recommended for all kids
- A smear (the size of a grain of rice) of toothpaste should be used until age 3
- Use a pea-size amount for kids 3 years and older
- Parents should place toothpaste on the brush to ensure correct amount
- Parents should monitor young children while brushing
- Over-the-counter fluoride rinse is not recommended for children younger than 6 years
- Eat a balanced diet
- See the dentist regularly
- Brush teeth twice a day
5 Ways to Prevent Kids’ Tooth Decay

Care don’t share

Don’t share utensils with your child or “clean” a pacifier by putting it in your mouth. You can transfer cavity-causing germs to your child.

Eat healthy

and drink fluoridated water

First dental visit

no later than age 1 year old

Seal out decay

Ask your dentist about applying dental sealants to chewing surfaces of teeth.

Use fluoride toothpaste

as soon as teeth come through the gums. When kids can brush their own teeth, have them brush

2 minutes x 2 times per day

Mouth Healthy

Brought to you by the ADA, American Dental Association

Learn more at MouthHealthy.org.