Pinellas County UTILITIES

Pick Talley
Director

July 7, 2004

An Open Letter To the Customers of Pinellas County Utilities

On August 26, 2003, the Pinellas County Board of County Commissioners approved the introduction of fluoride to the potable water supply. On June 7, 2004, the program was implemented adjusting the natural fluoride levels of Pinellas County's drinking water to a level recommended for optimal dental health in our climate.

A vocal group of citizens has expressed opposition to fluoride based on perceived dangers resulting from its use. The following Frequently Asked Questions (FAQs) address many of the concerns expressed by concerned citizens.

Q. Do health studies exist on the chemicals used in water fluoridation?

A. The claim is sometimes made that no health studies exist on the silicofluoride chemicals used in water fluoridation. The scientific community does not study health effects of concentrated chemicals put into water. The health effects of the treated water are studied, i.e., what those chemicals become when added to water such as fluoride ion, silicates and the hydrogen ion. The health effects of fluoride have been analyzed by literally thousands of studies over 50 years and have been found to be safe and effective in reducing tooth decay. The EPA has not set any Maximum Contaminant Level (MCL) for the silicates as there are no health concerns for them at the low concentrations found in drinking water.

Q. Does the chemical "hydrofluorosilicic acid" come from phosphate scrubbers and does it contain a "chemical soup" including arsenic, lead, etc.?

A. The apatite rock is ground up and treated with sulfuric acid, forming a gas by-product. This gas is captured as fluorosilicic acid using fresh, clean water and is condensed into a lined recycling system. These units are called product recovery units. The fluorosilicic acid does not come from pollution scrubbers and is not vented into the air.

PLEASE ADDRESS REPLY TO:
14 South Fort Harrison Avenue
Clearwater, Florida 33756
Phone: (727) 464-4000
FAX: (727) 464-3576
ptalley@pinellascounty.org
Website: www.pinellascounty.org

Apatite rock naturally contains very small amounts of lead, arsenic, mercury and barium. Although a small fraction of these elements may be present in the concentrated acid produced from the rock, when diluted into water, the amounts would all be much less than a part per billion, and in most cases, would be undetectable in fluoridated water without the use of highly specialized equipment. These levels are far below the levels permitted to be in drinking water by the USEPA.

Q. What are the effects of this chemical getting into the bloodstream of children under six years old and seniors?

A. At the level of 0.8 parts per million, no adverse effect is anticipated.

Q. Some dental and pediatric associations say children less than 6 months of age should not be given fluoride. Should those expecting their first child be concerned over this?

A. The American Dental Association says "a child could not absorb enough fluoride from toothpaste to cause a serious problem." The ADA further states that a "pea-sized amount" of toothpaste should be used by children under six and that "to prevent swallowing, children under six years of age should be supervised in the use of toothpaste." The ADA warning labels were originally required to help reduce the risk of mild fluorosis in children. The ADA does not recommend fluoride to children under six MONTHS of age since teeth have not begun to develop significantly before six months of age. Therefore, there is no benefit to giving fluoride. The position against fluoridated water for children under six months of age was not based on any potential negative health effect.

The American Academy of Pediatrics endorses and accepts as policy the "Recommendations for Using Fluoride to Prevent and Control Dental Caries in the United States." The AAP supports fluoridation for all ages only cautioning that measured use of fluoride is appropriate for children less than six years of age because this is the period of anterior tooth enamel development. The level of fluoridation in Pinellas County does not constitute a level of concern for this age group based on AAP guidelines.

Q. Families with children having no cavities feel there may already be too much fluoride in our society. Should they be concerned about later effects of this type of hydrofluorosilicic acid?

A. No, there is no evidence of negative health effects from the optimal fluoridation of drinking water recognized by the Centers for Disease Control.

Q. The warning on toothpaste is enough to scare people away.

The ADA agrees and has recommended that the FDA requirement for the notice be discontinued. The warning on ADA-approved toothpastes was originally intended to avoid the possibility of mild mottling of teeth in children who swallowed toothpaste regularly over a significant period of time during the formative years for permanent teeth. No acute health effects were anticipated even if toothpaste was swallowed.

Q. There is concern that natural fluoride is not the same as hydrofluorosilicic acid and could affect arthritis and/or osteoporosis in seniors.

A. Fluorosilicic acid dissolves in water to form fluoride ions, hydrogen ions, silicon dioxide and water. Naturally occurring fluoride compounds may contain substances such as sodium, calcium, barium, silica, or phosphate. No matter which fluoride-containing compound dissolves in water, the fluoride ion produced is the same. The CDC does not attribute any negative health effects for the general public from the consumption of optimally fluoridated drinking water.

Q. What are the potential impacts of chemical accidents pertaining to fluoridation?

A. Hydrofluorosilicic acid is in fact a relatively weak acid compared to many other chemicals transported and used in Pinellas County every day. The utility industry and PCU have an outstanding record for chemical safety.

Q. Is hydrofluorosilicic acid poisonous and does it contain mercury?

A. It is not poisonous. It is toxic in its concentrated form as are most chemicals. It is neither poisonous nor toxic in the extremely low concentrations in our water supply. Mercury is not listed by the Centers for Disease Control as a contaminant in fluorosilicic acid.

Q. What about those who desire an absence of toxins in water?

A. The level of fluoride in optimally fluoridated public water supplies is not toxic.

Q. Some people would prefer natural calcium fluoride. A subcommittee study in 1993 shows dental fluorosis up 22 - 84%, weakened teeth, and high corrosiveness from fluoride.

A. At the recommended level of 0.8 ppm, no adverse effect is anticipated. Studies that have been published in recognized credible medical journals do not report increased fluorosis, weakened teeth or complications of corrosiveness at the levels included in the public water supply. Corrosiveness is only an issue when handling the concentrated acid. Concentrated acids commonly used in the drinking water industry include both sulfuric and phosphoric acids as well as fluorosilicic acid. The industry has an excellent safety record in chemical handling.

Fluoride has over 50 years of safe and effective use in nearly 60 countries and the ability of fluoride to reduce tooth decay and strengthen tooth enamel has been well documented through continuous research. The safe and effective use of fluoride is well documented by numerous reputable organizations including the American Dental Association, Florida Department of Health, Florida Department of Environmental Protection, American Academy of Pediatric Dentistry and others. It has been listed by the Centers for Disease Control and Prevention and the Surgeon General as one of the top ten greatest public health achievements of the 20th century. This is a very positive step that our Board of County Commissioners has taken in the interest of public health.

For more information about fluoride, please visit our website at www. pinellascounty.org/utilities or visit:

www.ada.org (American Dental Association)
www.ama-assn.org (American Medical Association)
www.cdc.gov (Centers for Disease Control and Prevention)
www.who.int (World Health Organization)

Very truly yours,

Pick Talley, Director
Pinellas County Utilities

Dr. John Heilman, Director
Pinellas County Dept. of Health