

Collaboration to optimize dietary intakes of salt and iodine: a critical but overlooked public health issue

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High dietary salt is considered to cause about 30% of cases of hypertension.¹ Globally, approximately one quarter of the adult population has hypertension, a leading risk factor for premature death. By 2025 it will affect 1.56 billion adults in the world and more than 90% of those aged 80 years or more will develop hypertension. High salt intake is also linked to other important diseases (such as gastric cancer, obesity, kidney stones and osteoporosis). Based on its impact on blood pressure and gastric cancer, high dietary salt is estimated to be the seventh leading risk factor for premature death in the United States of America and the second leading risk factor in Chile.^{2,3} High salt intake in low-income countries also has a similar burden of illness and disability. The World Health Organization has recommended reducing salt intake to less than 5 g per day (less than 2000 mg/day) in adult populations.⁴

Mild-to-moderate iodine deficiency impairs cognitive and motor function and severe iodine deficiency causes hypothyroidism with marked mental and growth retardation.⁵ The main strategy recommended by the World Health Organization (WHO), the United Nations Children's Fund (UNICEF) and the International Council for the Control of Iodine Deficiency Disorders (ICCIDD) for correction of iodine deficiency is universal salt iodization.⁶ Salt iodization to prevent iodine deficiency is a major global public health triumph; it is estimated about 70% of the global population now has access to adequately iodized salt.⁵ Salt is generally used as the vehicle for providing iodine because it is consumed by most of the population at fairly constant levels throughout the

year and its taste and appearance is not affected by iodization.

Salt iodization is a highly cost-effective intervention that can be used in low-resource settings. The estimated costs of salt iodization programmes are 0.02 United States dollars (US\$) to US\$ 0.05 per person per year, resulting in a cost of US\$ 34–36 per disability-adjusted life year gained (i.e. the cost to avert one year lost due to ill-health, disability or early death caused by iodine deficiency).⁵ Adverse effects of iodization of salt are uncommon, occur when natural dietary sources of iodine have been adequate and are limited to the rare occurrence of hyperthyroidism.⁵ Currently recommended average levels of iodine added to salt are within the range of 20–40 mg/kg, based on an estimated average salt consumption of 5–10 g/day in adult populations.⁶ These levels are safe up to salt intakes of around 25 g/day when the iodine dietary supply is low (as it is in most typical diets in the world).

Concerns have been raised that programmes to reduce dietary salt could adversely impact programmes to prevent iodine deficiency disorders (and vice versa).⁷ However, iodine levels can be increased in salt to adjust for the recommended reduction in dietary salt to less than 5 g/day.⁷ To adequately adjust the salt fortification programmes, policy-makers should take into account the food consumed, salt and iodine food sources, iodine nutritional requirements of the population and vulnerable sub-populations (young children, pregnant and lactating women). Clearly there is a substantial need to coordinate salt reduction with salt iodization programmes to avoid iodine deficiency. However, each programme involves dif-

ferent public-health communities. We strongly believe that close collaboration between these different groups could enhance both the salt reduction and iodine supplementation programmes. Active nongovernmental organization advocacy is needed with clear messaging on what is required by government, the public and the food industry, including government engagement and oversight of the programmes, evaluation/surveillance, and ongoing negotiations and interactions with the food and salt industries. Many aspects of these activities are common to both programmes therefore there is an opportunity to share and leverage resources and approaches to be more effective and efficient.

However, if the programmes to reduce dietary salt and iodine supplementation programmes are not coordinated, they have the potential to confuse policy-makers, the food industry and the public, thereby impeding the health goals. Some countries have selected other methods of providing supplemental iodine than through salt fortification, because use of salt in homes has been replaced by the salt in industry-processed foods. We believe that potential incompatibility of the two programmes is not a valid reason for selecting alternative methods, because the salt used by the food industry should be iodized and at the same time be subject to salt reduction programmes.

The Expert Committee convened by the Pan American Health Organization on Optimizing Dietary Salt and Iodine is developing a framework to outline the different actions that are required, planning meetings of larger stakeholder groups and developing a proposal to study the implementation of collabora-

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tive salt iodization–salt reduction programmes in countries of the Americas with different economic and nutritional profiles that could serve as model programmes for other countries. ■

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