

Good Things Also Come Out of the School Water Fountain

TODAY, THERE is increasing concern about the safety of our drinking water, including the water our children drink at school. In the past century and a half the concerns about drinking water safety have changed. From a historical standpoint, previous concerns were related to the presence of microbial pathogens, such as those responsible for cholera and typhoid epidemics. Currently, concerns are related to the presence of inorganic chemicals, pesticides, and radionuclides. Alcholor, the most widely used pesticide in the United States, is becoming a common water contaminant. The presence of PCBs, a widely found chemical in insulation, and toluene a solvent, and gasoline additives also are potential contaminants.

As many as forty million people in the United States drink water containing unsafe levels of lead, says the National Wildlife Federation. Pollution of this type can not be stopped at the water treatment plant. High levels of lead in the drinking water and from other sources can cause mental retardation, as well as heart and kidney diseases. It is estimated that at least one million lead contaminated drinking fountains are in schools and some have levels 400 times higher than the EPA standard of 50 ppb, though it says 20 ppb poses a health risk (Friend 1989). The EPA has begun recalling lead-lined fountains from schools, although it is estimated that water accounts for only about 20% of lead ingested by children; the rest comes from soil, air, and food.

Now for the good things in the water supply. Recent research studies and observation in private

practice continue to support the contention that fluoridation of the communal water supply is the most effective method of reducing dental caries in children and also the general population. Currently, more than 50% of the United States population lives in communities with fluoridated water. Some children today are deprived the benefits of community water fluoridation because they live in rural areas and other areas not served by central water supplies. However, Horowitz and Associates has reported findings that have relevance for millions of these American children. It has been observed that the water supply of a rural school that was fluoridated for twelve years, at a level of 5 ppm, which is 4.5 times the optimum level for community fluoridation, resulted in the children having 39% fewer decayed, missing, and filled teeth. Late erupting teeth demonstrated twice as much caries protection as early erupting teeth. In both categories of teeth the greatest benefits were observed on proximal surfaces with as much as 69% less caries for the late erupting teeth. Heifetz and coworkers completed another twelve-year observation where the school water was fluoridated at the level of 6.3 ppm with caries reduction only slightly higher than the DMFS reduction in the earlier studies.

In Indiana there are 89 rural schools where water supplies have been fluoridated, and more than 37 thousand children in these schools are experiencing the benefits of fluoridated water. The fluoridation level of 4.5 parts per million in the school water

supply is resulting in dental caries reduction similar to those observed in other studies.

So even though there is great concern about the quality of water in some areas of the country, some school water supplies contain fluorides that are reducing the dental caries experience.

Parents of children who attend rural schools that have water supply independent from the community water supply, that is not fluoridated or does not have an optimal fluoride level, should investigate the possibility of a school fluoridation program. The

Dental Division of the State Board of Health would be the appropriate agency to contact for assistance.



Friend T: Lead in water: "Every school" should test. USA Today, April 11, 1989.

Heifetz BS et al: Effect of school water fluoridation on dental caries: results in Seagrove, NC after 12 years. J Am Dent Assoc 106:334-37, 1983.

Horowitz HS et al: Effect of school water fluoridation on dental caries: final results in Elk Lake, PA after 12 years. J Am Dent Assoc 84:832-38, 1972.

Worldwide AIDS cases increasing

Almost 140,000 cases of Acquired Immune Deficiency Syndrome (AIDS) around the world were reported by February 1 this year, an increase of about 65,000 cases over the previous year.

The World Health Organization's (WHO) Global Programme on AIDS (GPA) received reports of the disease from 144 countries, an increase of 15 countries from the previous year. A total of 177 countries report to WHO, with 33 countries reporting no cases yet.

GPA estimates the actual number of AIDS cases to date to be more than 350,000—more than twice the number officially reported. About 70% of the cases have been reported from the Americas, with 85% of those from the United States.

About 13% of the cases were reported by 28 countries in Europe. Africa, with 46 countries reporting, represented about 16% of the world's total. In Asia, 22 countries have reported a total of 324 cases.