

This response was submitted to the consultation held by the Nuffield Council on Bioethics on *Public Health: ethical issues* between May and September 2006. The views expressed are solely those of the respondent(s) and not those of the Council.

Anon 2

I wish to register my objections to your views on water fluoridation expressed in your document on bioethics.

Fluoridation of water has not been proven to improve dental health as you claim.

Water fluoridation is incompatible with the Human Rights Act 1998, EU Directive 2004/27/EC, and the EU Charter of Fundamental Rights.

- it claims medical benefits for a substance not licensed as a medicine
- moreover, this substance is only legally classified as a poison under the poisons act
- It imposes a medicine on everyone and therefore removes every person's right to refuse medical treatment.

I have copied below a document which is intended to balance the inherent bias in this so called debate.

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Department of Health guidelines on new Fluoridation schemes, \*

\*September 2005 (Gateway Ref: 5136)\*

This commentary on the Chief Dental Officer's guidelines on public consultations provided for in the Water Act 2003 is written on behalf of the All Party Parliamentary Group Against Fluoridation and the National Pure Water Association. It is intended to provide a corrective to some of the statements that appear in the document.

\*There are serious errors in the description and interpretation of the science. T\* \*here is also an inbuilt bias in the consultation process \*which needs to be acknowledged.

\_ \_Background\_

Water fluoridation began 60 years ago in the USA. It has been heavily promoted by health authorities and Governments in a handful of countries as a means of combating dental decay in children. There has been considerable popular opposition to it, and no new schemes have been started in the UK for more than 20 years, largely because water companies could not be compelled to fluoridate. The recent Water Act has changed this, and debate has intensified since the first and only high-quality and systematic assessment of the scientific evidence for fluoridation world-wide showed past claims for great effectiveness and complete

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safety to be unfounded. Government is now encouraging health authorities to consider new schemes, and the recent official guidelines, while setting out how public consultation should be conducted, purport to give a description of the scientific evidence to date.

### \_The Science of Fluoridation\_

1. The CDO correctly draws attention (paragraph 2) to the University of York report *A Systematic Review of Water fluoridation, 2000*. This was commissioned by Government, and remains the only reliable source of scientific information because of the thoroughness, rigour, transparency and inbuilt precautions against bias that attend a systematic review conducted to the highest international standards. It superseded all previous (unsystematic) reviews, and is better evidence on effectiveness and safety than the useful but lower-quality Medical Research Council working group report *Water Fluoridation and Health, 2002*. This point is important because at times the reports make different statements on the same evidence.

2. The CDO writes that York "concluded that water fluoridation increased the number of children without tooth decay by 15 per cent". This is not accurate, and perpetuates an error repeated by the MRC and several others. The York reviewers were at pains to highlight the overall weakness of the evidence, making any firm conclusions impossible (see in particular York report, Executive Summary *Conclusions*; 4.9; 12.1; 12.9.1). This has obvious implications for public policy.

3. A useful website not referred to by the CDO is [www.york.ac.uk/inst.crd///fluoridnew.htm](http://www.york.ac.uk/inst.crd///fluoridnew.htm). The York review team became so concerned at the continuing misrepresentations of their findings that in October 2003 they posted a few key statements in an attempt to put the scientific record straight. Three of these are:

"We were unable to discover any reliable/good-quality evidence in the fluoridation literature world-wide"; "What evidence we found suggested [our italics] that water fluoridation was likely to have a beneficial effect, but that the range could be anywhere from a substantial benefit to a slight disbenefit to children's teeth"; and "The evidence about reducing inequalities in dental health was of poor quality, contradictory and unreliable". The CDO's "realistic option of reducing health inequalities" (paragraph 1) should be read with this in mind. The observation of differences in decay between Sandwell and Bolton in paragraph 4 does not amount to scientific evidence for water fluoridation, and (like the "accumulating evidence of the benefits" to adult teeth in 2) is nowhere to be found in the York review on account of the lack of good evidence.

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4. \*Gaps in the evidence base for fluoridation are more extensive than the CDO indicates in Appendix 1:2. The MRC also called (6.2.2) for an estimate of "lifetime intakes of fluoride", recognising that total fluoride exposure, i.e. from all sources, was now the key health issue for populations. It was more relaxed about possible dangers to health than York, probably because of its membership and methodology. \*York\* recommended high-quality research into infant mortality, congenital defects and IQ, as well as the effects of fluoridating at the lower level of 0.8 parts per million, and stated that the evidence was of "insufficient quality to allow confident statements about other potential harms [than dental fluorosis]", and that "Some possible adverse effects . . . may take many years to develop and so . . . the relationship may go undetected" (York, /1). Neither bone defects nor cancer could be given a clean bill of health (Sections 8; 9), since the evidence pointed both ways and was of poor quality and quantity.

5. \*The CDO's claim in Appendix 1:4 that dental researchers "found no evidence for any differences between the absorption of fluoride" from naturally and artificially fluoridated water is strongly disputed by scientists at the University of York and elsewhere, and normal scientific debate on this through peer-reviewed journals has not been possible. Reference to the Newcastle report /Bioavailability of fluoride in drinking water, /2004, at [www.ncl.ac.uk/dental/research/diet/fluoride.htm](http://www.ncl.ac.uk/dental/research/diet/fluoride.htm) <<http://www.ncl.ac.uk/dental/research/diet/fluoride.htm>> will show that, in a study of surprisingly few subjects (n = 20), "Relative bioavailability was significantly greater for artificially fluoridated water . . ." (Summary of findings, p.6); but that "when one subject with an anomalous value . . . was removed from the analysis" the statistical significance was lost, although a strong trend towards a greater effect from artificial fluoride remained.

\*This cannot legitimately be reported as "no evidence [our italics] for any differences", and in any case the removing of one subject with an unusual reading is highly questionable in scientific terms. The authors of this study in Section 6: Conclusions record that (once this subject was discarded) "There was no statistical ly [our italics] significant difference", and go on to advise "some caution" in interpreting these results because the power to detect differences was low on account of the "small number of subjects". \*Caution, however, has been left behind in public statements by the Department of Health and others who have advocated fluoridation in the past. In a Section on "Further Research" (7) the study authors list a number of ways in which research methodology could be improved in future.

On many counts this was a poorly conducted study, carried out in a dental institution which favoured fluoridation. \*The findings raise the possibility that water from fluoridation schemes may have a much

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stronger effect, \*for good or ill, than water with a natural fluoride content. \*The CDO's guidelines do not reflect this. \*

6. Two final comments may be made on the science.

The York review has shown that the \*optimism about fluoridation \*as a method of safely reducing dental decay, traditionally shown by dentists, Governments and public health bodies, \*rests on shaky foundations. The question is whether good \*\*science is now to prevail, \*in a health measure affecting millions, or whether the same low quality of evidence as before is to be relied on. Low-quality evidence often gives wrong answers, in science as in any other field. One problem is that \*fluoridation has been promoted and defended too loudly and too long \*for its advocates easily to admit error, and the signs of a change since the York review have not so far been encouraging. Sir Iain Chalmers, formerly director of the UK Cochrane Centre (for evidence-based medicine) and a member of the Advisory Board to the York review, describes as "appalling" the claims still being made for fluoridation by public and professional bodies.

7. There is, however, widespread \*recognition since \*\*York\*\* that more research is need-\* \*ed into the effects of fluoridation, \*and this is welcome. The CDO's guidelines make this clear, which not all commentators since York have done. But no one in authority has addressed the question \*how it can be right to press ahead with new \*\*fluoridation schemes /before /the results of research are known. \*If, for example, MRC-recommended research into the effects of fluoridation on children (6.2.6) shows these to be minimal in terms of benefit - and on the York findings this is perfectly possible (4.1 & 9) - or if good-quality studies confirm that artificial fluor- idation has more powerful effects than naturally fluoridated water, then the whole foundation of a fluoridation policy based on a concentration of 1 ppm falls down. In a difficult situation for fluoridation advocates, there has been a collect-ive \*failure to confront the full implications of what the Government-funded \*\*systematic review of the evidence has shown. \*It is rather like a supertanker forging ahead in poor visibility after discovering that its charts and radar are unreliable.

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\_The consultation process\_

8. In another sense the situation for advocates of fluoridation has continued to be easy, since they still control the publicity high ground by virtue of the prestige of their official and professional bodies, and of the resources of money and man-power available to them in putting across the fluoridation message. As one ex-ample the British

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Fluoridation Society, which is a promotional body, still receives over £80,000 a year from Government. \*This puts unfunded opponents of fluoridation at a substantial disadvantage, \*whatever their invitations to "participate" in consultations, and Appendix 2 describes the ways in which information packs, websites, speakers, telephone information lines, advertisements and so on can be used to put the case on behalf of those who command the resources to do so.

There is much that is good about the detail of consultation, but the \*disparity in re-sourcing \*means that there will be no level playing field for those who wish to make the case against new fluoridation schemes. The booklets, briefings, web sites and speakers will be overwhelmingly pro-fluoridation, since the public health community signed up long ago to a fluoridation policy.

9. Two other points from Appendix 2 should be mentioned.

The British Fluoridation Society's *One in a Million*, /cited with approval in para-graph /7, /\*is propaganda not science. \*It suffers from the same kind of systemic bias that has afflicted enthusiasts on both sides of the argument for 50 years, in its selective use of evidence, its lack of attention to the quality of studies, its errors of fact (e.g. over the York report), and its omission of anything that could cast doubt on fluoridation's benefits. It is hoped that more reliance can be placed on the Department's "standard brief" when this appears (7 & 8), but on past evidence this has to be doubted.

10. Emphasis on the relevance of "the health arguments" when Strategic Health Authorities weigh up their final decision (37) seems at first sight to disregard the ethical element in fluoridation, although this is mentioned elsewhere. It is hoped that this was unintentional. There are opponents of fluoridation for whom the ethical argument against medical intervention without individual informed consent is fundamental, and for whom the scientific evidence is irrelevant. This is a tenable viewpoint, and those who hold it should not have to relate their objections to arguments about health in order to be heard.