Fluoride and Arsenic in Drinking Water

Millions of children are exposed to excessive amounts of fluoride through drinking water contaminated from natural geological sources. In China, the burning of fluoride-rich coal adds to the problem. Small amounts of fluoride are good for teeth; it is added to toothpaste and, in some countries, to drinking water. At higher doses, it destroys teeth and accumulates in bones, leading to crippling skeletal damage. With their bodies still growing, children are most at risk.

Like fluoride, arsenic is widely distributed throughout the earth’s crust, and is present in almost all waters in very small amounts. In certain areas, however, there are dangerous levels of this toxin in children’s drinking water. The most tragic example is Bangladesh, where thousands of wells are causing a mass poisoning of the population. Unsafe wells are marked with red paint, warning people that this water is not for drinking.

Health effects

Fluorosis
- Tooth discoloration and decay
- Crippling skeletal damage

Arsenicism
- Skin pigmentation changes and skin thickening (hyperkeratosis)
- Cancer of the skin, lungs, bladder and kidney

Adapted from Inheriting the World: The Atlas of Children’s Health and the Environment © WHO 2004

http://www.who.int/water_sanitation_health/en/