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Fluoridation, Water

The furious debate about water fluoridation continues. Yet evidence about possible harmful effects is still thin on the ground

It must rank as one of the most hotly debated subjects - should we add fluoride to drinking water?

Fluoride in water and toothpaste has helped to reduce dental decay dramatically over the last two decades. But some groups believe that there could be a link with bone disorders and even cancer. And the Government wants more research carried out to rule out these associations once and for all.



For and Against

In some parts of the country the 'optimum level' of fluoride (one part per million) occurs naturally in the water. In other areas, fluoride is added.

'There is no evidence that this optimum level has any effect on the health of the body, other than reducing tooth decay,' explains Professor Mike Lennon, chairman of the British Fluoridation Society and professor of dental public health at Liverpool University.

Ian Wylie, of the British Dental Association (BDA) agrees: 'As chief executive of the BDA, my most shocking experience to date has been a trip to Glasgow where I saw four-year-olds being given general anaesthetics to pull out several rotten teeth.'

'In areas of social deprivation, where fluoride is not added to the water, dental decay rates are unacceptably high. For similar groups living in fluoridated areas, the decay rate is vastly reduced.'

However, there is also evidence that too much fluoride can cause changes in the appearance of teeth. Even supporters of fluoride acknowledge that too much fluoride can cause mottled brown marks - a condition known as dental fluorosis and considered to be an aesthetic problem. Opponents claim this mottling points to something more serious.

'This is the visible sign of fluoride poisoning,' says Jane Jones, campaign director of the Pure Water Association.

'Fluoride is an accumulative poison and takes up to 20 years to affect your bones. It's not just in the water - mouthwashes have huge amounts of fluoride added, as does toothpaste. We have no idea how much of that gets into the system through mucus membranes. In the US, fluoridated toothpaste comes with a poison label.'

Around 10 per cent of the UK's water supply is fluoridated (your local water company will have details). The World Health Organisation, the British Medical Association, and the World Dental Federation are among the many medical and scientific bodies that support fluoridation or confirm

its safety and effectiveness. But there is also opposition.

Don MacAuley is an experienced dentist who has been practising in Ireland - where 73 per cent of the water supply is fluoridated - since 1998. After several years of research, he is convinced that fluoridation should be abolished.

'Even if there are small benefits, the risks far outweigh them,' he says. 'It doesn't make sense to me that fluoride can mottle the teeth and avoid the bones.'

Two years ago the Government commissioned the University of York to look into the effects of fluoride. It confirmed that fluoridated water does prevent decay, but it also found that 12.5 per cent of the people who had fluoride in their drinking water had dental fluorosis considered to be of 'aesthetic concern'. It found no evidence fluoride exposure was associated with any other ill effects. But it did warn: 'It is surprising to find that little high-quality research has been undertaken'.

The Government has now asked the Medical Research Council 'where it might be possible to strengthen the evidence currently available'. The council is due to report back soon.

Case studies

Fluoride means no fillings

Julie and Nigel Stockin live in Sandwell in the West Midlands. Fluoride was added to their water in 1986. Their ten-year-old son, Matthew, has no fillings - which Julie is convinced is due to the water supply.

'Matthew won't eat fruit and vegetables and I'm trying to get him off crisps and chocolate. We do brush our teeth twice a day, but even Nigel and I have noticed that we haven't had any fillings for a long time now. I don't know whether it's just because we have a good dentist. But Matthew is really proud. I think it gives him a sense of achievement not having a filling.'

Dental disaster

Dianne Standen is no fan of fluoride. In fact, she is so incensed about her children's teeth that she's joined a local action group that campaigns against fluoride.

'When Sky and Finn were young I gave them fluoride drops. I didn't know there was already (naturally-occurring) fluoride in the water. But I thought at the time that you couldn't get enough of it. There was no advice or warning given about the effects of high fluoride intake. When their adult teeth came through at around six, they were mottled and discoloured.'

'My daughter, who's now 22, was very self-conscious and has had veneers on one of her front teeth ever since. My son isn't as bothered as Sky, but his teeth are far worse. We do not know what effects the excess fluoride will have on their long-term health.'

The Future of Fluoride

In the 1990s several health authorities, including those in the north east of England, consulted local people about adding fluoride to drinking water.

Following community meetings and widespread publicity, the health authorities asked local water company Northumbria Water to fluoridate the water, as an 'overwhelming majority' of the population was in favour of it. But the water company refused - under the Water (Fluoridation) Act

1985, it has the right to do so, without giving a reason. The problem is that the water companies want the Government to provide indemnity against any legal action resulting from adding fluoride to water supplies.

'The water companies have no objection to fluoridation, provided the public is consulted and the law is changed to make clear it's a public health requirement,' explains Pamela Taylor, chief executive of Water UK, the trade body for Britain's water companies.

'This (decision) was very frustrating,' Dr David Evans, consultant in dental public health in the north east of England, told Health Which?. 'The law needs changing - a private company shouldn't be able to overrule the decision of a health authority and local people.'

But those against fluoridation say it's not a matter for democratic debate. 'This is about the individual's right to choose or refuse,' says Jane Jones. 'No one has the right to vote for their next-door neighbour to be medicated.'

Verdict

The decision about whether or not to add fluoride to drinking water is not straightforward. There are undoubted health benefits, but strong objections on the grounds of individual choice, the risk of fluorosis and a lack of good research into potential health risks. There needs to be widespread agreement among the people affected before any action is taken.

The consultation process used by health authorities in the north east of England in the early 90s was comprehensive. But we would like to see even more work on public participation. Future debates should include citizens' juries or similar measures so those affected by fluoride can be properly represented.

Other approaches such as information stalls in shopping centres are needed to ensure as many people as possible are aware of any proposals.