



# St. Joseph County Health Department

*“Promoting physical and mental health and facilitating the prevention of disease, injury, and disability for all St. Joseph County residents”*

## WATER QUALITY ADVISORY

January 2007

### Fluoride Levels In St. Joseph County Groundwater

Are Too Low

#### To Support Proper Tooth Development In Children and Prevent Decay in Adults

##### Summary:

All of the residents of St. Joseph County obtain their drinking water from the groundwater either through private drinking water wells or from a public system that obtains water from wells. Unlike most areas of the United States, the naturally occurring groundwater in St. Joseph County has very low concentrations of fluoride. **These concentrations are too low for the proper development of teeth in children and the Health Department recommends that all parents discuss the need for fluoride supplements or other treatments with their dentist or physician.**

All municipal drinking water systems in the County, such as South Bend, Mishawaka, and our smaller towns, add fluoride to their water system so children using water from these systems probably do not need fluoride supplements. Some of our elementary schools also add fluoride to their water systems which provides some of the fluoride that children need. **However, the residents in St. Joseph County that do not obtain their drinking water from one of these municipal systems are probably not getting the necessary amount of fluoride for proper dental health.**

##### Background:

Tooth decay is the most common chronic disease of children aged 5 to 17 and is largely preventable. Good tooth development and oral hygiene in children not only reduces the need for costly dental work it also promotes good general health and well being. Fluoride is also needed throughout life to protect the teeth from tooth decay. The most effective ways to reduce the amount of tooth decay are frequent brushing and assuring that the body receives the appropriate amount of fluoride. Fluoride has made a profound contribution to good dental health in the United States.

Fluoride occurs naturally in soil, rock, and water and is the 13<sup>th</sup> most abundant element on earth. Much of the groundwater in the United States contains an adequate amount of fluoride in the groundwater for proper tooth development, however, this is not the case for St. Joseph County. Our groundwater contains almost no fluoride. In all but a very few locations in St. Joseph County our groundwater contains less than 0.10 ppm (parts per million) fluoride. Children need from 0.30 ppm to 1.0 ppm, depending on age.

The proper amount of fluoride reduces the number of cavities in children by approximately one third and also reduces the cavities in adults. Fluoride stops and often reverses the tooth decay process and keeps the tooth enamel strong and solid by preventing the loss of important minerals from the enamel.

**It is important to remember that too much fluoride can also damage the teeth of children.** Too much fluoride causes enamel fluorosis which is usually seen as chalk-like discoloration or white spots on the enamel. Too much fluoride in the diet or the overuse of fluoride toothpaste by very young children is usually the cause of fluorosis.

**Recommendation:**

Prior to discussing your children’s need for fluoride supplements with your physician or dentist, the Health Department recommends that you have your water tested for fluoride **if you have a private water well**. This is an easy and inexpensive process. Contact a local environmental laboratory (listed in the yellow pages under laboratories) or the Health Department for information about testing. If you had a new well drilled in the last five years, the Health Department already has records of your fluoride levels and will be happy to supply you with those results.

After you know the fluoride level in your water, make an appointment with your physician or dentist to discuss fluoride supplements. There are other ways to obtain the appropriate protection for children’s teeth such as applying fluoride gels or varnishes. Fluoride supplements should only be taken under the direction of a physician or dentist. The following are the fluoride supplement recommendations of the American Dental Association, American Academy of Pediatrics and American Academy of Pediatric Dentistry. These levels should not be exceeded.

**RECOMMENDED FLOURIDE SUPPLEMENT**

Fluoride concentration in drinking water (ppm)\*

AGE	<0.3 ppm Fluoride In Drinking Water	0.3 – 0.6 ppmFluoride In Drinking Water	>0.6 ppm Fluoride In Drinking Water
Birth – 6 months	None	None	None
6 months – 3 years	0.25 mg/day**	None	None
3 – 6 years	0.50 mg/day	0.25 mg/day	None
6 – 16 years	1.00 mg/day	0.50 mg/day	None

**Examples:**

1. As shown in the table, if your drinking water contains less than 0.30 ppm fluoride and you have a child between 3 and 6 years old, the recommended daily supplement is 0.50 mg/day.
2. If your drinking water contains 0.3 to 0.6 ppm fluoride and you have a child 3 to 6 years old, the recommended daily supplement is .25 mg/day.

\* ppm is parts per million

\*\* mg is milligrams

Please contact the St. Joseph County Health Department at (574) 245-6761 if you have any questions.