

Will fluoridating tap water be unlawful?



Nature's gift of life

A. INTRODUCTION

Water

Water is fundamental to life.

Just like food, shelter and air, water is a basic and necessary requirement for all human life.

Our bodies are at least 60% water and the brain 80% water.

An adult human is recommended to drink at least **2 litres** of water every day (British Nutrition Foundation guidance).

A person can survive several weeks without food but usually only several days without water.

In this context, access to safe, clean and adequate water is absolutely essential.

Fluoride

Fluoride is a naturally occurring element and can be found present in rocks and the soil.

Fluoride is also sometimes naturally present in rivers and ground water.

In addition, fluoride is found in many plants including tea leaves, vegetables and fruit.

Dietary fluoride recommendations

A range of macro minerals such as magnesium and calcium, together with micro minerals including zinc and iron, as well as vitamins such as C and D are all essential for good health.

For example, insufficient iron can lead to iron deficient anaemia. Likewise, a chronic lack of vitamin C was historically linked to scurvy disease. From 1795, the British Royal Navy gave $\frac{3}{4}$ ounce of lemon or lime juice per day to every sailor, earning them the nickname "limeys".

In contrast, fluoride can be described as being of lesser importance and present in the body as a trace mineral.

Nevertheless, it is generally acknowledged that natural fluoride does help promote the strength of bones and teeth.

The EU estimates an Adequate Intake (AI) of fluoride to be **2.9 mg** per day for women and **3.4 mg** per day for men.

For children the dosage is from 0.6 mg to 3.2 mg per day depending on age.

The EU also recommends the maximum safe daily consumption of fluoride to be **7 mg** per day for adults.

Natural products containing fluoride

A cup of *brewed black tea* provides approximately 1.5 mg of **natural** fluoride (nearly half the recommended Adequate Intake of fluoride per day).



Just 2 cups of black tea = adequate daily intake of natural fluoride

Raisins contain concentrated amounts of fluoride.

Oatmeal and baked potatoes are also good sources of natural fluoride as are shellfish such as crab and shrimp.

The current Manx position

At present Manx tap water does **not** have fluoride added to it.

A Freedom of Information reply to us from Manx Utilities dated 24th July 2023 revealed that mains water on the Island does have ferric sulphate (a coagulate) and sodium hypochlorite (commonly known as chlorine and used against bacteria) added to it (the chlorine cost £671,621.00 last year).

Manx mains water also has some heavy metals present in it but the FOI reply confirmed that tap water is regularly monitored for heavy metals such as Cadmium, Nickel, Lead, Mercury, Copper and Aluminium so that they do not exceed recommended levels.

See link below for FOI response from Manx Utilities.

<https://www.ik.im/wp-content/uploads/2023/08/24.07.23-Chemicals-added-to-IOM-drinking-water.pdf>

When the tap is turned on in our office kitchen in Douglas, it is often possible to smell chlorine in the water.

If water is boiled, does this remove chlorine or heavy metals or fluoride?

Chlorine *is* removed by boiling.

Heavy metals are **not** removed by boiling.

Fluoride is **not** removed by boiling.

The Proposal

In April 2023 Tynwald, the Isle of Man Parliament, voted that the Public Health Directorate prepare a *Research Paper* (including recommendations and conclusions) for Tynwald to consider by February 2024 on whether to add fluoride to the Island's mains tap water. However, this would not be natural fluoride.

Specifically, what is under consideration is adding man-made **fluorosilicic acid** to water. This is a pale yellow liquid with a sour odour.

This chemical would be added at the treatment plant stage and involves adding approximately *1 mg of fluorosilicic acid per litre* of pure water (UK Health Security Agency figure).

Given that approximately 10,000 megalitres (a megalitre being a million litres) of mains water is used on the Isle of Man each year, this would potentially entail *hundreds of tonnes* of fluorosilicic acid being added at the treatment plant per annum.

Fluorosilicic Acid

This is a liquid co-product or by-product of phosphate fertiliser manufacture.

Other options for water fluoridation include adding sodium fluoride powder or sodium fluorosilicate which is the sodium salt of fluorosilicic acid.

All of these substances are different to naturally occurring fluoride in that they are man-made chemicals manufactured in industrial plants for specific purposes.

Fluorosilicic acid is highly *corrosive* and is used in a number of manufacturing processes including the treatment of concrete surfaces, in rust removal cleaning products, and also in insecticides and even some rodenticides (rat poison).

Sodium fluoride, fluorosilicic acid and sodium fluorosilicate are all soluble in water and when added to the water supply are diluted to the designated level.

Consequence of adding Fluorosilicic Acid to tap water

If fluorosilicic acid (or indeed sodium fluoride or sodium fluorosilicate) is added to mains water, it means that every home, business, school and hospital would automatically receive fluoridated water.

Only water that is fluoridated would come out of the tap.

There would be no option to use un-fluoridated tap water.

This means drinking water in the house, tap water used for cooking, water given to livestock such as cows, sheep and chickens, water used in the propagation and irrigation of crops, and water used in the production of food stuffs such as soups and drinks including pop and beer would all contain manufactured fluorosilicic acid.

B. ARGUMENTS ADVANCED IN FAVOUR OF FLUORIDATING TAP WATER

Tooth Decay

The main argument put forward for fluoridating tap water is that it helps prevent tooth decay in children.

Research carried out by the University of Manchester's School of Dentistry, called the "**CATFISH Study**" (published on 14.11.2022) assessed the dental health of children over a 6 year period in Cumbria.

One group of children, in West Cumbria, consumed man-made fluoridated water.

Another group of children, in the rest of Cumbria, used water free of man-made fluoride.

The data indicated that there was a modest reduction of 4% in the incidence of dental caries (tooth decay, fillings or missing teeth) in younger children using the fluoridated water.

However, the researchers pointed to the role of *other factors* such as health inequality, social disadvantages, diet, brushing habits and dental attendance.

In Australia, the **National Health and Medical Research Council** published research on 24.08.2016, which reviewed the evidence on the health effects of water fluoridation.

The research concluded that, "*water fluoridation at levels comparable to those used in Australia reduces the incidence of dental caries in the deciduous and permanent teeth of children by approximately 35%, compared to un-fluoridated water*".

The **York Review** was a systematic review of public water fluoridation published on 11.05.2002. The available evidence suggested that the difference in the number of children found to be caries free in fluoridated and non-fluoridated areas averaged 14.6%.

In simple terms, it is suggested that fluoridated water creates low levels of fluoride in the mouth's saliva, which reduces the rate of tooth enamel demineralisation.

The benefit is not derived from the act of brushing teeth with fluoridated water; rather the benefit derives from the act of drinking throughout the day which results in fluoridated water every time coming into contact with the teeth.

It should be stressed that the above research refers to the benefits to young **children**, not adults. This is because the enamel of baby teeth in children is thinner than the enamel of permanent teeth, making it easier for bacteria and acid to harm the teeth and cause cavities.

Children lose baby teeth periodically until around the age **10 – 12** when the permanent adult teeth are in place. There appears to be little if any benefit of fluoridated water to children *after* such age.

Those in favour of fluoridating tap water also submit that there is a cost benefit to the proposal namely that the financial cost of fluoridating water is lower than the financial cost of dental treatments for children with tooth decay.

C. ARGUMENTS AGAINST FLUORIDATING TAP WATER

A wide ranging Cochrane Review (Cochrane is a global network of independent researchers) of 155 international studies on water fluoridation to prevent tooth decay published on 18.06.2015 found that, "*Within the before and after studies we were looking for, we did not find any benefits of fluoridated water for adults*".

In other words, whereas there may be evidence that fluoridated water reduces dental decay in children, importantly there was no evidence that it reduced dental decay in adults.

In addition, this Cochrane Review stated, "*We found insufficient information to determine whether fluoridation reduces differences in tooth decay levels between children from poorer and more affluent backgrounds*".

Dosage Control

Fluoridation of tap water in effect means that there is no control over how much man-made fluoride is consumed by individuals. Quite simply, **the more tap water a person drinks, the more fluoride they will consume.**

The real concern is the cumulative consumption, day after day, month after month, year after year, of fluoride from all direct and indirect sources such as water, drinks and foodstuffs.

For example, in hot sunny weather a person undertaking sporting activities may well drink much more water than when indoors in the winter.

A significant study by SM Levy and JJ Warren published in 2001 ("*Patterns of fluoride intake from birth to 36 months*") referred to research in Iowa, USA and considered the impact on very young children of consuming fluoridated water.

The distressing research found that **90% of 3 month** olds consumed over their recommended upper limits, with some babies ingesting *over 6 mg* of fluoride daily from tap water (via baby milk formula prepared with fluoridated mains tap water), far in excess of the daily fluoride intake recommended as safe by the World Health Organisation.

Perhaps unsurprisingly, the Fluoride Action Network in the USA comments that, "*the single most important way to protect babies from fluoride exposure is to breast feed. An exclusively breast-fed baby will receive virtually no fluoride. In contrast, fluoridated water contains up to 300 times more fluoride than breast milk and so should not be used to make baby formula (use bottled water instead, if unable to breast feed)*".

Dental Fluorosis

This is an upsetting condition by which unsightly white patches appear on tooth enamel.



Too embarrassed to smile?

A number of studies have found that fluoridated water contributes towards dental fluorosis.

For example, the US Centre for Disease Control published research (The National Health and Nutrition Experimentation Survey 1999-2004) which examined the cumulative effect of consuming fluoridated water and established an increased risk of developing fluorosis. The startling results showed that **40.6%** of 12-15 year olds in the USA were affected by dental fluorosis (perhaps explained by the fact that most of USA population consume fluoridated tap water – see further below).

Cancer

A study by the US National Toxicology Programme in 1990 found some evidence of an association between fluoride and osteosarcoma (bone cancer) in male rats given water high in fluoride for 2 years.

A Harvard School of Public Health study (of persons under 20 years old) by E. Bassin, R. Davis and M. Mittleman published in 2006 found an association between osteosarcoma and fluoride in drinking water for boys but not girls.

On the other hand, an extensive review of cancer deaths by Hoover et al in 1991 for the US National Cancer Institute found no relationship between osteosarcoma and fluoridation.

IQ

A meta-analysis carried out by the **China Medical University** in Shenyang published on 20th July 2012 examined 27 studies examining fluoride in neurotoxicity. The worrying results found strong indications that fluoride adversely affects cognitive development in children. All but one of the 27 studies suggested

that high fluoride content in tap water *negatively affects* cognitive development. Significantly, the average loss of IQ was reported as being equivalent to **seven (7) IQ points**.

Thyroid

A persuasive study by Indian researchers Susheela et al publicised in May 2005 found that 47% of children living in a New Delhi neighbourhood with average mains water fluoride levels of 4.37ppm showed clear evidence of clinical **hypothyroidism** (underactive thyroid) attributable to fluoride.

The thyroid is a gland in the neck, below the Adam's apple, which secretes three different hormones important for bodily functioning.

An underactive thyroid, essentially when the thyroid gland does not make enough thyroid hormones, can cause a range of health problems including tiredness, irregular periods, slowed heart rate, weight gain and constipation.

Liver & Kidney

Research carried out by the Mount Sinai Hospital, New York published on 8th August 2019 considered the tap water intake of 1,983 adolescents.

This important research found exposure to fluoridated tap water may contribute to complex changes and *reduction in liver and kidney function*. Potential dysfunction included renal system damage and impaired protein metabolism. This was of particular concern given that a child's body only excretes 45% of fluoride in urine via the kidneys, whereas an adult's body clears fluoride at the rate of 60%.

It was also noted that the kidneys accumulate more fluoride than any other organ in the body.

Cognitive Development

B. Gopu et al published a study in the International Journal of Environmental Research and Public Health on 20.12.2022 entitled, "*The relationship between fluoride exposure and cognitive outcomes from gestation to adult – a systematic review*". This wide ranging study considered the effect of high levels of fluoride on cognitive development of persons under the age of 18.

The evidence from this systematic review of 46 international studies suggested that exposure to fluoride at a level of any more than 2 mg/litre in drinking water can result in impaired cognitive outcomes among children including in relation to memory, psychomotor development and visual motor ability.

Cognitive development issues are also central to current civil court proceedings in the USA involving *Food & Water Watch et al v US Environmental Protection Agency*. See further below.

Baths and Showers

If mains water is fluoridated this means that every time someone has a shower or a bath they will be sprinkled by or immersed in water containing fluorosilicic acid.

Is this a problem?

The skin absorbs around **30%** of the water it comes into contact with during a bath or shower.

Therefore, a person having a shower or a bath in fluoridated water may absorb fluoride through the skin, contributing to the daily cumulative total.

As to how much fluoride will be absorbed and whether it will exceed the daily recommended intake, this will obviously depend on a range of factors including how long the person is in the shower or bath, how warm the water is (hot water opens the skin pores and allows more absorption) and also how much fluoride is consumed from other sources.

Again, the issue of unregulated or uncontrolled dosage becomes pertinent.

Sensitivity to chemicals

This issue of showering and bathing in fluoridated water is particularly relevant to those with hypersensitivities and certain skin disorders.

Consider the emotionally moving case of **Mrs Audrey Adams** and her autistic son Kyle in the USA.

Essentially, Mrs Adams discovered that if her son showered in man-made fluoridated water he had severe headaches whereas if showers were stopped entirely and he was washed with heated bottled water he did not have any headaches.

See hyperlink below "Kyle's Fluoride Story".

<https://www.ik.im/wp-content/uploads/2024/02/Kyles-Fluoride-Story.pdf>

Livestock

If mains water is fluoridated it will be consumed by farm animals.

A dairy cow consumes in the range 60-120 litres of water per day. This water will be utilised in the cow's body to produce milk (approximately 20-30 litres per cow per day).

There are several thousand dairy cows in the Isle of Man (there were 3,351 calves born to dairy cow mothers in the year 2022). These cows produce 26 million litres of milk per annum on the Island.

This milk is not only drunk but also used in the making of dairy produce such as cheese, butter, cream and yoghurt.

If cows drink fluoridated water, will this show up in their milk?

Interesting research by P. Gupta and K. Meena dated 1st May 2015 studied concentrations of fluoride in cow's milk in the Mathura district of Northern India. The study found that with the increase in fluoride concentration in drinking water there was a clear increase in the concentration of fluoride in the cows' and buffalos' milk.

Likewise, egg-laying hens consume on average ½ litre of water per day. Such water will be utilised in the production of eggs, whether free-range or battery or organic. If the hens were to drink fluoridated mains water, would fluoride manifest itself in the eggs? There is no available research on this point.

Horses & Ponies

A medium sized horse will consume approximately 20-30 litres of water per day. A working horse can consume 40-60 litres of water per day in hot weather.

There are hundreds of horses and ponies kept on the Isle of Man. Unless in a field with river access, all of these horses and ponies will drink from water troughs supplied by mains water.

Concerning research carried out by S. Choubisa of the University of Rajasthan, India published last year on 20.03.2023, found that chronic exposure to fluoridated water induced pernicious consequences in horses and donkeys such as lameness, colic and sterility.

In effect, the horses were being poisoned by fluoride.



Severe hoof deformity caused by prolonged fluoride poisoning

Additionally, disturbing research by C. Justus & L. Krook of Cornell University, New York, published in March 2006, entitled "*Fluoride poisoning of horses from artificially fluoridated drinking water*", examined horses in Colorado, USA. The study found as follows:

"On a farm in Pagosa Springs, Colorado, Quarter (an American breed) horses consuming artificially fluoridated water (up to 1.3 ppm F) for extended periods of time developed classical symptoms of chronic fluoride intoxication including dental fluorosis, crooked legs, hyperostosis and enostosis, hoof deformities and microscopic evidence of reduced bone resorption. These symptoms began to appear about two years after fluoridation started in 1985 and gradually became more severe".

However, the researchers also tellingly commented that, "**Interestingly, after the termination of fluoridation in drinking water, some health complaints like colic, stiffness, lameness and other reversible manifestations of fluorosis have been found to gradually disappear**".

Dogs

31% of homes in the UK have a pet dog.

A medium sized dog such as a spaniel drinks approximately 1 litre of water a day.

The *Association of Canine Water Therapy* recommends never giving any fluoridated water to dogs.

In addition, some vets warn owners about giving their dogs fluoridated water to drink. Why is this?

The genuine concern is that long-term consumption of fluoridated water can cause a build-up of *fluoride toxicity* in dogs leading to a range of health issues such as skeletal fluorosis (similar to arthritic symptoms), gastroenteritis and potentially bone cancer (osteosarcoma).

For example, The Veterinary Manual by Dr Barry Blakeley of the University of Saskatchewan, Canada includes a chapter on fluoride poisoning in animals.

This professional veterinary text refers to the potential adverse effect of fluoride including the risk of osteosarcoma.

The manual states, "*Disease resulting from chronic exposure to high concentrations of fluoride compounds generally does not respond favourably to treatment*".

In the USA, intriguing research by Mueller and Fuchs published on 27th January 2007 showed that more than 10,000 osteosarcoma cases occur in dogs each year, which is 8 times greater than the US human population.

Given that 70% of homes in the USA receive fluoridated tap water, could this be the cause?

Food and drink

Many foodstuffs are prepared with tap water. Soups, stews and sauces all contain varying amounts of tap water. If mains water is fluoridated these dishes will obviously contain fluoridated water, which will contribute towards the recommended daily intake of fluoride.

Again, the issue of unmonitored or uncontrolled intake is relevant.

Fluoridated water is already used in the production of some drinks such as beer and pop.

For instance, the mains water in Newcastle and Birmingham is fluoridated, which means that if any breweries in those UK cities use tap water to make their beers, such beverages are very likely to contain man-made fluoride.

Breweries such as *The Two Towers Brewery Limited*, *Birmingham Brewing Company* and *Ostlers Ales Limited* all produce beers in Birmingham. However, there is no legal requirement to mention that the ingredients contain fluoridated water.



NewKie Brown: "Cheers, what you don't know can't hurt you!"

Similarly, anyone buying a cup of coffee at *Starbucks* in Crewe railway station is likely to be unknowingly consuming a drink made with fluoridated tap water.

Pregnancy

Influential recent research carried out by L. Goyal et al published in the Journal of Family Medicine and Primary Care on 30.06.2020 assessed fluoride levels during pregnancy and its association with early adverse pregnancy outcomes.

Six hundred pregnant women in the Faridkot District of Punjab, North India were studied in order to examine the association between *elevated urinary fluoride* levels during early pregnancy and maternal anaemia and adverse foetal outcomes.

Alarming, **402** of the 600 women were found to be anaemic and **81** had pregnancy complications such as stillbirth.

This disquieting research concluded that, "***Excess fluoride intake during early pregnancy may lead to increased prevalence and severity of maternal anaemia as well as adverse foetal outcomes in the form of miscarriages, abortions, intrauterine deaths, and congenital malformations***".



There is a special duty of care to the unborn

D. WHICH COUNTRIES IN THE WORLD HAVE/DO NOT HAVE FLUORIDATED TAP WATER

Only **3%** of European citizens currently receive artificially fluoridated water.

Water is **not** fluoridated in the majority of European countries including Germany, France, the Netherlands, Italy, Austria, Sweden and Norway.

In the UK, water is not fluoridated in Northern Ireland, Scotland or Wales.

The Channel Islands of Jersey and Guernsey do not add fluoride to mains water.

Only parts of England receive fluoridated water. These include Birmingham, Crewe, West Cumbria and Newcastle.

Aside from certain parts of England, the only European countries that fluoridate water are parts of Spain, Serbia and most of the Republic of Ireland.

However, in the USA, approximately 70% of residents receive fluoridated water, including in cities such as New York, Chicago and San Francisco.

E. CAN MAN-MADE FLUORIDE BE REMOVED FROM TAP WATER?

Man-made fluoride (such as fluorosilicic acid) *cannot* be removed by normal water filters such as a Britta Filter or under sink units designed to remove chlorine and heavy metals.

As previously mentioned, fluoride cannot be removed by boiling.

A *special filter* is required for the removal of fluoride.

These filters are typically known as either **Reverse Osmosis Filters** or **Deionisation Filters**.

For example, a fluoride filter kit from the *Fresh Water Filter Company* is currently priced at £281.25.

The replacement filter cartridge pack costs £66.42 and typically needs replacing every 6 months.

A Reverse Osmosis water filter from *Osmiosolutions Ltd* is currently priced at £445.00.

Replacement fluoride removal filters for this device cost £45.88 and typically need replacing every six months.

Both these units are usually fitted under the sink but will only remove fluoride from the kitchen tap water, not other tap water in the house such as in the bathroom.

In addition, a plumber would be needed to install any such device (approximately £80.00 - £100.00), unless the counter top version is available.



An under-sink fluoride filter: but why should residents have to buy one?

Consumer Choice

Clearly, it would be an option to buy bottled water for drinking as an alternative to purchasing a specialist fluoride removal filter.

However, bottled water is relatively expensive with *Buxton* natural mineral water for example costing £4.15 per 6 x 1.5 L pack from Tesco.

This means that it would typically cost on average **£10.00 per week** to purchase bottled water for drinking just for one adult (based on an adult consuming 2 litres per day or 14 litres of water per week).

Obviously, this excludes all water used for cooking, washing and cleaning teeth.

Is it financially realistic to expect a household to purchase and run a specialist fluoride filter or alternatively to purchase all its drinking water and also the water necessary for cooking and washing?

Moreover, household Rates levied by local authorities in the Isle of Man include payment for the provision of water. Unlike in the UK, water is not subject to payment by meter.

A proportion of every Manx household Rates bill is for water. For example, a typical terraced house in Douglas had a Rates water bill for 2023-2024 of £350.00 (in addition to the property and sewage Rates).

Fitting a specialist fluoride filter or purchasing bottled water represents a financial penalty and would be in effect **paying twice for the same thing**; paying once on the Rates then paying again for a fluoride filter or bottled water. Is this fair?

No doubt, the purchase of thousands and thousands of extra plastic bottles of water will also eventually lead to more environmental harm and the seepage of trillions of nanoparticles of plastic into rivers and oceans.

F. ALTERNATIVES

If the principal aim of adding man-made fluoride to tap water is to reduce the incidence of tooth decay in young children, can this be achieved in different, more proportionate ways?

Consider the following strategies:-

- i) Providing education classes for parents and children on appropriate tooth brushing such as frequency, duration and correct techniques.
- ii) Similar education classes on dietary choices including reducing consumption of sweets, fizzy drinks and processed food.
- iii) Involving schoolteachers and child nursery staff in dental hygiene programmes.

These strategies were incorporated within the commendable **Childsmile Programme**, which began in Scotland in 2001 and is still running today.

This Programme encourages nursery children to brush their teeth, involves staff at all Scottish nurseries offering free supervised tooth brushing every day, helps parents establish a healthy diet from the earliest stage and in addition to the free distribution of toothpaste and toothbrushes, oral health improvement packs are also distributed to every children in Scotland on at least 6 occasions during their first 5 years.

The Programme even has its own website, see link below.

<https://www.childsmile.nhs.scot/>

In 2013 Scottish Public Health Minister, Michael Matheson stated, "*By this simple measure, NHS costs associated with the dental disease of 5 year old children have decreased dramatically*". The scheme costs about £1.8 million a year but saves more than £6 million per year in dental charges. Glasgow researchers found that the scheme had reduced the overall cost of treating dental disease in 5 year olds by more than 50% between 2001 and 2010.

Following the example of **Childsmile**, toothbrushes and toothpaste could be offered free of charge to all children under the age of 12 in the Isle of Man.

Fluoride tablets could also be offered free of charge. Fluoride tablets or lozenges typically contain natural fluoride (also known as fluorine) plus other ingredients such as minerals and inert materials.

Fluoride tablets do not contain fluorosilicic acid or any of the other man-made chemicals, which are added to fluoridated water.

A Cochrane Review dated 07.12.11 assessed fluoride supplements (tablets, drops, lozenges and chewing gum) for preventing tooth decay in children.

The Review indicated that in schoolchildren aged 6 years and over, fluoride supplements had a preventative effect on dental decay in permanent teeth (a 24% reduction in missing or decayed teeth). No conclusion could be reached about the effect of fluoride supplements in preventing tooth decay in children less than 6 years of age.

By using the above alternative methods, the issue of tooth decay in children could be satisfactorily addressed in a less intrusive way, without forcing everyone to drink fluoridated water.

Personal choice would be retained but the principal goal still achieved.

G. LEGAL CONSIDERATIONS

As mentioned above, tap water in Scotland, Northern Ireland and Wales is not fluoridated, although some parts of England do receive fluoridated water.

Decisions on whether to fluoridate water in England were previously governed by the Water Industry Act 1991, which gave local authorities the responsibility to propose and implement fluoridation schemes.

However, under the Health & Care Act 2022, decisions in England on fluoridation are now made by the Secretary of State for Health and Social Care, following consultation with local authorities and water companies.

In the Isle of Man, under the Water Act 1991 S.13, "*The authority shall provide in its mains and communication pipes a supply of wholesome water sufficient for the domestic purposes or food production purposes of all owners and occupiers of premises within the compulsory area of supply who are under this Act entitled to demand a supply for those purposes*".



Will fluoridated water be wholesome, as required by Manx law?

If the Isle of Man Government decides to fluoridate tap water, under what power will this be?

Will it be under delegated powers of the Health Minister or will primary legislation such a new Water or Health Act be required?

If the decision is made under delegated ministerial powers, any such decision may be subject to legal challenge by way of Judicial Review.

Petition of Doleance

In the Isle of Man, Judicial Review is referred to as a Petition of Doleance.

This is where the Court is requested to review the decision making process of a public body or official.

The Court will consider matters such as whether the decision was made in excess of legal powers or whether there was an error in law or failure to take into account relevant considerations or a breach of natural justice or a failure to follow proper procedure or whether the decision maker took into account irrelevant matters or whether the decision was irrational (a decision that no reasonable or sensible decision maker could make – so called “Wednesbury Unreasonableness”).

If a Petition of Doleance is successful, the Court can make a range of orders including an order quashing the original decision. If the High Court makes such an order quashing the original decision it may refer the matter back to the relevant public authority or minister for reconsideration (e.g. a decision to fluoridate water).

Other Options

Negligence is where there is a breach of a duty of care, which causes loss or damage to an individual. It may be argued that the Manx Government’s legal

obligation under S.13 Water Act 1991 to provide **wholesome** water to users entails a public duty of care to consumers.

If consumption of fluoridated water subsequently resulted in an illness or injury to a person (or indeed livestock), it may be possible to pursue Court proceedings using negligence as a cause of action. Causation would need to be proved which would inevitably involve expert evidence and reference to the extensive medical research in this area.

Another option would be to consider legal action for breach of human rights.

See below for further discussion on human rights.

Primary legislation

If a new Act of Tynwald is proposed with regard to fluoridating Manx tap water, any such bill must be *compatible* with the European Convention on Human Rights.

The Human Rights Act 2001 incorporates the European Convention on Human Rights into Manx Law.

By virtue of the Human Rights Act 2001 S.3, Acts and subordinate legislation must be read and given effect in a way which is *compatible* with ECHR rights.

Under Human Rights Act 2001 S.4, the Court has power to make a declaration that a legislative provision is incompatible with a Convention Right and under S.6 it is unlawful for a public authority to act in a way which is incompatible with a Convention Right.

H. HUMAN RIGHTS

How might a Bill giving power to fluoridate Manx tap water (or a ministerial decision to that effect) affect rights guaranteed under the European Convention on Human Rights or by the United Nations?

Right to Water

Access to safe drinking water is an internationally recognised human right, derived from the right to an adequate standard of living under Article 11 (1) of the 1966 International Covenant on Economic, Social and Cultural Rights. Under this Article, Member States "*recognised the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions*".

In November 2002, the United Nations interpreted this 1966 International Covenant on Economic, Social and Cultural Rights as confirming the right to water in international law.

The United Nations stated that, "*The human right to water is indispensable for leading a life in human dignity. It is a prerequisite for the realisation of other human rights*". The UN committee continued by stating, "*The human right to water entitles everyone to sufficient, safe, physically accessible and affordable water for personal and domestic uses*".

In July 2010 the United Nations General Assembly adopted the following historic resolution recognising, "*The right to safe and clean drinking water and sanitation is a human right that is **essential for the full enjoyment of life and all human rights***" (Resolution 64/292).

Accordingly, there is an internationally recognised human right to safe and adequate water.

The addition of man-made fluoride to tap water could arguably be claimed to breach this fundamental human right by introducing a potentially hazardous substance to mains water.

European Convention on Human Rights (ECHR)

A person who claims that a public authority has acted in a way which is unlawful and incompatible with human rights, can commence appropriate action in Court and rely on Convention Rights in such legal proceedings.

Such legal proceedings must be brought within 1 year beginning with the date on which the action complained of took place and if successful, the Court has power to award damages.

Article 8 (Right to respect for private and family life):

Under **Article 8 (1)**, "*Everyone has the right to respect for his private and family life, his home and his correspondence*" and **Article 8 (2)**, "*There shall be no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary in a democratic society in the interests of national security, public safety or the economic well-being of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others*".

Essentially, this means that everyone has the right to respect for his or her home, private and family life.

This will potentially include mains water into homes and the choice of whether tap water into the dwelling is fluoridated.

Consequently, Article 8 may well be engaged by a decision to fluoridate water but the key question will be whether the right is *unreasonably* interfered with.

General Principles

Some ECHR rights are defined by the Court as being **absolute**. This means that they can never be interfered with in any circumstances. Article 3 (no one shall be subjected to torture or to inhuman or degrading treatment or punishment) is an example of an absolute right.

Other rights are described as being **qualified** which means they can be lawfully interfered with. Article 8 is a qualified right because the State is permitted to interfere with the right to private life on a number of grounds including for the protection of health.

The State is given what is referred to as a *margin of appreciation*. This is the leeway granted to States in recognition of the cultural and political differences between them. With regard to water fluoridation, this may mean that some States decide to add fluoride to tap water whereas other States adopt a different health policy to achieve exactly the same goal.

Any interference by the State with qualified rights such as Article 8 must be necessary and proportionate.

In the authoritative case of **Bank Mellat v HM Treasury 2013**, the Court, which included the distinguished judge Lord Sumption, held that when testing the proportionality of restrictions on fundamental rights, the Court should ask the following questions:-

- i) Whether the objective pursued is sufficiently important to justify limitation of a fundamental right?
- ii) Whether the measure is rationally connected to the objective?
- iii) Whether a **less intrusive** measure could have been adopted?
- iv) Whether fair balance has been struck between individual rights and the interests of the community?

Article 8 examples

In the high profile case of **Diane Pretty v UK 2002**, Mrs Pretty was sadly suffering from a motor neurone disease and sincerely wished to die. As she was paralysed this required the assistance of her husband. UK law prohibited this.

Mrs Pretty applied to the European Court of Human Rights arguing that her rights had been violated including her Article 8 right to respect for private and family life.

The Court held that there was no violation of rights. With regard to the right to respect for private life under Article 8, the Court held that preventing Mrs Pretty from exercising her choice to avoid a distressing end to life would constitute an interference with her Article 8 right. However, the Court held that the interference by the State was necessary. The Court considered that the interference was necessary in a democratic society for the protection of the rights of others and therefore there was no violation of Mrs Pretty's Article 8 rights.

In the case of **Bensaid v UK 2001**, Mr Bensaid was an Algerian immigrant who brought legal action against the UK regarding a proposed Deportation Order back to Algeria, North Africa.

Mr Bensaid argued that his removal to Algeria would have a severely damaging effect on his physical and mental wellbeing. Whilst the Court accepted that adverse effects on physical and moral integrity could constitute a violation of Article 8 it held that the deportation was justified for the legitimate ends of protecting the UK's economic wellbeing and preventing disorder and crime.

(Applying this case in the context of present issue of water fluoridated by the State, any significant adverse effects on physical bodily integrity could be argued to violate Article 8).

In another Court action, that of **Y. E. v Turkey 2004**, the complainant was a Turkish citizen who alleged that his wife's Article 8 right to private life was violated by a forced gynaecological examination carried out in Police Custody in the city of Bingol, Turkey.

In this highly influential case, the European Court of Human Rights in Strasbourg held that there had been a violation of Article 8 and awarded damages and costs against the Turkish Government. The Court held that, "Any interference with a person's physical integrity must be prescribed by law and **requires the consent of that person**".

In other words, a *compulsory medical intervention, even of minor importance, constitutes an interference with Article 8 rights.*

IS FLUORIDATED WATER A MEDICINAL PRODUCT?

In the important case of **Ter Voort 1992**, the European Court of Justice (ECJ) ruled that, "*If a product is represented to the public so that any averagely well informed person gains the impression that the substance might have a beneficial effect on some medical condition, then that substance is a medicinal product under the terms of this directive*".

Additionally, the UK Medicines & Healthcare products Regulatory Agency (MHRA) refers to Article 1 of Directive 2001/83 EC, which includes precisely defining a medicinal product as, "**any substance or combination of substances presented as having properties for treating or preventing disease in human beings**" (this is called the presentational limb of the definition, there also being a second limb called the functional limb).

Those who promote fluoridation of water expressly present that its main aim is to help *prevent tooth decay*, particularly in children.

In other words, fluoridation is a public health intervention with fluoride being used as a form of **preventative medicine**.

As stated above, any medical intervention requires informed patient consent.

Compulsory fluoridation of water may therefore be susceptible to legal challenge under Article 8 ECHR on the basis of it being a **forced medication** without patient consent.

This crucial issue of voluntary and informed patient consent is discussed further below as an ethical consideration.

Equality Act

The UK Equality Act 2010 in effect combines the Race Relations Act, the Equal Pay Act and the Disability Discrimination Act with other considerations to create one single overarching anti-discrimination law. The IOM Equality Act 2017 largely mirrors this.

Under the Equality Act, there are *nine* **protected characteristics** which are age, disability, gender reassignment, marriage and civil partnerships, pregnancy and maternity, race, religion or belief, sex and sexual orientation.

Direct discrimination is where a person is treated worse than another person because of a protected characteristic.

Indirect discrimination is where there is a policy that applies to everyone but disadvantages a particular group of people who share a protected characteristic.

In light of the scientific research referred to above, (for example with regard to pregnancy and infants) it could be argued that fluoridation of tap water will harm and **disproportionally affect pregnant women and babies**; persons with these protected characteristics thereby being *indirectly discriminated against*.

I. ETHICAL CONSIDERATIONS

The **Nuremberg Code 1947** is a set of research ethics covering medical interventions on humans. It arose from the Nuremberg trials in 1945 at which members of the German Nazi Party were tried for war crimes committed during World War II.

In response to such barbarity, the **Nuremberg Code** sets out 10 principles which must be followed by those carrying out medical interventions. The First Principle of the Nuremberg Code 1947 states, "*The voluntary consent of the human subject is absolutely essential. This means that the person involved should have legal capacity to give consent; should be so situated as to be able to exercise free power of choice, without the intervention of any element of force, fraud, deceit, duress, overreaching, or other ulterior form of constraint or coercion; and should have sufficient knowledge and comprehension of the elements of the subject matter involved as to enable him to make an understanding and enlightened decision. This latter element requires that before the acceptance of an affirmative decision by the experimental subject there should be made known to him the nature, duration and purpose of the experiment; the method and means by which it is to be conducted; all inconveniences and hazards reasonably to be expected; and the effects upon his health or person which may possibly come from his participation in the experiment.*

The duty and responsibility of ascertaining the quality of the consent rests upon each individual who initiates, directs or engages in the experiment. It is a personal duty and responsibility which may not be delegated to another with impunity".

Similarly, the Council of Europe Convention on Human Rights and Biomedicine (The Oviedo Convention 1997) sets out a framework of patients' rights with regard to biomedical research, genetics and transplantation.

The Convention (which takes its name from the Spanish city of Oviedo) is based on the fundamental connection between human rights and biomedicine and gives primacy to the dignity of human beings.

Article 5 of the Convention states, "*An intervention in the health field may only be carried out after the person concerned has given free and informed consent to it. This person shall beforehand be given appropriate information as to the purpose and the nature of the intervention as well as its consequences and risks*".

Accordingly, both from a human rights perspective and from a medical ethics prospective, ***voluntary and informed consent of the person is imperative for any medical intervention.***

Those who oppose the fluoridation of water argue that the compulsory addition of man-made fluoride to tap water is a medical intervention done without their personal consent. Consequently, it is unethical and illegal.

Put bluntly, opponents of fluoridation object to the prospect of being **force-fed** a medication without their consent.

J. RISK ASSESSMENTS

It is submitted that any proposal for the compulsory addition of man-made fluoride to tap water should be subject to proper *risk assessments* and comprehensive *environmental impact studies*.

As stated above, there is substantial research with regard to the potential adverse side effects of fluoridated water on children's cognitive development, a range of adult bodily issues, pregnant women, livestock and domestic pets.

But what about the natural environment?

UNESCO Biosphere

The Isle of Man was granted UNESCO **Biosphere** status in 2016.

Unusually, it was granted to the whole Island nation, not just to a region within the Island.

This award recognizes the Island's important nature, wildlife and heritage and aims to safeguard and improve the Isle of Man's special land and sea environments.

At present, raw human sewage regrettably continues to be discharged into Peel and Laxey bays.

A Freedom of Information reply to us from Manx Utilities dated 3rd February 2022 provided specific data in relation to the untreated sewage discharged.

The FOI reply revealed that approximately **2,900 cubic metres** (2.9 million litres) of raw effluent is being pumped into Peel Bay each day. It should also be noted that this waste is not just human excrement but also dangerous household chemicals and traces of medicine.

An Olympic sized swimming pool has a capacity of 2,500 cubic metres.

Therefore, a disgusting quantity of untreated human waste equivalent to slightly more than the size of an *Olympic swimming pool* is being discharged into the bay every day, 365 days a year.

More alarmingly, the FOI reply indicates that up to 4,000 cubic metres (4 million litres) of raw sewage a day is being pumped into Laxey Bay.

If tap water is fluoridated, this will inevitably also end up in the sea, with unknown consequences for marine life.

One of the Island's most important fisheries stocks is Queen Scallops (locally known as queenies). Last year, over 1,000 tonnes of queenies were caught within Isle of Man territorial waters, with much exported to France and Spain.

Approximately 30 Manx fishing vessels are engaged in the industry and an indication of how important scallops are to the Isle of Man is the annual **Queenie Festival**, held in Port St. Mary village every August.

How will fluoridated water discharged into the sea affect this valuable species and other important catch such as crabs and lobster?

There is no available research on this issue of potentially polluting our cherished coastal seas with man-made fluoride.

It should also be noted that there is no evidence from the UK or elsewhere that treated human sewage removes fluoride.

The *Meary Veg Treatment Facility* in Santon was opened in 2004 and now treats approximately 10 billion litres of sewage each year from sewage networks connected to Douglas, Onchan, Braddan and the south of the Isle of Man.

Treated liquid from *Meary Veg* is discharged into the Irish Sea, off Santon Head.

In addition, approximately 1,000 tonnes of dry sludge pellets are produced annually at *Meary Veg*, which are taken to the Energy From Waste Plant (Incinerator) outside Douglas to be burnt.

A number of regional sewage facilities also exist in locations such as Jurby and Kirk Michael.

Sewage from Ramsey Town is pumped to the treatment works at Balladoole near the Dog Mills and after treatment, it returns under gravity to the Vollan, at the end of Ramsey's Mooragh Promenade, where it is discharged into the Irish Sea.

Ultimately, if mains tap water is fluoridated, the treated liquid residue containing man-made fluoride from all those treatment plants will still be discharged into the Irish Sea.

Is this consistent with UNESCO Biosphere status and preserving the Island's beautiful environments?

Basking Sharks

Basking sharks migrate to seas around the Island from May to August each year.

At least 90 Basking sharks are thought to visit the Islands' waters annually.

Basking sharks are listed as an *endangered species* by the International Union for Conservation of Nature.

These majestic sea creatures eat plankton and can reach up to 8 metres in length.

They are filter feeders moving slowly along the surface of the sea with open mouths filtering a staggering 2,000 tonnes of water per hour (nearly an entire Olympic sized swimming pool).



Will these Ocean giants be harmed by fluoridated water in sewage outfalls?

No research is currently available on how man-made fluoride such as fluorosilicic acid may act as a marine pollutant to these rare fish.

Visiting wildlife including hedgehogs and garden birds

A range of prized wildlife including foxes, badgers, hedgehogs and garden birds visits domestic homes in the UK.

Hedgehogs eat a range of food including worms, slugs, berries and nuts.

They also drink every day from ponds, puddles and shallow streams.

During dry periods, many people kindly put out bowls of water in the garden for thirsty hedgehogs to drink.

There is no available research or postmodern examination data on the effect of fluorosilicic acid in tap water on hedgehog health (for example in Birmingham or Newcastle).



These shy, nocturnal visitors need pure water

Tap water already contains chlorine and heavy metals and it may well be that adding another chemical in the form of fluorosilicic acid would represent a further *contaminant* for vulnerable hedgehogs to deal with.

Similarly, many caring homeowners fill birdbaths with tap water for treasured garden birds such as Robins, Song Thrushes and Goldfinches to drink from.

Access to this drinking water is particularly appreciated in towns and cities during prolonged dry spells or where temperatures are below freezing and natural sources of available rainwater become limited.

Again, there is no published research on the effect of fluoridated tap water on small garden birds, especially House Sparrows whose numbers have declined by nearly **60%** in the UK since 1979 according to the Royal Society for the Protection of Birds (RSPB).



SOS = Save Our Sparrows!

However, as a matter of common sense, man-made chemicals such as fluorosilicic acid are likely to be an unwelcome **pollutant** and biological stress factor within the tiny anatomy of garden birds.

Greenhouse crops and vegetable production

UK farmers produce many commercial arable crops such as wheat, potatoes and sugar beet, without any irrigation, relying entirely on natural rainfall.

However, other crops such as lettuce, tomatoes and cucumber grown in greenhouses and polytunnels rely exclusively on being irrigated with mains tap water.

Seedlings and young plants both absorb material through their roots and also their leaves.

For example, *MaxiCrop* seaweed extract is sometimes sprayed on to the leaves of tomato plants as a foliar feed.

What would be the effect on growing plants if irrigated with fluoridated water?

Would the fluoride be taken in by the plant through its leaves or drawn up through its roots?

Perhaps more importantly, would the absorbed man-made fluoride be evident in the final product?

For instance, consider a greenhouse tomato plant growing in soil or a growbag.

Would man-made fluoride be present in the final tomato fruit?

Similar concerns apply in the domestic home garden because some residents grow salad crops in the greenhouse during the summer or vegetables in a plot outdoors. Often such small-scale produced crops rely on being irrigated during the summer by hosepipe or watering can.

Intriguing research by L. Dagnow and F. Zewge of the University of Addis Ababa, Ethiopia published in December 2017 considered the fluoride content of leafy vegetables produced with irrigated water and soil with varying levels of natural fluoride.

The farmland in the **Rift Valley**, Ethiopia, was irrigated with water higher in natural fluoride than the farmland in non-Rift Valley areas.

Interestingly, significantly higher fluoride levels were detected and recorded within the fruit and vegetable produce (including lettuce, tomatoes and Abyssinian

cabbage) cultivated in the *Rift Valley* farms, compared with the non-Rift Valley farms.

By reasonable inference, plants irrigated with man-made fluoridated water may also be expected to contain *higher* levels of fluoride than if irrigated in non-fluoridated water.

Environmental impact assessment

In light of the environmental issues raised above including the Island's **Biosphere** status, sewage sea-outfall and potential consequences on Basking sharks, garden birds and crop production, it is submitted that **seasonal and long-term environmental impact assessments** ought prudently to be undertaken before any decision is made on whether fluorosilicic acid should be added to mains tap water.

Such professional scientific studies may be able to identify and explore the ramifications of a water fluoridation policy, taking into account the broadest range of environmental outcomes of industrial pollution including on migratory species, special ecological communities, ocean drift and cross border harm.



Our glorious Ellan Vannin Biosphere

K. INTERNATIONAL COURT CASES

Many of the above scientific, legal and ethical considerations have been or are presently being, scrutinized in a number of Court cases around the world.

Scotland

In a famous Court case in Scotland in the early 1980's, **Mrs Catherine McColl** bravely took legal action against Strathclyde Regional Council following its decision to add fluoride to water in 1979.

At the time of Mrs McColl's Court action she had no teeth and so was dubbed by the press as "*The toothless granny*".

Mrs McColl colourfully referred to fluoridated water as "*The witches brew*" and opposed the chemical being added to Scotland's water supply claiming it was unsafe, inefficient and illegal.

After a remarkable Court hearing lasting a mammoth 201 days involving expert witnesses from Europe, Australia and the USA, in 1982 the Court ruled in Mrs McColl's ***favour***. Although the presiding judge Lord Jauncey rejected the medical arguments against fluoridation, he found that Strathclyde Regional Council had exceeded its legal powers.



Mrs McColl's Court action remarkably stopped the fluoridation of tap water in Scotland

Ireland

In 1964, a formidable Dublin housewife called **Gladys Ryan** took legal action in the Irish Supreme Court against the Health Department's decision to fluoridate Irish tap water.

The mother of five passionately argued that her rights to bodily integrity and her right as a parent to manage the health of her children were infringed by the Health (Fluoridation of Public Water Supplies) Act 1960.

Although the Supreme Court dismissed Mrs Ryan's appeal, it held that the right to bodily integrity did exist, even though it was not explicitly mentioned in the Constitution of Ireland. The case was widely regarded as being influential in the subsequent development of citizens' rights in the Irish Republic.

New Zealand

In a recent High Court Judicial Review Judgment dated 18th September 2023 in Wellington, New Zealand, the decision of the Director General of Health to direct 14 local authorities to add fluoride to drinking water was reviewed.

Although the Court did not quash the direction to fluoridate drinking water, it did find that a citizen's rights (under the New Zealand Bill of Rights 1990) assessment was a mandatory relevant consideration when considering whether to fluoridate drinking water.

Holland

The Dutch Supreme Court in an important judgment dated 22nd June 1973 in the case of **Budding v City of Amsterdam**, ruled there was *no legal basis* for putting fluoride as a medical additive into drinking water.

The Court also held that consumers could not choose a different tap water provider/company.

As a consequence of this landmark decision, drinking water has not been fluoridated in any part of the Netherlands since 1973.

USA

A highly topical case currently before the Court in the USA is the legal action by **Food & Water Watch et al v US Environmental Protection Agency**.

The case is currently being heard in San Francisco at the Northern District Court of California.

The civil law suit focuses on chemical toxicity and whether fluoridation of mains water is associated with lower IQ in children.

The Claimants controversially argue that chemical fluoride should be regulated under the Toxic Substances Control Act.

Seven world leading experts including Professor Philippe Grandjean, of the University of South Denmark, are to give scientific evidence principally in relation to neurotoxicity.

In opening arguments, the Claimant's Attorney Michael Connett, highlighted that babies fed formula drink made with tap water as being, "*a critically vulnerable group being exposed to the highest dose of fluoride of any age group in the population. That is a major cause for concern*".

The Court case continues, as at February 2024.

L. CONCLUSION

The fluoridation of tap water is clearly a complicated and contentious topic.

When evaluating this important public health issue, any Parliament or Court in the world will need to carefully assess and balance a range of competing factors.

A final decision will need to appropriately consider the **overall consequences** of the proposal as a whole, not just the single perspective of whether fluoridation of water helps prevent tooth decay in children.

On the one hand, it is accepted that there is some scientific research pointing towards the benefits of fluoridation reducing tooth decay in young children.

On the other hand, there is a convincing body of scientific evidence and emerging expert research indicating a range of significant side effects.

Such adverse consequences include dental fluorosis, credible links to cancer, thyroid, liver and kidney harm, impaired IQ and cognitive development in children, complications in pregnancy and for the unborn child, the detrimental impact on livestock, horses and dogs, crop production, foodstuffs and drinks, the natural habitat and marine life.

Other crucial issues which will also require proper appraisal, include the availability of alternative methods of reducing tooth decay in children, the **United Nations** right to safe and clean water, the principle of proportionality and unreasonable interference with fundamental **ECHR** human rights. In addition, the role of medical ethics and the vital issue of informed patient consent for any medical intervention

will need to be correctly weighed against whether this public health intervention is necessary and justified, particularly in light of sensible alternatives.

As can be seen from the above mentioned international Court cases, various legal actions have had different outcomes.

Any decision to fluoridate Manx tap water may equally be susceptible to legal challenge and it would be interesting to see how the local Courts grapple with the myriad of relevant issues.

The much anticipated IOM Public Health Directorate **Research Paper** referred to above is still pending as at 29th February 2024.

However, in its Water Fluoridation *FAQs* published in 2023, the Directorate blithely asserted that, *“Overall there is no evidence of health related harms for any age group following water fluoridation, when water is fluoridated within the recommended levels”*.

The Directorate continues by simplistically stating, *“Does adding fluoride violate our human rights and contravene the IOM Human Rights Act 2021? Answer: No it does not”*.

In light of all the complex matters properly raised within this article, such glib assertions are clearly premature and potentially both wrong.

For many citizens the proposed fluoridation of Manx tap water is an example of dangerous overreach by the State, the unwarranted adulteration of a primary commodity, a serious violation of bodily autonomy and a gross intrusion of private life.

In other words, to these people the paramount issue is civil liberty and the straightforward truth that mandatory fluoridation of mains water by the State will deny the freedom to choose.

“My body my choice?”