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"Town halts use in water supply, seeks solutions Amesbury DPW no longer adding element to water supply"

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AMESBURY — Citing problems with the quality of sodium fluoride flooding the American market, Department of Public Works director Rob Desmarais said Amesbury has no current plans to resume its practice of adding fluoride to the town's water supply.

Though the health benefits to children in adding it to the water supply are well documented, the town discontinued fluoridating its water in April.

Desmarais said he is concerned that the material Amesbury had been getting in recent years did not dissolve as raw sodium fluoride should, leaving questions about the possibility it's being mixed with something else.

"This is the second time we've had to stop because we can't get a reliable supply," said Desmarais last week. "We've been buying the stuff from our supplier, which is the low bidder, and they've been providing us with product that comes from China, which doesn't meet our standards."

Desmarais said while soluble sodium fluoride has traditionally proved easy to dissolve and add to the water supply, in recent years he's found that 40 percent of the product they've been buying will not dissolve, and he doesn't know why. Desmarais has sent the material out for testing on two separate occasions, but had no luck in determining what it contained. He has sent it back to the supplier and had a better quality product delivered following the complaint. But the next delivery presents with the same problem, he said.

In 2007, it was discovered by U.S. health officials that numerous brands of toothpaste purchased from China and being sold in the United states contained a dangerous poison used in antifreeze, prompting a nationwide recall of the Chinese-made products. The toxic material diethylene was found in concentrations as high as 3 to 4 percent under a number of different brand names.

Months later, the FDA banned the sale of baby formula manufactured in China after it was discovered to be tainted with a dangerous toxic chemical, melamine.

Though Desmarais said he's not suggesting the material in the sodium fluoride is similarly dangerous, those two incidents weigh heavily on his mind when he ponders what the material could be.

"We don't know what the stuff is," said Desmarais of the residual material that ends up in the water treatment plant's saturator. "The saturator gets plugged very frequently, and then it will stop adding it."

This creates a problem in assessing how much fluoride is being dispensed at any given time, Desmarais said. While fluoride has proved beneficial to children's dental health, some studies show too much can have detrimental effects.

"We've spent years trying to fix it," Desmarais said. "It makes us hesitant to provide fluoride to the residents because we don't know what the dosage is. We need to be consistent in the dosage and we have this residual, but we don't know what it is."

According to KidsHealth.org, fluoride exists naturally in water sources and is derived from fluorine, the 13th most common element on Earth. It's a substance well known for preventing and reversing the early stages of tooth decay.

The American Dental Association touts the benefits of adding fluoride to municipal water supplies and cites the practice as first being implemented in 1943. It's a measure the ADA credits with being the most effective public health measure for the prevention of dental cavities.

Desmarais doesn't dispute the benefits of adding fluoride to the town's water supply, and he said his department has looked into adding it into the system by some other means — specifically through the addition of a highly concentrated hydro-fluorocytic acid. But the material is highly corrosive and requires a special system to deliver it to the supply. That delivery system is not slated to be part of the town's new water treatment system, as it requires the building of a separate ventilation and containment room.

"It's not part of the proposed project now," Desmarais said. "It's possible. At this point we would have to go for a budget item or separate appropriation to purchase the equipment to add it."

While Amesbury Board of Health Chairwoman Amy Courtney agreed that Desmarais' concerns over the fluoride quality are troubling, she believes if the town isn't going to offer fluoride through the municipal system, it should offer it elsewhere for the benefits cited by the ADA.

"If there is any question that there's a high risk of toxicity, then you definitely don't want to add it to your water supply," Courtney said. "Fluoride can be very toxic."

But that benefit might be offered through other means, she said, to provide the benefits to people who don't have dental insurance.

"You only get one set of teeth, and if you don't take care of them, then you run into a lot of problems later on in your life," Courtney said.

The daughter of a dentist, Courtney said she grew up in a community that used well water and therefore didn't have the ability to fluoridate the supply. She suggests a possible consideration might be to do what her own father did, which is offer a fluoride rinse to schoolchildren one day a year. That would require the buy-in of the schools and perhaps the support of a volunteer dentist in town to oversee the program.

Courtney said doing nothing is not a good idea.

"I have a concern," she said of the discontinued fluoridation. "And I know there are some hygienists in town who have the same concern that they're no longer providing fluoride in the water."