

Potentially Harmful Fluoride Levels Found in Some Instant Teas

Lyle Loughry, August, 2008

St. Louis: Instant tea, one of the most popular drinks in the United States, may be a source of harmful levels of fluoride, researchers at Washington University School of Medicine in St. Louis, report.

The researchers found that some regular strength preparations contain as much as 6.5 parts per million (ppm) of fluoride, well over the 4 ppm maximum allowed in drinking water by the Environmental Protection Agency and 2.4 ppm permitted in bottled water and beverages by the Food and Drug Administration.

The discovery stemmed from the diagnostic investigation of a middle-aged woman suffering from spine pain attributed to hyper-dense bones. Testing for the cause of her symptoms revealed the patient had high levels of fluoride in her urine. She then disclosed a high consumption of iced tea--claiming to drink one to two gallons of double-strength instant tea throughout the day--which led the researchers to test for fluoride content in several brands of instant tea available on grocery store shelves.

Physicians have been aware that ingestion of high levels of fluoride cause bone-forming cells to lay down extra skeletal tissue, increasing bone density but also bone brittleness. The resulting disease, called skeletal fluorosis, can manifest in bone pain, calcification of ligaments, bone spurs, fused vertebrae and difficulty in moving joints.

"When fluoride gets into your bones, it stays there for years, and there is no established treatment for skeletal fluorosis," Whyte says. "No one knows if you can fully recover from it."

Americans are exposed to fluoride not only through fluoridated water but increasingly through fluoridated toothpastes and other dental preparations. Pesticides, Teflon®-coated cookware, chewing tobacco, some wines and certain sparkling mineral waters are more unusual sources of excess exposure. Until now, instant tea had not been recognized as a significant source of fluoride.

According to Whyte, the findings could aid in the diagnosis and treatment of patients who have achiness in their bones. In the future, doctors should ask such patients about their tea consumption.