



National Pure Water Association

42 Huntington Road YORK YO31 8RE

☎ +44 (0)20 8220 9168 ✉ - info@npwa.org.uk www.npwa.org.uk

A statement from National Pure Water Association Prepared for the Rotherham Scrutiny Review held on February 19th 2007

Artificial fluoridation of public water supplies was first practised in America in 1945 and was from the outset highly controversial. It has been rejected by most European countries except for Eire (where it is mandatory); and England, where 5.5 million people are now medicated, mainly in and around the cities of Birmingham and Newcastle-on-Tyne. Arguments concerning the effectiveness, safety and ethics of fluoridation have continued world-wide for over sixty years. Thousands of scientists including 14 Nobel Prize-winners in chemistry and medicine have opposed fluoridation on the available evidence.

Fluorides are chemical compounds of fluorine containing the fluoride ion; soluble fluorides are without exception dose-dependently biotoxic. Sodium fluoride, used in early fluoridation schemes, is a rat-poison. Fluorosilicic acid is used in artificial fluoridation schemes in the UK. This extremely corrosive substance must be transported in specially constructed tankers and would pose a considerable hazard if it were involved in a traffic accident. Natural waters usually contain the fluorides of calcium or magnesium; they are less biotoxic than artificially fluoridated waters. Most waters in this country contain traces of fluoride, typically at concentrations of 0.1 ppm (parts per million) or below. In some districts the concentration is up to 1 ppm. It is rarely higher. The maximum allowed in UK drinking water is 1.5 ppm. Thus there is a very narrow margin between the 1 ppm (1mg per litre) recommended for fluoridation schemes and the maximum fluoride content currently permitted.

In 1995 Yorkshire Water was one of four water companies who refused to fluoridate. The reasons they gave were that their customers did not want them to do so; fluoridation added to the complexity and risk involved in 'water treatment' and the Government would not grant them adequate indemnity. Water companies' discretion on whether to fluoridate or not was removed by the Water Act 2003. This new Act is accompanied by two Statutory Instruments, one granting full civil and criminal indemnity to the water companies, the second outlining plans for a three-month public consultation which is mandatory before a Strategic Health Authority can demand fluoridation. The wording of this latter Statutory Instrument is such that little regard for public opposition need be taken. If, in its opinion, "the health benefits outweigh the objections" an SHA can order a water company to fluoridate.

Fluoride has never been shown to be essential to any body process so the concept of fluoride deficiency is without validity. Dental caries (tooth decay) is not caused by a deficiency of fluoride but by a number of other factors. These include inadequate protein, calcium and vitamins in the diet, over-consumption of sugary and starchy foods which are converted by bacteria in the mouth to form acids which attack tooth enamel, and poor oral hygiene.

Topical application of fluoride (by its inclusion in toothpaste, mouthwash or dental treatments) can be effective at reducing dental caries rates, partly because fluoride is poisonous to bacteria in the mouth. Studies showing fluoridation reduces caries rates by up to 65% have been discredited. The York Review criticized the quality of the scientific studies underpinning fluoridation. *York* estimated a possible caries-free benefit from fluoridation at 15% though the studies on which this was based were highly divergent, and did not continue beyond age 15. There was little evidence that fluoridation reduced inequalities in oral health. The *York Review's* Terms of Reference excluded the consideration of animal, biochemical and biomedical studies and prevented it from evaluating a mass of evidence regarding the adverse effects of fluoride on the thyroid gland.

Excessive fluoride intakes during the period of enamel formation will cause 'dental fluorosis'. This is mottling, staining, pitting (and in very severe cases embrittlement) of the teeth which is only caused by fluoride, and is dose-dependent. The '*York Review*' found that in fluoridated areas 48% of children had some degree of dental fluorosis; in 12.5% (1 in 4 of those affected) the condition was severe enough to be "of concern". Dental fluorosis also occurs in non-fluoridated areas, most probably because children swallow fluoride toothpaste. Dental fluorosis is sometimes said to be "a purely cosmetic issue" but it can cause embarrassment and psychological damage to sufferers and is expensive to remedy with dental veneers.

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Professor Trevor Sheldon, Chair of the Advisory Group to the York Review has subsequently said:

“The review found water fluoridation to be significantly associated with high levels of dental fluorosis which was not characterised as ‘just a cosmetic issue’.

The review did not show water fluoridation to be safe. The quality of the research was too poor to establish with confidence whether or not there are potentially important adverse effects in addition to the high levels of fluorosis. The report recommended that more research was needed.

The review team was surprised that in spite of the large number of studies carried out over several decades there is a dearth of reliable evidence with which to inform policy. Until high quality studies are undertaken providing more definite evidence, there will continue to be legitimate scientific controversy over the likely effects and costs of water fluoridation.”

In March 2006, the (US) National Research Council (NRC) published its Report, ‘*Fluoride in drinking water*’. This calls on the Environmental Protection Agency to reduce the maximum level of fluoride allowable in U.S. waters (the Maximum Contaminant Level Goal, currently 4ppm) because of the risk of dental fluorosis in children and bone fractures in the elderly. While the NRC’s remit did not include an assessment of artificial fluoridation, the Report warns of a number of potential harmful effects of fluoride on the bones, brain, thyroid gland and immune system. This should be a wake-up call.

In May 2006, Dr Elise Bassin’s study, which found 5 to 7 fold higher levels of osteosarcoma (bone cancer) in boys who had drunk fluoridated water as against a control group which had not been exposed to fluoridation, was published in *Cancer Causes and Control*. Osteosarcoma is often fatal or necessitates amputation of limbs. Few parents would trade a tooth or two with no decay for such potential harm to their child.

On 9th November 2006, the American Dental Association issued interim guidelines, telling dentists not to advise mothers to mix powdered infant formula with fluoridated water. Babies consuming formula mixed with fluoridated water receive up to 200 times more fluoride than is present in human breast milk and are at risk of dental fluorosis. The (US) Center for Disease Control (CDC) has repeated the warning on its website. The ADA’s action has resulted in calls for fluoridation to be halted and thousands of people have written to Wal-Mart asking them to withdraw fluoridated bottled water which for many years has been sold as beneficial to babies.

Dr Hardy Limeback, Professor of Preventive Dentistry at Toronto University has said ***“In my opinion, the evidence that fluoridation is more harmful than beneficial is now overwhelming and policy makers who avoid thoroughly reviewing recent data before introducing new fluoridation schemes do so at risk of future litigation.”***

Directive 2004/27/EC of 31 March 2004 defines as medicinal (necessitating registration as a pharmaceutical drug):-***(a) Any substance or combination of substances presented as having properties for treating or preventing disease in human beings; or (b) Any substance or combination of substances which may be used in or administered to human beings either with a view to restoring, correcting or modifying physiological functions by exerting a pharmacological, immunological or metabolic action, or to making a medical diagnosis.*** Fluoridated water fulfils this definition. However, fluoridated water has never been tested or registered as a medicine, nor has marketing authorization been obtained for it as is required for medicines. It is claimed that harm from fluoridation has never been observed, but there are no government-funded detailed comparative health studies (measuring fluoride in blood, urine and tissues) to identify outcomes promoted by fluoride but attributed to other diagnoses.

Fluoridation is state-imposed medication without individual consent and as such violates the European Convention on Human Rights. Fluoridation provides no control on any individual’s fluoride intake, because total intake depends on the amount of water drunk plus fluoride obtained from the diet (high sources are tea and fish) and from toiletries, dental treatments and medications. Calls for ‘further research’ accentuate the fact that for 60 years fluoridation has been an illegitimate medical experiment on millions of people, with all adverse effects officially denied.

(3 February 2007)