

The Ethics of Water Fluoridation

Key points

- Fluoridating water supplies replicates the benefits already enjoyed by communities receiving water naturally containing one part per million of fluoride. The greatest benefit is to children – who are least able to help themselves.
- Drinking fluoride-free water is not a basic human right but a question of individual preference. Personal preferences need to be balanced against the common good arising from the lower levels of tooth decay which fluoridation brings.
- Fluoridation can provide a high degree of protection against tooth decay. It can liberate people from the pain and misery of toothache and from the anxiety of having teeth extracted or filled.



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A question of balance

Clearly, there is scope for different points of view on the ethics of any major issue of public policy, including fluoridation. Anyone taking up an extreme 'individualist' position which holds that the individual has the right to determine the precise composition of a publicly provided water supply, is unlikely to accept fluoridation as anything less than an intrusion. Does that mean that the individual can prevent the chlorination of water simply because of a personal aversion to chlorine? Surely in a society where people come together for mutual support and mutual benefit, it is a question of balancing individual preferences against the common good.

The professional philosopher's view

John Harris is Professor of Bioethics at the University of Manchester, and is recognised internationally as an expert in medical ethics. Professor Harris argues that fluoridation is perfectly ethical because:

- It is a safe process which confers benefits on human beings (protection from tooth decay, one of the commonest diseases).
- It does not in any way conflict with basic human rights (there is no such thing as the right to drink fluoride-free water – only a personal preference to do so).

- It is replicating a situation which occurs naturally in some places (where fluoride already exists in water at the optimum level of one part per million parts of water).
- It does not have any harmful consequences (its safety having been demonstrated by almost sixty years of experience and by the wealth of endorsements from leading dental, medical and scientific organisations).

John Harris goes further. He asserts that as dental decay may itself be responsible for a small number of deaths each year from anaesthesia used in treatment, fluoridation could be described as 'life-saving' if it prevents the need for treatment. Indeed, it could even be unethical not to fluoridate water where it is practicable to do so.

The view of a human rights' campaigner

Lord Avebury, former Chairman of the Parliamentary Human Rights Committee, enjoys an international reputation for his work in this field. No one could say that he was slow to champion the cause of individual freedom. His view on fluoridation is therefore particularly relevant, since he could scarcely be expected

to support a measure which infringed basic human liberties. Lord Avebury dismisses as invalid the so-called libertarian arguments of those who oppose fluoridation. Writing in the *British Dental Journal* [3] he said:

'Fluoride is a natural constituent of water supplies, as indeed it is of many foods. The adjustment of the quantity to an optimum level cannot be compared with the addition to water of a substance not found there ordinarily.'

He also rejected claims that fluoridation could be construed as 'mass medication', pointing out that fluoridation is not a means of curing a disease. He said:

'A substance which has the effect of maintaining medical or dental health is more in the nature of a food or nutriment than a medicine.'

Like John Harris, Lord Avebury sees the ethics of fluoridation in positive terms:

'No consumer has the right to dictate the chemical composition of water, a recipe for anarchy. What is at stake is not the erosion of liberty but, ... the erosion of millions of teeth and the resultant suffering and misery of thousands of children which fluoridation would go far to prevent.'

How a practising dentist sees it

Lord Colwyn is a legislator and a dentist. He looks at fluoridation from two perspectives: what it can do to prevent tooth decay on the one hand and how it fits in with the rights of the individual on the other. Knowing that fluoridation is both safe and effective, he is clear in his view about the rights and wrongs of the matter:

'It is all very well saying that they (children) should clean their teeth and that we should take their sweets away from them. But it is not until you have had to hold down a screaming four-year old child, anaesthetise it and pullout baby teeth that you realise the immorality of not initiating a proven, comprehensive plan that will prevent untold cases of future suffering.'

Helping those least able to help themselves

It is important to remember that whilst fluoridation benefits everyone with natural teeth, the greatest benefit of all goes to those least able to help themselves - children. Moreover, research shows that fluoridation succeeds in levelling out the differences in dental health which normally separate children from better off and poorer backgrounds. In fact, as Table 1 shows, in the 2001/2002 national dental

survey of 5-year-olds, the dental health of children in fluoridated Rowley Regis and Tipton, one of the poorest PCT districts in England, was at least as good as that of 5-year-olds in one of the most well off but non-fluoridated PCT districts, Guildford and Waverley [4].

Table 1 The dental health of 5-year-old children (2001/2002) in fluoridated but socially deprived Rowley Regis and Tipton PCT, compared with that of 5-year-olds in affluent but non-fluoridated Guildford and Waverley PCT.

	Fluoridated Rowley Regis and Tipton	Non-fluoridated Guildford and Waverley
Average number of decayed, missing or filled teeth per child	0.90	1.15
Percentage of children with any decayed teeth	32.7%	35.4%
Average number of decayed teeth per child among children with any decay experience	2.75	3.25

It is also interesting to note how the familiar North South divide in health status has disappeared as far as the dental health of children in fluoridated parts of the North East and West Midlands is concerned. National surveys of children's dental health consistently confirm that five-year olds in fluoridated areas enjoy the same standard of dental health as those from the more well off, but non-fluoridated parts of the South of England [4-7]. Fluoridation is a great equaliser.

Verdict of the Irish High Court

In December 1960 the Irish Parliament (Oireachtas) passed the Health (Fluoridation of Water Supplies) Act which gave the Minister for Health the power to require health authorities to arrange for fluoridation of water supplies for everyone connected to the public water supply system. Local authorities - the bodies responsible for water supplies - were obliged by this legislation to co-operate with health authorities in implementing the policy.

Following the passage of the Act, a resident of Dublin applied to the Irish High Court to have it overturned on the grounds that it was unconstitutional. In a hearing lasting 65 days, the counsel for the plaintiff argued that the Act had overridden the inalienable rights of the individual citizen, which the State had a duty to respect and, as far as practicable,

to defend by its laws. These rights, it was argued, included that of 'bodily integrity'.

Personal rights not unlimited

In his final judgement, delivered in 1963, Mr Justice Kenny stated:

'None of the personal rights of the citizen are unlimited: their exercise may be limited by Parliament (Oireachtas) when the common good requires this.'

He added:

'When dealing with controversial social, economic and medical matters Parliament has to reconcile the exercise of personal rights with the claims of the common good and its decision on the reconciliation should prevail unless it was oppressive to all or some of the citizens or unless there is no reasonable proportion between the benefit which the legislation will confer on the citizens or a substantial body of them and the interference with the personal rights of the citizen.' [8].

On the question of bodily integrity, Mr Justice Kenny accepted that it would be oppressive to impose on a country's citizens any process which might be dangerous. But he also accepted arguments that fluoridation was safe and that it constituted no danger to individuals' bodily integrity. He concluded:

'In my judgement, the fluoridation of the public water supplies in this country is not a violation of any of the plaintiff's constitutional rights and this action must be dismissed.'

Verdict of the Supreme Court

The judgement of Mr Justice Kenny was upheld by the Irish Supreme Court in July, 1964 [9]. Chief Justice O'Dalaigh commented:

'The effect on the teeth (of fluoridation) is demonstrably beneficial. The purpose and the effect of fluoridation is to improve children's teeth and so, indirectly, their health. These benefits are to a great extent carried forward into adult life.'

Replicating nature's benefits

Rejecting the plaintiff's contention about the possible violation of bodily integrity, the Supreme Court stated:

'Fluoride ions occur naturally in water and in many foods. The Act has for its object where water is deficient in fluoride ions to bring it to the optimal level by fluoridation. Fluoride ions thus added differ in no respect from fluoride

ions naturally occurring in water. In modern life the provision of public water supplies in cities is necessarily a community obligation, and if water occurring naturally is deficient in some of its wholesome elements, it is the right if not the obligation of the community to make good the deficiency where this can be done without harm or danger to the public. The desirability of adding to food or water elements in which they are deficient or removing elements which may be harmful has been widely recognised and frequently exercised. Water is chlorinated, salt iodised, vitamins added to margarine, flour fortified whenever these measures are shown to be beneficial.'

Duty to protect citizens against disease

The Supreme Court went on to develop the argument that the State has a duty to protect its citizens from disease. It said:

'Dental caries is no new thing. It has adversely affected generation after generation and will continue to do so if measures are not taken. This constitutes the type of danger from which the State has not merely the right but the duty to protect its citizens. To deal with the problem, parliament has chosen a method, namely the fluoridation of the public water supply. The plaintiff has failed to refute the evidence that this is not only the most effective method but is indeed the only effective method.'

The judgement continued:

'The Court is left in no doubt that the fluoridation of water to the extent proposed in the Dublin Health Authority area where the plaintiff resides cannot be said to involve physical changes which affect in any way either the wholeness or the soundness of the person concerned. The ingestion of the fluoridated water cannot, therefore, be said to constitute an infringement of or a failure to respect the bodily integrity of the plaintiff or her children.'

Not mass medication

The Court also firmly rejected the anti-fluoridation argument of 'mass medication'. It said:

'The Court does not accept that the fluoridation of water is, or can be described as, the mass medication or mass administration of "drugs" through water. This matter was examined in detail by the Commission set up by the Government of New Zealand to inquire into the desirability of fluoridation and the conclusion was reached that "fluoride is not a drug but a

nutrient and fluoridation is a process of food fortification.” It is, in the opinion of the Court, a misuse of words to refer to this process as mass medication or mass administration of drugs.’

The Forum on Fluoridation

Because of increased media coverage and apparent public interest and concern over the benefits and possible negative aspects of fluoridation, in May 2000 the Irish Minister for Health and Children established the Forum on Fluoridation to examine the issue. Recognising the complexity of the issue the Minister invited Professor Pat Fottrell, former President of the National University of Ireland, Galway, to act as the independent chair of the Forum. Forum members included representatives of the relevant Government Departments (in particular the Department of Health and Children which has the primary responsibility in this field), regional health authorities, university faculties engaged in relevant research areas, consumer bodies, environmental interests, and professional dental and medical bodies. In addition, its members included recognised authorities on ethics, law and sociology. The Forum report was published in 2002 [10].

Among other issues the Forum considered the legal and ethical dimensions of fluoridation in terms of the relationship between the State and the individual – in particular in light of the changing values in society since the early 1960s when mandatory fluoridation legislation had been enacted in Ireland.

Professor William Binchy, Regius Professor of Law, Trinity College, Dublin, gave evidence to the Forum on both the legal and ethical questions raised by fluoridation. His interesting presentations are included in full in Appendixes 16 and 17 of the Forum report (<http://www.doh.ie/publications/fluoridation.html>). Professor Binchy discussed in detail the contemporary legal position comparing it with the earlier judgements of Justice Kenny and Chief Justice O’Dalaigh. He said that the earlier judgements were no guarantee that the courts today would make an identical holding of fact or law. However, in his opinion the courts would be very reluctant to come to the conclusion that the 1960 Health (Fluoridation of Water Supplies) Act could be considered to infringe any constitutionally protected rights.

Professor Binchy also highlighted the radical changes which have taken place internationally in the 20th century in the predominant values relating to personal autonomy. Developing this theme, Professor Binchy suggested that there had been a movement ‘*from the social to the individual*’ and that there was now increased emphasis on autonomy and ‘*disconnectedness*’. Nevertheless, he said, the State had assumed very wide-ranging new functions designed to achieve the goals of: ‘*enhancing social welfare, encouraging equality, protecting citizens from injury, improving their health, protecting potentially vulnerable groups such as employees and, within families, children – indeed generally to improve the quality of life for all.*’

Public health is regarded as an important aspect of the State’s responsibilities he asserted.

A sub-group of the Forum reviewed Professor Binchy’s presentations and also consulted Dr Richard Hull, a respected ethicist. The sub-group addressed three areas of uncertainty:

- **Firstly whether water fluoridation posed any particular ethical problems:**
Dr Hull addressed this question in terms of choice. He said that people *can* chose not to drink tap water, though he acknowledged that the choice was not an easy one. If the State were concerned about this, he said, consideration would have to be given to supplying an alternative source of water.
- **Secondly, whether water fluoridation breach bodily integrity or interfere with autonomy:**
Dr Hull said that water fluoridation is a paternalistic intervention by the State to safeguard the health of its citizens. However, he said, such interventions are justifiable and the degree of infringement of bodily integrity by water fluoridation is relatively minor.
- **Thirdly, the issue of scientific uncertainty – it being impossible to state categorically that *anything* is completely safe:**
Dr Hull suggested that the question relating to scientific uncertainty comes down to risk versus benefit. From an ethical perspective, he said, risk can be justified if the benefit significantly outweighs the risks.

Dr Hull further discussed the topic in terms of a potential conflict of values, between freedom and autonomy on the one hand, and welfare and paternalism on the other. Viewed from an

extreme libertarian perspective with the core values of freedom and autonomy, suggestions of equality and state intervention would be rejected he said. However other, less extreme, welfare liberal views might concede that freedom requires positive conditions such as a certain level of health, education and economic well being. Freedom in this sense is more positive and means more than just being free from interference. Furthermore, he said, along with positive conditions for freedom come positive rights to assistance. This reflects a position where allowing harm can be as bad or worse than doing it; such a position is consistent with limited paternalism, and allows for autonomy to be limited to a certain extent for the sake of freedom and justice.

In considering the safety argument Dr Hull, on the assumption that fluoridation is solely beneficial, balanced fluoridation against health education; however he conceded that this comparison is only valid if health education is effective:

'It is all very well to emphasise the value of autonomy, but the desire to effectively safeguard the health and safety of children (who are not yet autonomous) could be said to constitute a strong counter-emphasis.'



Dr Hull concluded by saying that any evidence that fluoridation is unsafe will, of course, weaken the arguments in favour of it, although perhaps not fatally. Even given a modicum of risk, we might still ask whether it could ever be ethical to withhold an on balance beneficial treatment, to fail to prevent suffering when it is within our power? To do so *'would be to deliberately fail to protect and promote the health of people in our community,'* he said.

References

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