



DELAWARE MODERN PEDIATRICS, P.A.

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Fluoride Supplementation

Tooth decay is caused by mouth bacteria growing on tooth surfaces. The best defenses against cavities are to brush and floss twice a day, starting when the first baby tooth erupts; to visit the dentist twice a year, starting after the 3rd birthday; and to take the recommended amounts of fluoride supplementation.

Fluoride supplementation, in the recommended small doses, helps prevent cavities in two ways. Fluoride promotes the calcification of tooth enamel, which strengthens it. It also affects the bacteria by reducing the amount of acid they produce. Browse <http://www.cdc.gov/fluoridation/benefits/background.htm> for more information.

How do I ensure that my child receives sufficient fluoride? If your water supply has fluoride added (as most does in New Castle County), no further supplementation is needed (except for routine treatments at dental visits). But if your home has well water, fluoride supplements are almost certainly necessary for your child; well water in the Mid-Atlantic states rarely has sufficient fluoride to prevent cavities.

In Delaware, tap water provided by the City of Wilmington and the City of Newark is sufficiently fluoridated. So is the tap water provided by Artesian Water Company and United Water Company. Tidewater fluoridates water for some but not all of its customers, so check with the water company to find out by calling the number on your bill. If you live in New Jersey, Maryland or Pennsylvania, fluoridation is not consistent. You might be able to check on the CDC website (<http://apps.nccd.cdc.gov/MWF/Index.asp>). If CDC does not have this data, please check with your water company by calling the phone number on your utility bill.

If you have a well, or if your water utility does not fluoridate the tap water, your children should be prescribed fluoride supplements until the age of 16. Fluoride supplementation can be given by drops or chewable tablets. For toddlers, the recommended dosage is 0.25 mg once daily. The dose increases to 0.5 mg at age 3, and again to 1.0 mg daily at age 6. A daily dose of fluoride should be offered until the 16th birthday (or until your family moves to a location with fluoridated water).

In the past, fluoride supplements could also be given as part of a prescription vitamin preparation (Poly-Vi-Flor or other brand), but in our area recently these preparations have been difficult to find.

Does a filter remove the fluoride? Most home water filtration systems do not remove fluoride from the water. Brita, Pur, in-sink systems, and other inexpensive filters are passive systems that only remove grit and odors. But very expensive systems that attach to the home water supply (RainSoft, or similar systems costing thousands of dollars) may remove some or all of the fluoride added by the water company. Usually I prescribe supplements at half the doses above for these children.

Are there side effects? In general, fluoride supplementation has no serious side effects. Occasionally, if too much fluoride is given, a child may develop "enamel fluorosis" (permanent small white spots on the teeth). Enamel fluorosis is not harmful (unless it is very severe, a rare situation). For this reason, I do not prescribe fluoride for children if the water supply is fluoridated, even if the family never uses the water for drinking or cooking. The more severe types of fluorosis (severe dental fluorosis, or skeletal fluorosis) are generally not caused by routine supplementation.

Parents of young infants may be interested to hear of research suggesting that fluoride supplementation from tap water mixed with infant formula (powder or concentrate) for infants under 12 months may lead to very mild enamel fluorosis later in a third of babies. These white spots are entirely cosmetic, may be barely noticeable, and do not affect the health of the teeth. But they may be preventable by using fluoride-free water for mixing baby formula for the first 12 months. The CDC is reviewing their recommendations; you may review the CDC's current recommendations at http://www.cdc.gov/FLUORIDATION/safety/infant_formula.htm.