

Minister for Children, Ms Frances Fitzgerald T.D.

Cc: Minister for Agriculture, Food and Marine, Mr. Simon Coveney T.D.

Minister for Health Dr. James O Reilly

Minister for Environment, Community & Local Government Mr. Phil Hogan T.D.

Minister of State, Ms Roisin Shortall T.D.

Minister of State, Ms Kathleen Lynch T.D.

Ombudsman for Children, Ms Emily Logan,

Mr. Cathal Magee, CEO Health Service Executive

Dr Tony Holohan, Chief Medical Officer

Professor Kiernan Murphy, President The Medical Research Council

The Oireachtas Committee on Health and Children

3rd April 2012

Dear Minister

I applaud your statements at the Fine Gael Ardtheis, in particular, that you believe as Minister that *"it is unacceptable that people are aware of child abuse and neglect but fail to act"* and that there would *"no more standing idly by"* on the issue.

I agree with your condemnation of what you called the "shambolic child protection system", however, as Minister for Children I wish to inform you that in addition to the 30,000 child protection cases you referred to, of whom 1,500 children every year were the victims of sexual, physical or emotional abuse, there are an additional 50,000 children under the age of 12 months whose physical, mental and emotional development is endangered by the policy of fluoridation of drinking water supplies in Ireland.

It is scientific fact, that infants and in particular babies under twelve months of age are the most at risk from the potential health impacts of fluoride. This is supported by the *European Food Safety Authority*, the *U.S National Cancer Institute of Toxicology*, the *European Commission's Scientific Committee on Cosmetic Products and non-Food Products intended for Consumers*, the *U.S Public Health Service*, the *Canadian Association of Dental Research*, the *American Dental Association*, a *Scientific Committee of the National Research Council of the National Academy of the United States of America*, the *U.S Department of Health and Human Services Public Health Service Agency for Toxic Substances and Disease*, *U.S Centres for Disease Control and Prevention*, the *European Commission's Scientific Committee on Health and Environmental Risks* and the *United Kingdom's Expert body on Vitamins and Minerals*. According to their rigorous scientific standards establishing tolerable upper limits of human exposure to the fluoride, it is clearly evident, that all bottle-fed infants in Ireland under the age of 12 months fed formula milk made up with fluoridated

water, exceed the maximum upper tolerable limits for toxic exposure to fluoride by multiples of the recommended standards. The Minister must be aware that these limits are set to protect infants and to avoid the health implications of chronic overexposure to fluoride within the population.

The degree of exposure to fluoride in Ireland does not occur in any other country in the world. The level of contamination of baby food with fluoride compounds presents a significant breach of food safety standards at toxic levels that are clearly unacceptable. You may not be aware but Singapore is the only other country in the world with a legislative mandated policy on water fluoridation like Ireland, however the concentration of fluoride in their public water supplies is approximately **half** that present in public water supplies in this country.

In the United States of America where the policy originated (and where hundreds of communities have ended the policy of water fluoridation on health risks) the problems of chronic overexposure of the population, in particular infants has become so endemic in the population that it is now the policy of the *American Dental Association*, the *American Academy of Pediatric Dentistry*, and the *American Academy of Pediatrics* that no fluoride should be given to infants under 6 months and the limit for children up to 3 years of age should be < 0.25 mg/day for children from 6 months to 3 years of age.¹

Similarly, the *Canadian Association of Dental Research* have recommended that —“*children under three should never use fluoridated toothpaste or drink fluoridated water. And baby formula must never be made up using fluoridated water.*”

Within Europe, this is a unique problem to Ireland, as no other European country fluoridates its public drinking water supplies like Ireland. Currently the only other geographic location within Europe where water fluoridation occurs is in a small region of the north east of England. As a consequence of this policy continuing to be implemented in Ireland, all bottle fed babies are given fluoridated water from their first formula feed, in concentrations far in excess of recommended safety standards. This occurs without their parents knowing about the health risks posed by water fluoridation, because unlike other developed countries the Health or Food Safety Authorities have not informed parents of any risks associated with using fluoridated water in preparing infant formula food. This is entirely unacceptable.

I have communicated these concerns at length with the Government and its agencies and they are addressed in detail within my report on the *Human Toxicity, Environmental Impact and Legal Implications of Water Fluoridation*.

I am saddened to say that the responses I have received to date are deeply disturbing and deserve closer scrutiny. Each State Department or Government Agency that replied to my communications responded that it is not their problem, informing me that it's a legal requirement set by government legislation (established in the 1960's) and that it must be enforced at whatever cost; regardless it seems of the wider environmental or wider public health concerns.

¹ Centers for Disease Control and Prevention. Recommendations for using fluoride to prevent and control dental caries in the United States. *MMWR Recomm Rep*. 2001;50(RR-14):1-42.

For the future health of our nations citizens and the long-term health perspective of our children this is a scandal of truly shocking proportions. It is undertaken by the State against the best international scientific advice.

The **U.S. National Research Council of the National Academies** in their review of water fluoridation² found that when body weight is taken into account, non-nursing infants receiving formula made with water fluoridated who are less than one year old are exposed to a fluoride intake on average of about **three times** that of adults. The adequate intake of fluoride for infants aged from 0-6 months, as defined by the **Food and Nutrition Board (FNB) Institute of Medicine of the National Academies**, is 0.01mg/l.³ It is an absolute certainty that all bottle-fed infants in Ireland under 6 months of age bottle-fed with formula reconstituted from fluoridated water would exceed by multiples of 6-10 this recommended level. It is also evident, as noted by the **U.S. Agency for Toxic Substances and Disease Registry (ATSDR)**, that damage may not be evident until a later stage of development. The agency reported in their toxicological profile of fluorides that children also have a longer remaining lifetime in which to express damage from over-exposure to such chemicals; this potential is particularly relevant to cancer.⁴

As the Minister may be aware, Ireland has the lowest prevalence of breast feeding in the World. It is little wonder therefore that up to 400,000 children under the age of 18 years in Ireland are now known to suffer from dental fluorosis, the most common immediate physical and visible sign of chronic overexposure to the fluoride toxin. Dental fluorosis is a developmental disturbance of dental enamel, caused by chronic fluoride consumption by infants from birth to 4 years of age leading to enamel with lower mineral content and increased porosity that is prone to fracture.

To understand the significance of this health risk I would draw to your attention the latest studies by **O Mullane et al.**⁵ (2003) **Browne et al.**⁶ (2005) and **Verkerk et al.**⁷ (2010) who found that the prevalence of dental fluorosis, representing chronic overexposure of the population to fluoride, has now reached endemic proportions in Ireland and that water fluoridation is the principle cause of the increased incidence. Remarkably the study by O Mullane et al. identified that the prevalence

² National Research Council. (2006). Fluoride in Drinking Water: A Scientific Review of EPA's Standards. National Academies Press, Washington D.C. p221-22

³ FNB (Food and Nutrition Board) (1997). Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D and Fluoride. Institute of Medicine National Academy Press, Washington DC

⁴ Toxicological Profile for Fluorides, Hydrogen Fluoride, and Fluorine, U.S. Agency for Toxic Substances and Disease Registry, Dept Of Health & Human Services, 2003

⁵ O'Mullane DM, Harding M, Whleton HP, Cronin MS, Warren JJ. Dental Fluorosis in Primary Teeth of 5-year-olds in Ireland. Paper presentation at American Association for Dental Research conference, San Antonio, USA in March 2003.

⁶ Browne D, Whelton H, O' Mullane D, Oral Health Services Research Centre, University Dental School, Cork. Fluoride metabolism and fluorosis, Journal of Dentistry, Volume 33 Issue 3, March 2005, Pages 177-186

⁷ Verkerk, Robert H.J. The paradox of overlapping micronutrient risks and benefits obligates risk/benefit analysis, Journal of Toxicology, Feb 2010.

of dental fluorosis in communities with no fluoridated water was as low as 1.5% compared to 37% in fluoridated communities. It was also documented that no children were observed with moderate or severe dental fluorosis in non-fluoridated communities it was found that both moderate and severe dental fluorosis was evident in children living in fluoridated communities. Similarly international studies have shown from epidemiological data that the prevalence of fluorosis in permanent incisors of 8-9 years-old-children, living in communities supplied with fluoridated and non-fluoridated water was 54% and 23%, respectively.⁸

The real and long term health risks of this unnecessary policy on society are however entirely overlooked by the HSE in Ireland. It is now known, as documented by the **European Food Safety Authority**⁹ that retention of fluoride in bone can be as high as 90% of the absorbed amount, increasing the risk of developing skeletal fluorosis, bone cancer, osteoporosis and bone pain in latter life. Recent medical research studies¹⁰ have found that the largest concentration of fluoride in the human body has been found in the pineal gland, with as yet unknown consequences for the health of individuals. The **U.S. National Research Council Scientific Committee** examining fluoride in drinking water found importantly that *“recent information on the role of the pineal organ in humans suggests that any agent that affects pineal function could affect human health in a variety of ways, including effects on sexual maturation, calcium metabolism, parathyroid function, postmenopausal osteoporosis, cancer, and psychiatric disease”*.¹¹

All of these facts are truly disturbing, because as Minister you may be aware, that Ireland has the highest prevalence of neurological disease in the world as well as osteoporosis and certain cancers.

While the policy for water fluoridation was originally introduced to benefit dental health and was based on it not having any negative health implications, the current scientific consensus is beyond dispute, it is now accepted that water fluoridation at

⁸ Tabari ED, Ellwood R, Rugg-Gunn AJ, Evans DJ, Davies RM. Dental fluorosis in permanent incisor teeth in relation to water fluoridation, social deprivation and toothpaste use in infancy. Br Dent J. 2000;189:216-20.

⁹ Opinion of the Scientific Panel on Dietetic Products, Nutrition and Allergies on a request from the Commission related to the Tolerable Upper Intake Level of Fluoride. The EFSA Journal (2005) 192, 1-65

¹⁰ Luke J. (2001). Fluoride deposition in the aged human pineal gland. School of Biological Sciences, University of Surrey, Guildford, UK, Department of Obstetrics and Gynaecology, The Royal London Hospital, Caries Research 35:125-128.

¹¹ National Research Council. (2006). Fluoride in Drinking Water: A Scientific Review of EPA's Standards. National Academies Press, Washington D.C. p221-22

the current optimum level is directly or indirectly a major contributory factor to dental fluorosis and other health side effects.^{12,13,14}

The Minister should be aware that the scientific review¹⁵ undertaken by the NHS in the UK in 2000 clearly found that water fluoridation was not safe. Professor Sheldon the Chairman of the reviews scientific committee has stated clearly on record that there has been a deliberate misrepresentation and distortion of scientific findings of the NHS review findings by pro-fluoridation groups and further stated¹⁶ that *“The review found water fluoridation to be significantly associated with high levels of dental fluorosis which was not characterised as “just a cosmetic issue” and that “ The review did not show water fluoridation to be safe.”*

In regard to dental hygiene the Minister should be aware that the WHO have reported that in children aged 5--7 years, the countries with the best standards for dental hygiene were all countries where fluoridation of drinking water supplies is not undertaken and include Denmark, Finland, Italy, Netherlands and Norway.^{17,18}

It is now accepted internationally that it is the use of fluoridated toothpaste and improved diet that has resulted in improved dental hygiene not water fluoridation. The scientific consensus is beyond dispute, it is now accepted that water fluoridation at the current optimum level is directly or indirectly a major contributory factor to this disease.^{19, 20,21}

As a direct consequence thousands of children in Ireland now suffer from severe dental fluorosis resulting in mottling teeth, damaged enamel and severe tooth decay requiring costly and intensive dental surgery. This is a direct consequence of

¹² Jenny Abanto Alvarez, Karla Mayra P. C. Rezende, Susana María Salazar Marocho, Fabiana B. T. Alves, Paula Celiberti, Ana Lidia Ciamponi Dental fluorosis: Exposure, prevention and management, Journal section: Clinical and Experimental Dentistry

¹³ National Research Council. (2006). Fluoride in Drinking Water: A Scientific Review of EPA's Standards. National Academies Press, Washington D.C. p221-22

¹⁴ NHS Centre for review and Dissemination, A systematic Review of water fluoridation, The University of York, Report 18

¹⁵ NHS Centre for review and Dissemination, A systematic Review of water fluoridation, The University of York, Report 18

¹⁶ Waugh D. Human Toxicity, Environmental impacts and Legal Implications of Water Fluoridation, Appendix 2

¹⁷ Diet, Nutrition And The Prevention Of Chronic Diseases, World Health Organisation 2003, WHO Technical Report Series 916

¹⁸ Marthaler TM, O'Mullane DM, Vrbic V. The prevalence of dental caries in Europe 1990--1995. ORCA Saturday Afternoon Symposium 1995. Caries Research, 1996, 30:237—255

¹⁹ Jenny Abanto Alvarez, Karla Mayra P. C. Rezende, Susana María Salazar Marocho, Fabiana B. T. Alves, Paula Celiberti, Ana Lidia Ciamponi Dental fluorosis: Exposure, prevention and management, Journal section: Clinical and Experimental Dentistry

²⁰ NHS Centre for review and Dissemination, A systematic Review of water fluoridation, The University of York, Report 18

²¹ Critical review of any new evidence on the hazard profile, health effects, and human exposure to fluoride and the fluoridating agents of drinking water, Scientific Committee on Health and Environmental Risks, Director General for Health & Consumers 2010

exposure to multiples of the recommended tolerable maximum daily concentration of fluoride in infant food contaminated with fluoridated water. The responsibility for this lies directly with the State. This may however be only the tip of the iceberg as the internal toxicological health consequences of chronic overexposure to fluoride compounds have never been examined by the HSE despite repeated calls from international scientific committees demanding further research in order to determine the health risks associated with using silicofluorides in drinking water. Concerns have been documented regarding fluoride being a developmental neurotoxin, metabolic poison and suspected carcinogen. It is listed in the USA as a suspected carcinogen. International scientific bodies have called for increased awareness of the harm done to children through overexposure to silicofluoride chemicals and the potential health impacts of this chemical on the most vulnerable in society who are known to be most at risk from this toxin, in particular, individuals with diabetes and women.

In light of this, I am uncertain which is worse, the State not undertaking the toxicological tests in the interests of public safety or the State continuing to administered the chemicalS in the full knowledge that they has not undertaken the necessary scientific tests. Either one I sure you would agree could be regarded as criminal negligence. Such standards would not be tolerated for the protection of animal welfare not to for mind human beings.

I find your statement regarding the “national cycle of silence” on child protection is this particular context very appropriate as clearly this statement could also be targeted at those that continue to deny the scientific evidence that water fluoridation is harmful to people's overall health and wellbeing and entirely unnecessary given the introduction of fluoridated toothpaste to Ireland in the early 1970's.

By continuing with the policy of water fluoridation the State continues to place infants in harm's way. The Minister should be advised that even the WHO has advised that where fluoridated toothpaste is widely available, as it is in Ireland (over 97% of toothpaste is fluoridated), it is not necessary to fluoridate water supplies. To do so increases the risk of overexposure of the population to this toxin. Similarly the European Commission has clearly determined²² that topical application through the use of fluoridated toothpaste is the most appropriate and most effective manner in reducing dental caries.

While parents are advised by international scientific bodies to monitor and be aware of the total fluoride intake of their children, at the most basic level the State has not even advised parents in Ireland of the risks to infants of fluoride in infant food.

In Ireland, unlike other developed countries, there is no mechanisms for parents to obtain non fluoridated public water unless they purchase bottled water. Simply put once fluoride compounds are added by local authorities to drinking water they cannot be safely removed. Fluorides in water, unlike other substances are not removed by water filters, the only readably available mechanism to remove them is

²² Critical review of any new evidence on the hazard profile, health effects, and human exposure to fluoride and the fluoridating agents of drinking water, Scientific Committee on Health and Environmental Risks, Director General for Health & Consumers 2010

by reverse osmosis, yet the WHO has clearly stated that deionised water is not safe for human consumption.

The consequence is that in Ireland parents, guardians and healthcare practitioners are clearly not permitted nor allowed to make any informed decision on the health and safety of their children or limit their own exposure or their childrens to this harmful substance. They are presented with no choice but to consume silicafluorides in drinking water that have not been proven safe for human consumption. Minister, is this not a form of abuse? As a result of scientific studies carried out by esteemed scientific institutions throughout the world, we are aware of the serious potential dangers of fluoridated water to human health, yet we fail to act and continue to stand idly by.

The World Health Organisation (WHO) have advised²³ that there is increasing evidence that chronic disease risks begin in fetal life and continue into old age. Adult chronic disease, therefore, reflects cumulative differential lifetime exposures, none more so than chronic overexposure for fluorides from childhood. The WHO advise that the weight of current evidence indicates adverse effects of formula milk on cardiovascular disease risk factors; this is consistent with the observations of increased mortality among older adults who were fed formula as infants. This risk is clearly compounded by the addition of silicafluorides to drinking water as addressed in my report on the *Human Toxicity, Environmental Impact and Legal Implications of Water Fluoridation*.

Similarly the WHO have advised that the risk for several chronic diseases of childhood and adolescence (e.g. type 1 diabetes, coeliac disease, some childhood cancers, inflammatory bowel disease) have also been associated with infant feeding on breast-milk substitutes and short-term breastfeeding. These risks are also clearly compounded by the addition of silicafluorides to drinking water as addressed in my report on the *Human Toxicity, Environmental Impact and Legal Implications of Water Fluoridation*.

The WHO reported²⁴ that a recent review by the International Agency for Research on Cancer (IARC) in Lyon, France, concluded that there was clear evidence of a relationship between onset of obesity (both early and later) and cancer risk²⁵. Other risk factors are continually being recognized or proposed. These include the role of high levels of homocysteine as noted by the WHO. These risks are clearly compounded by the additon of silicafluorides to drinking water as scientific studies have found fluoride to be an inhibitor of homocysteine metabolism resulting in increased levels of homocysteine in the body. This is addressed in detail in my report on the *Human Toxicity, Environmental Impact and Legal Implications of Water Fluoridation*.

²³ Diet, Nutrition And The Prevention Of Chronic Diseases, World Health Organisation 2003, WHO Technical Report Series 916

²⁴ Diet, Nutrition And The Prevention Of Chronic Diseases, World Health Organisation 2003, WHO Technical Report Series 916, Chapter 4.

²⁵ *Weight control and physical activity*. Lyon, International Agency for Research on Cancer, 2002 (IARC Handbooks of Cancer Prevention, Vol. 6).

In regard to dietary fluoride intake the Minister may be unaware but there is no readily available information for Ireland as the HSE have not yet commenced any such study.

What is absolutely certain is that any such study is completed it will clearly and categorically demonstrate beyond any reasonable doubt that individuals in Ireland will be top of any global league table for fluoride exposure.

This is due to a combination of drinking fluoridated water and dietary exposure to fluoride from consumption of tea. Ireland as a nation consumes more tea than any other nation in the World and laboratory analytical studies I have commissioned have found fluoride levels in tea to be extraordinarily high, up to 40 times the current maximum level set for drinking water. I intend to publish this data in due course as a follow on to my previous report. I have been invited to present both my original report and this latter research at an international conference to be held later this year by an distinguished Professor of Chemistry from the United States of America.

In conclusion, it must be recognised that there is a significant problem with water fluoridation, in particular for infants and individuals suffering diabetes. The critical question is as Minister with responsibility for Children in association with your cabinet colleagues in the current Government, what are you going to do about it?

I look forward to your reply.

Yours sincerely



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