

Joint strategies for salt iodization and salt reduction in public health

Excerpt from a report of a joint technical meeting convened by the World Health Organization and the George Institute for Global Health in collaboration with the ICCIDD Global Network in Sydney, Australia, 25–27 March 2013.



The World Health Organization (WHO) promotes both the implementation of programs to reduce population salt intake as a strategy to reduce the burden of noncommunicable diseases (NCDs) and universal salt iodization to prevent and control IDD. This meeting brought together technical experts in IDD and dietary salt reduction, and WHO representatives from all regions of the world to discuss how to maximize the impact of salt reduction and iodine deficiency elimination programs through improved coordination.

Background

Increased blood pressure is estimated to cause 9.4 million deaths every year. In 2010, WHO recommended reducing salt intake (to <2 g sodium or <5 g salt per day) (1,2). This position has led to the adoption of the Global Monitoring Framework and Voluntary Global Targets for the Prevention and Control of NCDs, in which Member States agreed to target a 30% reduction in population intake of salt/sodium by 2025 (3). At the same time, there is concern

that IDD may re-emerge despite the fact that many countries have adopted USI in response to the resolution of the 43rd World Health Assembly that addressed the elimination of IDD.

WHO endorses USI whereby all salt for human and animal consumption is iodized (4) and reaffirms that the public health goals of reducing salt and increasing iodine intake through salt iodization are compatible given that the concentration of iodine in salt can be adjusted as salt intake changes (*Box 1*) (5).

Box 1: Salt as a vehicle for iodization

Recommendations of the WHO Expert Consultation, 21–22 March 2007, Luxembourg:

- Policies for salt iodization and reduction of salt intake to <5 g/day are both necessary and compatible
- USI is the recommended strategy to control iodine deficiency, and successful programs should continue and be sustained

- Assumption of iodization at 20–40 mg/kg is based on an average salt intake of 10 g/day at population level which may change
- The use of salt as the vehicle for new fortification initiatives other than iodine and fluoride should be discouraged
- Multinational food industries should harmonize the salt content of their products according to lowest threshold possible to avoid variations in products in different countries
- Changes in population salt intakes needs to be assessed over time via monitoring of urinary sodium excretion and levels of iodization adjusted accordingly

Implementation of salt iodization policies

Approximately a third of the world's population lives in areas with some iodine deficiency. Iodine deficiency is particularly common in the Eastern Mediterranean region, Asia, Africa, and large parts of Eastern Europe. However, the issue has not been confined to low- and middle-income countries, and there is evidence that Australia, New Zealand, and the United Kingdom are now confronted with a re-emergence of mild iodine deficiency.

Food grade salt as a vehicle for the delivery of iodine is based on many factors:

- It is one of few commodities consumed by everyone; consumption is stable throughout the year.
- Importation is often limited to a few producers.
- Iodization technology is easy to implement and is available at a reasonable cost.
- The addition of iodine to salt does not affect its color, taste or odor.
- The quality of iodized salt can be easily monitored.

Not only is salt iodization effective, it is remarkably cost-effective. The estimated annual potential cost attributable to IDD in the developing world prior to widespread salt iodization was \$35.7 billion per year versus \$0.5 billion per year after salt iodization, giving a benefit–cost ratio of 70:1 (6). The use of salt as a vehicle for food fortification in poor areas of rural subsistence farming is commonly the only choice; this is particularly true in key regions such as sub-Saharan Africa and South Asia where the health and economic burden of IDD is highest.

Synergizing salt iodization and salt reduction strategies

Previous work has demonstrated that policies for salt iodization and the reduction of salt to less than 5 g/day are compatible, cost-effective, and of great benefit to public health (Box 2).

Box 2: Commonalities of the two strategies

Excess dietary salt and lack of natural dietary iodine are of concern to public health because they affect billions of people worldwide. Consequently, both are major global public health priorities. The policies also share other commonalities in that they:

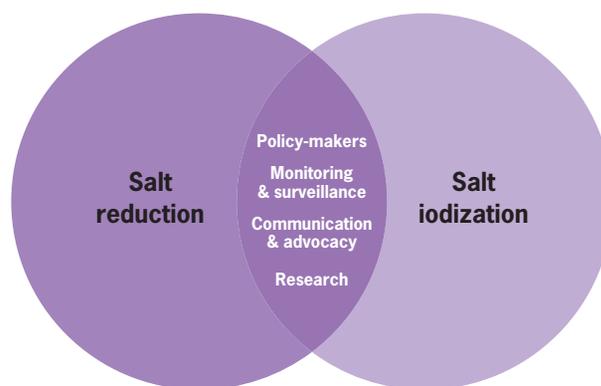
- are highly cost effective interventions to improve health;
- have similar surveillance modalities (dietary surveys and urine collection);
- require complex negotiations with the food industries;
- depend on strong political support for optimum policy implementation;
- rely on improved knowledge, attitudes and behaviors of health care professionals;
- rely on increased public knowledge, attitudes and behaviors;
- are affected by a lack of food industry action;
- rely heavily on education (e.g. “use iodized salt but less of it” particularly in low-middle-income settings where most salt is added in the home);
- require a stable non-commercial funding source to be sustained.

The report concurs that there is no evidence that adding iodine to salt increases salt consumption or impedes the implementation of salt reduction strategies. If salt intake fell to 5 g/day, salt iodization could be increased to 50 mg/kg without technical or sensory barriers to ensure intakes of 250 µg/day (7). The potential impact of salt reduction on iodine intakes will be country- and context-specific and will depend on various factors.

The policies can be coherent provided that there is (a) full implementation of USI, (b) effective implementation of salt reduction policies including regulati-

in the implementation of joint salt iodization and salt reduction policies. Governments will be encouraged to develop strategies to engage all departments in support of USI and effective regulations to reduce salt consumption. Civil society action can be leveraged to support the process. Industry will be consulted in relation to implementation but will have no role in policy-making. Developing a consistent strategy and message as well as identifying and managing perceived or real conflicts of interest will be fundamental to the successful delivery of the strategies.

FIGURE 1 Areas of integration between salt reduction and salt iodization strategies



on of salt levels in processed foods, and (c) increasing iodine levels in salt as salt intakes are decreased.

The solutions to reducing salt and preventing IDD are complex, especially in countries undergoing nutrition transition, where the amount and sources of salt in the diet are changing. Most low- and middle-income countries may not have the resources for a separate program to monitor salt reduction and iodine intake, or to negotiate with industry; integration would therefore result in improved cost efficiencies and improved health for all.

Areas for integration

A joint plan for collaborative work is to be developed to outline the common objectives. The main areas of complementarity for the two programs at global, regional and national levels are presented in Figure 1. A wide range of organizations can be involved

the comprehensive global monitoring framework, including indicators, and a set of voluntary global targets for the prevention and control of noncommunicable diseases. Geneva, 5–7 November 2012. http://www.who.int/nmh/global_monitoring_framework/en/

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