



# Responses to Misconceptions About Community Water Fluoridation

## Fluorosis

Fluorosis can occur before teeth erupt from the gums if the teeth are exposed to too much fluoride. The vast majority of fluorosis simply affects the way teeth look and does not affect how they function, nor does it affect a person's general health. More than 65 years of research and practical experience have shown fluoridation is safe and effective. In fact, it is the single most effective public health measure to prevent tooth decay.

## Infant Formula

Community water fluoridation has been proven to be safe for children and adults, including babies. The ADA encourages parents and caregivers to talk to their dentists or physicians about their children's fluoride intake. Babies who are fed powdered or liquid concentrate infant formula mixed with optimally fluoridated water **might** develop mild enamel fluorosis, which is a cosmetic condition. Fluorosis happens when a child takes in too much fluoride while his teeth are developing under the gums.

## IQ

According to the best available scientific evidence, there is no association between fluoridation and brain development or a lower IQ. The studies often cited are from China, India and Mexico where environmental conditions are significantly different from those in the U.S. The vast majority of these studies have never been published in peer-reviewed journals and the quality of these studies does not stand up to scientific scrutiny. Promotion of these papers only clouds the issue and plants fear in the minds of the public. More than 65 years of research and practical experience have shown fluoridation is safe and effective. It is the single most effective public health measure to prevent tooth decay and has been named by the CDC as one of 10 great health achievements of the 20th century.

## Osteosarcoma (bone cancer)

In 2011, a team of researchers from Harvard University, the Medical College of Georgia and the National Cancer Institute (NCI) published a study that analyzed hundreds of bone samples from nine hospitals over an eight-year period from patients with osteosarcoma and a control group to measure fluoride levels in the bone. Considered the most extensive study to date that examines a potential association between fluoride levels in bone and osteosarcoma, the results indicated **no connection** between the two. Three branches of the National Institutes of Health were involved in the study. The National Cancer Institute (NCI) approved the design of the study, and funding for the research was provided by the NCI, the National Institute of Environmental Health Sciences and the National Institute of Dental and Craniofacial Research.

On October 12, 2011, the California Environmental Protection Agency's Office of Environmental Health Hazard Assessment (OEHHA), the lead agency for the implementation of the Safe Drinking Water and Toxic Enforcement Act of 1986, voted unanimously (6-0) that it had not been clearly shown, through scientifically valid testing according to generally accepted principles, that fluoride causes cancer. This vote is in general agreement with the findings of all the organizations and



agencies that have looked at this issue – including the FDA and National Cancer Institute.

### **Fluorosis and Disease Burden in Population Groups**

Studies have shown that fluorosis occurs in all populations in fluoridated and non-fluoridated communities. However, studies suggest that fluorosis occurs more frequently in African American children. Additional research on this topic is needed. Fluoridation has been implemented because dental decay is widespread. The disease burden is distributed unfairly among some population groups including African Americans. What's important to remember is that there is very strong scientific evidence which shows that fluoridation helps prevent cavities among all population groups. It plays a particularly important role in cavity prevention for those without access to dental care and other alternative preventive strategies. The National Dental Association, representing African American dentists, is committed to encouraging and supporting community water fluoridation. The Hispanic Dental Association endorses community water fluoridation as safe and beneficial.

### **Bottled water and water treatment systems**

Individuals who drink bottled water as their primary source of water could be missing the decay preventive effects of the fluoridated water available from their community water supply since most bottled water does not contain optimal levels of fluoride. In addition, when you think of all the plastic waste created by individual bottles, you're doing something good for the environment by drinking fluoridated tap water.

Some home water treatment systems such as reverse osmosis systems and distillation units remove a significant amount of fluoride from the water supply, oftentimes to below recommended levels. The ADA encourages drinking fluoridated water at the recommended level to protect against tooth decay.