

**A policy meeting on the elimination of iodine deficiency in the Baltic States
through universal salt iodisation
(April 27-28, 2000, Riga)**

REGULATION AND COMMUNICATION

by B. Moinier (ESPA)

Implementing a national iodine deficiency prevention programme involves different operators and dimensions. As regulation and communication are two milestones on the way to IDD elimination, they both need special consideration.

Lifestyle changes such as deliberate identification and selection of iodated salt by the consumer have a significant impact on individuals and should be explained to the entire population before being recommended. Information that can be provided to the consumer such as

- why salt is iodated?
- where to buy iodated salt?

will be effective in as much as communication activities are duly organised, coordinated and implemented. If the corresponding programme requires active participation of various bodies and personalities, its efficacy will be increased provided that its implementation is concentrated within an iodine focus structure.

For everybody it has to be made evident that iodated salt consumption leads to substantial improvement of thyroid status in groups at risk (pregnant and lactating women, neonates, schoolchildren, etc) with important health benefits.

The change is safe. Its cost is minimal. The population at large must be convinced of its *raison d'être*. If not the case, legal requirements including inspections used to check distribution compliance with them will have only limited effectiveness unless the use of this type of salt is mandatory. The consumer should however be aware of the significance of correcting iodine deficiency.

Regulation

There is no salt production in the Baltic States. Thus, iodated salt supply depends totally on imports. Special consideration should be given to their quality and availability. In each of these States, the piece of law prepared by Health Authorities and adopted by the Government on salt iodisation has to be worded carefully in order to make sure that it provides the most appropriate framework to support their prevention policy based on salt fortification with iodine.

The article relating to the composition of salt referred to in the legislation on iodisation is of basic importance because dealing with iodine concentration. ICCIDD, UNICEF and WHO recommend that the related level should be fixed within the following span:

20-40 ppm expressed as iodine.

Irrespective of salt regulations already in force with higher or lower levels, it is of importance to determine in advance whether iodine supplementation will be only permitted for packet salt (households) or for food grade salt as a whole in order to allow caterers and food industries to use it as well. Moreover, iodine deficiency is also a problem in livestock management. It would make sense to iodise salt licks. Many countries have not included animal feeding in their iodated salt legislation. In fact, there are separate sets of regulations for foodstuffs and feeding stuffs. When salt for animal feeding is also iodated, the iodine concentration has to be lowered in salt for human consumption.

Where discretionary salt only (cooking salt and table salt) is iodated, iodine concentration has to be calculated by taking into account the fact that this source represents only 15 to 30 percent of dietary salt intake. Over an average of 10 g/day there are only 3 g/day, which are playing a role as iodine carrier in that case. See appendix A.

As far as the Baltic States are concerned, it seems that there is no legislation on iodated salt for the time being, and that Estonia is the only one to apply for a system aimed at monitoring salt quality. The penetration rate of iodated salt (percentage of households consuming discretionary salt) is not available. Both food industries and bovine breeding constitute important activities in these countries. Universal distribution of iodated salt for human and animal consumption would presumably contribute to reach the goal of iodine sufficiency in the general population provided that the critical points in the distribution network be progressively reduced.

“On a population basis, the benefits of correcting iodine deficiency through universal salt iodisation outweigh the risk of iodine-induced hyperthyroidism”. And iodine loss has not to be ignored when trying to quantify the iodine content of salt and the iodine intake depending on salt. Iodine loss is assumed to be

- 20 percent during distribution (before utilisation)
- 20 percent during cooking (before ingestion)

The quality of iodated salt imported from third countries is not always satisfactory. The major problem is the variability in iodine levels, even the absence of iodine in low quality salt. Among the steps to be undertaken to alleviating such constraints, mention has to be made of those relating

to tariff environment

- absence of duty for salt meeting the requirements of legislation on iodisation
- approximation of directives and procedures issued by Customs and Health Authorities

or to distribution

- local iodisation of imported salt
- sanction for non-compliance with legal requirements ...

Existing test kits give a very rough guidance to iodine level in salt. It would be more advisable to refer to a scientific test method such as ESPA standard for the determination of total iodine (iodide and iodate) in food grade salt. The method is applicable to products the iodine content of which is equal to or exceeding 3.5 ppm. The corresponding standard is available on written demand to ESPA Secretariat.

Communication

There are numerous elements, which have to be taken into consideration in a strategy aimed at changing behaviour patterns from plain salt to iodated salt consumption. Without legislation for mandatory production/import of iodated salt, the best-designed regulations would mean nearly nothing if the consumer is not directly implicated in the iodine deficiency prevention programme. And the penetration rate of iodated salt would remain desperately low...

Thus, it is necessary to address issues affecting salt consumption at different levels with different partners, more especially

- Health services
- School
- Press

Whatever be the responsibilities of health care providers in developing programme activities, they should keep in mind that any action is directed at the consumer and must be elaborated and completed as such. Therefore, information material for further communication must be designed in a precise way. The messages will be well received provided they meet the consumers' concerns. Then they will induce the households to react in a manner consistent with programme objectives.

The weaknesses in consumer demand for iodated salt are generally reflecting the weaknesses of the information i.e.

- negative perception arisen in the opinion
 - "iodated salt is sold at higher prices than plain salt"
 - "iodated salt affects the taste and/or the colour of meat products"⁽¹⁾
 - "iodine deficiency disorders are eliminated for there is no visible goitre in our area".
- or dilatory attitudes which are a common feature to various State institutions
 - "IDD is already treated through our health system"
 - iodine deficiency is not a public health priority"
 - scientific communities are not commissioned for promoting iodated salt"
 - "universal iodisation could lead to excessive salt consumption"⁽²⁾
 - "salt people should be excluded from the dialogue for science has nothing to do with business"

The available data show that Estonia, Latvia and Lithuania suffer from marginal to mild iodine deficiency disorders. See appendix B. Procrastination would not have detrimental consequences... Should this approach prevail, it would mean that groups at risk, and more especially the most vulnerable ones (schoolchildren), are prone to developing IDD in case of nuclear accident, as observed in populations exposed to radiation in 1986 (high uptakes of radioactive iodine in the thyroid).

It is assumed that such a lack of awareness among decision makers is not a characteristic of the Baltic States indeed. The conference organised in Riga is showing a strong political will to clarify the situation. Under such conditions, it seems advisable to recommend for their attention

- the definition of a clear-cut common programme for IDD prevention based on iodated salt consumption,
- the establishment of a iodine focal point or group which should be organised to eradicate disbelief that iodated salt is superfluous, and to advocate increasing use of iodated salt through the most supportive media.

⁽¹⁾ A survey has been commissioned by Codex Alimentarius a few years ago. It evidenced that iodated salt does not alter either the colour or the taste of meat and other products. Nitrited salt for meat curing can be also iodised.

⁽²⁾ Salt iodisation in Switzerland or in France has not prevented a decline in salt utilisation over 50 years.

It is striking to observe that the intents expressed in 1997 to produce a piece of law on iodated salt (Estonia, Lithuania) and to establish an IDD Committee (Estonia, Latvia, Lithuania) have been paving the way to further developments which should not ignore communication. See appendix B.

Countries like Switzerland and Germany have made evident how communication was decisive to change the consumer's reactions and to induce him to comply with health recommendations and salt regulations. The presence of Hans Bürgi is to facilitate an exchange of views on the Swiss experience in that field although his presentation relates to legislation. As a member of the 'Arbeitskreis Jodmangel', Roland Gärtner is another witness of the validity of a long-term communication plan and the efficient role of such an agency for its implementation.

This paper is not designed to review all the ways and means to be used for educating the opinion. A mere mention is nevertheless relevant:

- conventions and conferences
- mailing
 - printed material
 - posters
 - leaflets
 - brochures
- cooperation with media
 - TV
 - radio
 - newspapers and other publications
- and various initiatives with
 - teachers
 - dieticians
 - paediatrics
- Internet

ICCIDD focal point at Tulane University School for Public Health has developed a communication guide for IDD elimination which is available on line, <http://www.tulane.edu/~icec/iddiodizedsalt.htm>, where examples illustrate the use of the USI strategy. ICCIDD has also commissioned the design of a logo, which can be globally recognised as an indicator of IDD prevention via iodated salt. Anyhow, such a logo must be attractive for kids. The Arbeitskreis Jodmangel giraffe is a good example of what can be effective for a positive response.

Among the competences of the iodine focal point (iodine working party), dealing with the media is one of the most sensitive. All interviews, and broadcasting in general, should be well prepared in advance. Journalists have to be invited to list their questions, and the participants in a Round Table need to get an appropriate questions/answers document ready for any purpose it may serve. Editorial principles of objectivity, accuracy, and balance are irrefragable. Do not make any statement, which you cannot substantiate or which is not basically true...

Managing television ⁽¹⁾ interviews is a skill, which requires training. As a rule such interviews should only be given by senior executives who have such training. National television should accept to relay informative messages on iodated salt.

⁽¹⁾ TV sets for 1000 inhabitants, 1988 1997

Estonia	369	...
Latvia	384	...
Lithuania	321	...

Information posted on the web (Internet) is not specifically protected by laws for the time being but it has the same implications for intellectual property rights as publication in any other format. It is highly recommended to pay attention to copyright and any other specific rights.

In any circumstances, it is advisable to make sure that all stakeholders including consumer movements will be convinced that iodated salt participates in IDD prevention. Issues relating to the product (packaging, labelling, advertising, marketing, stockpiling) must be dealt with by working with all interested parties including those who deliver salt to the consumer, even if these issues are partly tackled by lawyers in charge of drafting general provisions for foodstuffs. The standard recommendation is to use potassium iodate because of its greater stability and longer shelf life.

* * * * *

Regulation and communication are both important components of IDD control programme. They require the full cooperation of every partner implicated in its implementation (health care, legislation, trade, education).

The support of UNO agencies like the Codex Alimentarius (FAO + WHO), UNICEF, WHO, the World Bank, and the expertise of ICCIDD are playing a key role in the improvement of the current iodine status in Eastern Europe and more especially in the Baltic States.

If approximation of law has remained wishful thinking as regards salt iodisation within the European Union, the commitment made by the European Commission to draft a common legislative framework for the addition of nutrients to foodstuffs (laid down in its recent White Paper) is showing that a solution is in sight for the future enlargement.

For the time being, the standard for food grade salt adopted in 1985 by the Codex Alimentarius Commission, and currently under review for proper inclusion of special provisions regarding salt iodisation remains a basic reference for those having to regulate iodine intake depending on its elected carrier, salt. Appropriate communication activities will confirm the success of their decision.

FOOD GRADE SALT	ESTONIA	FRANCE	POLAND	U.K.
• Dietary salt intake ⁽¹⁾ g/day	NA	7-8	10-11	8-9
• Proportion from various dietary sources ⁽²⁾ g/day				
- Discretionary salt	NA	2-3	4-5	1-2
- Salt from foodstuffs produced by the industry	NA	3-4	4-5	4-5
- Naturally present in food	Na	1-2	1-2	1-2
- Other sources		< 1	ε	< 1
• Iodine content in packet salt mg/kg	25-27	10-15	30	25 ⁽³⁾
• Iodine content in salt used by the food industry mg/kg	NA	--	--	--
• Effective iodine intake µg	NA	20-30	50-75	--

⁽¹⁾ based on 24-hour urinary excretion of sodium

⁽²⁾ iodine loss (distribution, cooking) is included with salt discarded before ingestion

⁽³⁾ very low penetration rate : 1%

Baltic countries (reminder)

Estonia

The country appears to have mild to moderate iodine deficiency, based on a goitre survey and median urinary iodine of 65 mg/L, and 9 of 28 schools having a median less than 50 mg/L. There is little IDD awareness, and no existing IDD programme. All salt is imported, from Russia, Belarus, Ukraine, Finland, and Denmark. The latter two have 25-27 mg I/kg. Recommendations include establishment of an official committee or working group for IDD, including importers of salt; ultrasonography of children in approximately six schools to check on the previous data from palpation, which appear high; and preparation of a decree or law on iodised salt. The legislation should be compatible with current and proposed European Community and GATT legislation, because Estonia seeks EC membership.

Latvia

A 1960 survey of iodine in drinking water led to the conclusion that iodine deficiency is not a problem, but there were no data on goitre. A 1995 unpublished survey of 30 schools found a median urinary iodine of 98 mg/L, so there is probably little or no iodine deficiency. There is also no awareness of IDD and no programme. Eighty percent of the salt is imported from the Ukraine. The recommended strategy is to establish a small working group to obtain more data and address the question of whether IDD is likely to be a problem. Further contact with those conducting the 1995 survey about goitre may clarify its findings; ultrasound survey in about eight schools would also clarify this. If iodine deficiency is found, an IDD committee should be formed to investigate further and to establish procedures.

Lithuania

A 1995 survey of 28 schools found a median urinary iodine of 75 mg/L. A goitre prevalence of 38% for 1A and 1B was described but its lack of correlation to urinary iodines was noted. A current abstract of 1450 adults in six districts found 27% with "pathologic thyroid" and a median urinary iodine of 63 mg/L. Thus, there would appear to be mild to moderate IDD. There is little awareness of iodine deficiency and no programme. All the salt is imported, from the Ukraine. An iodine laboratory is in operation in the Institute of Endocrinology but needs funds for chemicals. Proposed actions include the establishment of an official committee or working group including importers of salt, ultrasound survey of children to check the high prevalence reported from the previous survey, and preparation of a decree or law on iodised salt.