

## Top Canadian Dental Researcher Speaks Out Against Fluoridation

Friday, May 1, 2015

I served 3.5 years on the US National Academies of Sciences Subcommittee on Fluoride in Drinking Water.

The NAS is sometimes referred to as the “Supreme Court of Science,” an organization that sets up unbiased (or balanced) committees to review scientific issues of concern to Americans. The committee on which I served examined the health effects of fluoride in drinking water. Our report, published March 22, 2006, can be found online.

Our committee was funded by the US EPA — we were charged NOT to examine the benefits of fluoridation but we certainly reviewed all relevant literature on the toxicity of fluoride, including those at low levels of intake, including the toxic side effects of fluoridation.

The EPA has still not made a ruling on the maximum contaminant level goal (MCLG) for fluoride, while the Department of Human Health Services, being concerned about the dental fluorosis that fluoridation is causing, has lowered its recommendation for levels of fluoride in drinking water to 0.7 mg/L (ppm).

The American Dental Association and the Centers for Disease Control in the U.S. both agreed that fluoridated tap water should not be used to make up infant formula, since that increases the risk of dental fluorosis.

Health Canada and the US CDC, taking the recommendation of only pro-fluoridation experts, continues to recommend fluoridation (now at a lowered level of 0.7 ppm) despite mounting evidence that the optimum therapeutic level of fluoride in drinking water, if there is even any benefit at all, is at 0.35 ppm or less.

Our 2006 NRC (NAS) report also concluded that there is a likelihood that fluoride can promote bone cancer. On page 336 it is stated fluoride appears to have the potential to initiate or promote cancers, particularly of the bone, but the evidence to date is tentative and mixed (Tables 10-4 and 10-5). This alone should force the EPA to set a fluoride maximum contaminant level goal for fluoride in drinking water at ZERO (as it did for arsenic). The EPA has not yet made a decision as to fluoride’s carcinogenicity.

I have personally conducted years of funded research at the University of Toronto on the topic of fluorosis (fluoride poisoning) and bone effects of fluoride intake. I am also the co-author of studies that show that too much fluoride accumulation in the dentin of teeth (the tissue that supports enamel) causes its properties to change as well. I suspect that a lifetime of fluoride accumulation on teeth causes them to be more brittle and fracture more easily.

As a practicing dentist, I have been diagnosing and treating patients with dental fluorosis for over 30 years. My research on dental fluorosis (confirmed by the studies reported in the 2006 NRC report as well as the 2000 York review) show fluoridation significantly increases the numbers of patients seeking expensive cosmetic repairs. No one in public health has ever accounted for the added costs of treating dental fluorosis when considering the cost-benefit ratio of fluoridation.

There is no doubt in my mind that fluoridation has next to no benefit in terms of reduced dental decay. The modern literature is clear on that. Fluoridation cessation studies fail to show an increase in dental decay. In fact, caries rates continue to drop. The York review, held up as the best evidence for 'safe and effective' for fluoridation is flawed for several reasons, such as lumping modern studies with very old and questionable studies which resulted in an over-estimate of a perceived modest benefit.

Fluoride added to drinking water has NOT been shown to be safe and effective. In fact, as more and more peer-reviewed studies on fluoride toxicity appear in the literature, it has become clear to me that the pendulum is certainly shifting to "not safe, and no longer effective.' My professional recommendation is to vote fluoridation out!

Dr. Hardy Limeback BSc, PhD, DDS

Professor Emeritus and Former Head of Preventive Dentistry,

Faculty of Dentistry, University of Toronto