

# The Ethics of Water Fluoridation

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In a recent CDA member information bulletin entitled "Fluoride and Dentistry," the following question was posed: "If fluoride is available from many sources, and the prevalence of dental fluorosis among children is increasing, why does CDA continue to support water fluoridation?"<sup>1</sup> In this paper, we take a brief look at this question from an ethical perspective.

Formal ethical reflection and analysis have become expected components of decision making for all health professionals. Ethics is the branch of philosophy that explores value-laden decision making and conduct. Fair and respectful health policy and practice require an understanding of the values that underlie our choices. Decisions made in clinical practice and in public health policy should be a reflection of the values and beliefs of individual decision makers and of society as a whole. Ethically sound health care policy-making requires balancing the potential benefits and harms of all alternatives. Assessing the ethical validity of the CDA policy on water fluoridation therefore requires a consideration of the potential benefits and harms of water fluoridation.

## Physical Benefits and Harms

Water fluoridation is known to be one of the greatest public health and disease-preventive measures of all time. Its greatest documented benefit is that, by reducing caries, tooth structure is preserved and much pain, infection, tooth loss and restorative treatments are prevented. Water fluoridation protects everyone and is easy to deliver, safe, equitable, and economically efficient.<sup>2</sup>

However, concerns have been raised about the potential harm of water fluoridation. It is possible that fluoridation is causing an increase in prevalence of fluorosis and, it is argued, this is a reason not to support fluoridation. It has also been suggested that fluoride may be an environmental pollutant and may contribute to "multiple chemical sensitivities" syndrome, although these observations are largely anecdotal and are not well documented in the scientific literature.

We would conclude, on the basis of the evidence currently available, that the physical benefits of fluoridation outweigh the harms. However, we would also argue that attention should be paid to the potential harms, and that research should be supported to determine the effect of fluoridation on fluorosis, the health consequences of fluorosis, the impact of

fluoridation on the environment, and the effect of fluoridation on multiple chemical sensitivities syndrome.

## Economic Benefits and Harms

There are considerable economic benefits associated with water fluoridation. By reducing caries, water fluoridation minimizes the need for restorative dental treatment and thus has an enormous impact on lifetime oral health utilization costs. This is a particularly important benefit for Canadians since most oral health care services are not included in publicly funded health programs. Dental caries can result in serious and sometimes life-threatening infections requiring costly hospital and medical care. Fluoridation reduces these potential costs as well as costs for those provinces whose publicly funded health care system includes dental care for children, seniors and the poor.

Concerns have been raised about the potential negative economic consequences of fluorosis, and the argument made that the economic benefits of water fluoridation may be overestimated since restorative dental treatment may be needed to treat fluorosis. We would conclude that, without further evidence on the acceptability and restorative sequelae of fluorosis, the economic argument in support of fluoridation is stronger than the economic argument against it. However, in order to resolve the uncertainty around economic benefits and harms, research should be supported to compare the economic consequences of fluoridation and fluorosis.

## Freedom of Choice

It might be argued that restricting choice about the public source of drinking water is morally wrong because it violates the principle of respect for the autonomy of individuals by taking away their freedom to choose not to consume fluoride. It might also be argued that this violation of autonomy is indefensible given that the benefits of fluoride can be realized in other ways (i.e., those who wish to consume fluoride can rely on other sources such as supplements, fluoride mouth rinses and professionally applied fluorides).

However, restricting choice for the entire population may be defended on the basis that it benefits vulnerable populations. Commercially available sources of fluoride and professional dental treatment are costly. Not everyone in society can afford these. Yet, regardless of education, socioeconomic status, age,

race, or access to professional dental care, everyone can benefit from fluoride simply by drinking fluoridated water. When it is available in public water supplies, fluoride is no longer a discretionary commodity available only to those who are familiar with its benefits, can afford it and have access to it. When public policy supports fluoridation of water supplies, it is the most vulnerable in our society who benefit the most.

The liberal individualist arguments against the involuntary medication of populations may initially seem compelling. However, Canadian society has established a core set of values which allow for the infringement of individual rights in certain instances. For example, mandatory vaccinations, fortification of foods with essential nutrients, and testing for certain genetic diseases at birth are accepted public health measures despite the fact that these measures can be seen as an infringement on individual rights. Although we are a society dominated by individual rights, Canadians accept that some public policies must put the common good above the desires of some individuals. Fluoridation of the water supply fits into this philosophical framework.

## Conclusion

For Canadians, improving oral health by reducing dental caries is a good. Economic benefit to both society and to individuals is a good. The protection of vulnerable populations is a valued good. It is on the basis of this good that we would argue that CDA should continue to support water fluoridation.

Before closing, we would challenge CDA members to consider an important yet frequently ignored question: "In debates about fluoridation, are you hearing the voices of the vulnerable?" When political arguments erupt between policy-makers, interest groups and oral health professionals, are the groups who are most vulnerable even part of the discussions? For good reason, there is a great deal of concern being expressed by contemporary health care ethicists about health policies being made without consideration of the interests and desires of members of society who do not have a voice. When decisions are being made about public health policy, members of society who may be disadvantaged by a lack of education, resources and access to proper health care must be part of the discussions. It is not clear that they are when it comes to the issue of water fluoridation. CDA members should ensure that they seek out these voices before taking a final position on this issue. ♦

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## References

1. CDA Member Information Bulletin: Fluoride and Dentistry. October 1999.
2. Horowitz HS. The effectiveness of community water fluoridation in the United States. *J Public Health Dent* 1996; 56(5 Spec No):253-8.