

City encourages comment on fluoridation

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BY: Kevin Bottrell

Over 60 percent of all American communities are currently putting fluoride in their water supplies. But should Torrington follow suit? Mayor Leroy Schafer and the Torrington City Council are hoping to hear input from as many city residents as possible before making a decision.

"I certainly would like to hear from the people who are in favor of fluoridation as well as those who are not," Schafer said. "It will help us decide the direction we are going."

At recent council meetings, Torrington area dentists have spoken in favor of fluoridation, saying that it will help prevent tooth decay and save money on more costly dental procedures. Representatives from Wyoming Rural Water spoke against fluoridation, saying that potential risks outweighed the benefits.

The City Council voted Feb. 6 to find out what fluoridation would cost the city. Schafer said the estimates would be in around April 15. Councilman J.B. Hays, who was the dissenting vote, said he objected to fluoridation for a number of reasons.

"I don't think there's been enough real study to determine whether it's a health hazard or not," Hays said. "I'm more concerned about we as a council making the judgment."

Hays said he was also concerned about hidden costs. The fluoride additive may change the Ph balance of the water, requiring anti-corrosive additives.

"I think we're going to be smart enough about this to listen to the people and where they want to go from there. That's our job," Hays said.

Several avenues for getting public opinion on the matter have been discussed, Hays said, including adding an informal survey to the city water bills.

Councilman Ted Kinney said he would like to see comments take a public form such as letters to the editor.

"We need to know what the rest of the community feels," Kinney said.

Kinney said he would like both sides to present their arguments.

"I don't think anyone from either side should try to scare people," Kinney said. "Just give us the facts."

Fluoride is a naturally occurring mineral in the earth's crust. Trace amounts are often naturally present in water supplies. The Public Health Service recommends fluoride levels from 0.7 parts per million (ppm) to 1.2 ppm, which most communities adhere to. The Environmental Protection Agency, under the Safe Drinking Water Act, has set an upper limit of 4 ppm. While these levels are recommended for communities using fluoride, there is no federal mandate to include the additive.

According to the United States Centers for Disease Control (CDC), fluoride can help reverse the demineralization caused in teeth by consumption of refined sugar and carbohydrates or by some forms of bacteria. The demineralization process is what causes cavities to form. The CDC estimates that the majority of Americans of all ages have experienced some form of tooth decay.

Fluoride has been used in the United States since the city of Grand Rapids, Mich., began the practice in 1945.

Fluoride is also available from other sources such as supplements, some varieties of bottled water and toothpaste. Critics of fluoridation have suggested that dentists can prescribe these other sources to patients directly. Supporters of the practice say that fluoridation will have the most positive impact on lower income families, who may not be able to afford regular dental care.

There have been numerous studies undertaken to determine potential health risks, and while results vary, there are some universally acknowledged risks associated with fluoridation.

One of the risks is dental fluorosis. Fluorosis causes a blemish on the enamel of the teeth caused by excess intake of

fluoride. According to the CDC, timing is important for occurrence of fluorosis, as it only occurs during the period the enamel is developing. Once the teeth completely harden they are no longer susceptible to fluorosis. However, it can affect different teeth at different times, since not all teeth develop at the same time. The risks of developing fluorosis are higher for children ages 8 and younger.

The disease has varying degrees of severity. Mild forms appear as chalky white markings across the surface of a tooth, which are typically difficult to see. In moderate forms over 50 percent of the tooth's surface will be turned an opaque white. The severe form can cause pitted or brittle enamel. The moderate and severe cases, which are rare, can cause brown stains on the tooth. Some of the weakened enamel may break away.

The most recent survey concerning dental fluorosis put its prevalence at 24 percent among school age children in 1987. The majority of these cases were the mild form; only 0.3 percent of all the cases were of the severe form.

The disease can be prevented by having an alternate water source with lower levels of fluoride for children under eight and for mixing infant formula.

The CDC has also studied cases of acute fluoride poisoning, such as a 1992 case in Alaska where an excess amount of the mineral was accidentally injected into the water supply. Symptoms included nausea, vomiting, diarrhea, abdominal pain and paresthesias (tingling and numbness). The 1992 outbreak resulted in one death, but after four days fluoride levels in the patients were normalized.

The fluoride concentration in the water in this case was 150 milligrams (mg) per liter in the affected well. The concentration in a nearby, unaffected well was 1.1 mg per liter. The EPA's standards regulate no more than 4 mg per liter.

In 2007, a group of over 1,100 dentists and other medical professionals sent a petition to the United States Congress asking it to halt the practice of adding fluoride to water. One of their main sources of evidence was a 2006 National Research Council panel report on the toxic affects of high levels of fluoride such as possible increased risk of skeletal fluorosis or bone cancer.

The NRC report was commissioned by the EPA to study the level (4 ppm) that had been established. According to the CDC, the report does not question the use of fluoride at regulated levels to prevent tooth decay; however, the report did recommend lowering the maximum allowed concentration.

Torrington isn't the only community to face this issue in recent years. The town of Fairbanks, Ala., voted Monday to continue their water fluoridation. A city council member had brought up the issue, which elicited comments from the CDC as well as much community debate for and against the issue. In 2001 the town of Erie, Colo., voted down proposed fluoridation of their water supply after vocal opposition became far more prevalent than vocal support.