Salt and Health – What is Being Done Globally to Reduce Salt Intake?

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Initiatives to reduce sodium content of foods come in the form of mandatory or voluntary targets put forward by governments, initiatives proposed by food companies, or health-focused recommendations from entities like the World Health Organization. As the world focuses more on sustainable diets, we can expect these sodium targets to become more important and prevalent in the coming years. In this article, we review:

- Sodium's role in health
- Tax and legislation initiatives on sodium reduction being enacted globally, and their impact
- Voluntary initiatives from food industry and impact on sodium intake
- What to expect in the future

Effects of excess sodium intake on health

Heart disease and stroke are the leading causes of death in the European Region[1]. Excessive consumption of sodium raises blood pressure which is a major risk factor for these conditions[2]. Salt is the main source of sodium in foods[3], therefore reducing salt intake can naturally translate into a lower sodium intake, which is beneficial for health[4].

A moderate reduction in salt consumption can result in a significant reduction in blood pressure and is associated with reduced cardiovascular events[5]. However, sodium isn't all bad! The human body requires small amounts of sodium to regulate body fluids and maintain critical body functions[6]. Unfortunately, our intake far exceeds the threshold required, which has a negative impact on health[7].

KHNI ealth Organization (WHO) advises an individual's salt intake should not exceed 5 g of salt (2g of sodium) per day. The current daily salt consumption in most European countries is estimated to be between 8 to 12 grams per day, with few member states above and below this intake level[8].

What actions are being taken to lower sodium intake globally?

Salt farm in Thailand

Many countries have formally adopted salt reduction targets for commonly consumed processed foods as part of a strategy to reduce salt intakes. WHO released a new set of global benchmarks for sodium levels in 2021 to help countries to achieve the WHO goal of 30 % reduction in global salt and sodium intake by 2025[9].

EU Member States agreed to the creation of a common European Union framework on voluntary national salt initiatives. The framework was approved in July 2008, with the overall goal to contribute towards meeting appropriate levels of salt intake[10].

10 countries in Europe have mandatory initiatives against high salt levels. The main initiatives are establishing maximum permitted salt levels in foods, particularly bread. 25 European countries have voluntary initiatives involving labelling, maximum salt targets in foods, and reformulation programs. Policies include strategies such as taxes on high-salt food (Hungary), mandatory high-salt content labels (Finland), and targets for reformulation and close monitoring of the food supply (United Kingdom).

let's go into more detail.

Taxes and legislation

Taxing high salt products

After the agreement of the European Union Framework, some countries opted for a tougher approach, such as introducing new laws or tightening existing ones[10]. For example, in 2011 Hungary implemented a tax called Public Health Product Tax (PHPT) on packaged foods and beverages that contain high levels of sugar and salt, such as soft drinks, confectionary, salty snacks, condiments and fruit jams. The aim of introducing taxes is to reduce the consumption of food products that are not beneficial to public health[11].

However, the success of these types of taxes are often a controversial subject. It is not easy to prove causality between the implementation of a tax and a reduction in consumption. If we take sugar for example, evidence shows that in many places where sugar taxes have been implemented consumers are consuming less sugar[12]. However, reasons for this change could be due to many reasons, such as the growing awareness of sugar-related health problems, the availability of reformulated products with reduced sugar, as well as the cost of the taxes. For Hungary, an evaluation was conducted after the introduction of the PHPT to monitor its impact on the population. Unfortunately, the consumption of taxed products by the adult population did not decrease, thus it seems in this case a tax had a minimal impact on consumer behavior[13].

Establishing mandatory upper limits on salt content of foods

Other countries have implemented mandatory maximum salt targets on products with a generally high salt content, such as Belgium, Bulgaria, Greece, Netherlands, and Portugal. The main product of focus is bread.

The United Kingdom is often viewed by other countries as a good example for addressing an issue in public health[14]. It implemented a successful voluntary salt reduction initiative, and now the government are currently legislating to restrict the promotion of products deemed high in fat, sugar and/or salt (HFSS products). This includes restrictions on volume price promotions, for example, “buy one get one free” promotions, and selling locations in store and online[15]. The government has also committed to prohibiting advertisements of HFSS products on TV before 9 p.m. and online entirely[16]. This legislation is due to be enforced in 2022 and it aims to help consumers make healthier dietary choices and incentivise industry to reformulate their products to be healthier, including lower the salt content.

Warning labels on high salt foods

In Finland, numerous activities have been undertaken to reduce salt, in particular voluntary initiatives and compulsory front-of-pack warning labels. Warning labels are required if a specific product contains sugar or salt above a defined threshold. For example, foods that are high in salt are required to carry a “high

salt content" warning[17]. These warning labels have been very effective. Since their introduction, the average sodium content in food products in Finland have decreased by 20-25%[18].

In recent years many countries have adopted similar front-of-pack labels displaying information on sodium (or salt) [19].

Many countries in Latin America such as Chile, Mexico, Peru, Uruguay, and soon Brazil, have adopted front-of-pack black warning labels that indicate if a product is high in fat, sugar, or salt[20] (below).

Example of front-of-pack warning labels used in Chile. From left to right: High in Sugar, High in Calories, High in Sodium and High in Calories, High in Saturated Fat. At the bottom of each label it states Ministry of Health

Voluntary initiatives and food industry reformulation programmes

In the UK, up to 75% of the salt we consume is found in processed food and food eaten out of the home[21]. According to the latest figures from the UK National Diet & Nutrition Survey (NDNS), the biggest contributors of salt in the diet are bread, cheese and meat products like bacon. This is similar for Europe, with a large proportion of salt intake coming from foods that don't necessarily taste salty such as potato products and tinned produce[22].

It is widely accepted one of the most effective ways to reduce sodium intake at a population level is through lowering the sodium content of foods that are consumed frequently. Engaging industry on a voluntary basis to reformulate products high in salt is a key strategy to achieve this[10]. Many countries have established voluntary industry-led initiatives with category-specific salt targets for a wide range of food products. For example, the FDA plans to publish voluntary sodium reduction targets for different food categories by mid-2022.

From a public health perspective, voluntary industry initiatives can be more effective, as they may be more achievable than government measures which can be hampered by pressure from interest groups, political gridlock, and bureaucratic inertia. They may also achieve public health objectives quicker, more efficiently

addressed extensively than governmental regulation. From an industry perspective, there are many positives with engaging in nutritional improvement of products, such as public health responsibility, creating positive publicity for the brand, goodwill among stakeholders and preventing binding government regulation and fiscal measures. Product reformulation has large potential effects on the quality of the diet and has the potential to improve population health[22]. One primary hurdle is that reformulation can alter the sensory attributes of food products and influence consumer liking. However, there is evidence that consumers do not detect gradual decreases in the salt content of foods when slowly reduced over time[23].

Examples of successful industry-government partnerships for salt reduction

Many governments in countries including Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Finland, France, Greece, Hungary, Italy, Lithuania, Netherlands, Poland and Spain have proposed a collaborative approach with industries on setting voluntary salt targets. In Ireland a salt reduction program was run over ten years focusing on salt reduction in processed foods. This slowly but surely lead to an average reduction in salt intake from processed foods by 1.1g[24].

Recently Ireland published a Strategic Action Plan 2021-2025 that will finalise their 'Reformulation Roadmap' for HFSS foods as part of "Healthy Ireland", a framework for improved health and wellbeing[25]. Recently the UK released the fifth sets of voluntary salt reduction targets. The UK's gradual salt reduction program has been successful in reducing population-level salt intake: it achieved an overall salt intake reduction of 1 gram/day in the adult population, reducing adult average salt intake from 9.38 g/day in 2000 to 8.38 g/day in 2018[26-27]. This is a great step forward for public health despite the intake still being considerably higher that the recommended intake of 5g/day.

Conclusion

Many countries have taken and will continue to take actions to reduce population salt intake. A high salt intake has been shown to increase not only blood pressure, but also the risk of stroke. Salt intake in the European and world population is too high, so reducing intake will improve public health. For this reason, the salt levels in processed foods will continue to be under scrutiny and the pressure on industry to reformulate products will only increase. The role of salt is essential in the preservation, flavour and structure of food products; therefore, it is essential that governments and industries continue to invest in new technologies and develop innovative reformulation methods and salt substitutes.

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