

REDUCING SINGAPOREANS' HIGH SODIUM INTAKE

A first-ever nationwide program replacing regular salt with lower-sodium salt alternatives

- In 2022, Singapore launched a first-ever national-level strategy to reduce sodium intake by promoting lower-sodium salt alternatives, sauces, and seasonings.
- To date, demand for lower-sodium salt alternatives has doubled among food and beverage operators.
- This initiative can serve as a model for countries looking to reduce sodium intake from foods added in the home and from the restaurant/catering sector.

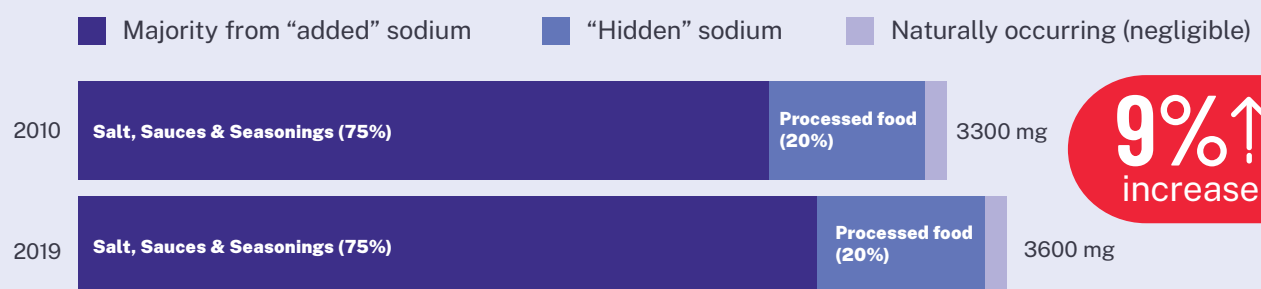


Salt consumption in Singapore: a growing problem

Singaporeans consume 3,600 mg of sodium a day — 1.8 times the limit recommended by WHO (2,000 mg/day). Half of Singaporeans' sodium intake comes from salt added to meals during cooking, and 25% comes from sodium in sauces and seasonings.

Between 2010 and 2019, sodium consumption in Singapore increased by 9%, with clear effects on health: prevalence of hypertension has been increasing across all sub-groups in Singapore over past decade.

Salt intake in Singapore increased 9% from 2010 to 2019



Source: National Nutrition Survey 2019, Global Data, Euromonitor 2010-2019

Low-sodium salt and seasonings: a salt reduction tool

Lower-sodium salt alternatives, where some of the sodium chloride is replaced by minerals or enhancers, can be used instead of regular salt in home cooking and by restaurants and caterers. Due to its high cost and low visibility, few Singaporeans have taken advantage of lower-sodium salt alternatives as a potential salt reduction tool.



Singapore's three-pronged strategy to curb sodium intake

In March 2022, the Ministry of Health (MOH), Singapore, announced a three-pronged strategy to reach the government's target of reducing sodium intake by about 15% in the next 5 years.

1. Expanding the availability and affordability of lower-sodium salt blends (with at least 30% sodium reduction) through partnerships.

Health Promotion Board (HPB), Singapore, has partnered with supermarket chains to develop affordable in-house brands of lower-sodium salt alternatives. These lower-sodium salt alternatives can bear the [Healthier Choice Symbol](#), a label that indicates products that are healthier than the market standard. (For salt this is $\leq 1,500\text{mg}$ per teaspoon (5g) compared with $\sim 2,000\text{mg}$ in regular salt).

2. Pushing for the development of lower-sodium sauces and seasonings

HPB introduced the Healthier Ingredient Development Scheme, which offers grant support to help food manufacturers/suppliers develop a wider variety of healthy ingredients and products.

3. Encouraging the switch to lower-sodium alternatives through public education campaigns

Singapore launched a multi-year, nation-wide, [public education campaign](#) which includes on-the-ground promotions such as taste tests of lower-sodium products, and media involvement to drive public messaging about the risks of high sodium consumption and promote the use of lower sodium alternatives. As a complement to these education efforts, Singapore makes decals available for hawkers and restaurants that serve meals prepared with lower-sodium ingredients.

Advertising as part of Singapore's nationwide marketing campaign to generate awareness and encourage a switch to the use of lower-sodium alternatives:



Transit advertising on a bus



Advertising at a workplace canteen



A focus on salt substitution is part of the three-pronged strategy announced by the Singapore Ministry of Health in March 2022, to curb high sodium intake

To date, **25% of sauces and seasonings available, and 22% of those purchased, are lower in sodium.**

Early days

Recent years

Preparatory work

Prior to launching the three-pronged strategy, the HPB tested both consumer acceptability of lower-sodium salt alternatives and whether their use would increase the total amount of salt used. They conducted a four-week trial with two major institutional caterers in 2019 and a 20-week trial at a hospital food court in 2022. Overall, one-for-one replacement of regular salt, sauces and seasonings with lower-sodium alternatives had minimal impact on taste and consumer acceptability. Other key findings included:

- Sodium content of meals decreased by about 450 mg in the first trial.
- Chefs found it convenient to use lower-sodium salt alternatives as no recipe changes were required.
- Cost impact was minimal.
- More than 80% of employees reported “no difference” in the taste of food.
- More than 85% answered “yes” when asked if they would repeat their food purchase prepared using lower-sodium salt alternatives in the second trial.

Key challenges to overcome

To facilitate widespread use of lower-sodium salt alternatives, the Singapore HPB has identified key challenges it will need to overcome, including:

- **Strong inertia among food and beverage operators** due to the higher cost of low-sodium alternatives (without grant support, low-sodium salt alternatives can cost up to 10 times as much as regular salt) and concerns about compromising taste.
- **Limited consumer demand**, in part because many consumers are unaware that they consume too much sodium and are unfamiliar with the benefits of lower-sodium salt alternatives.
- **Concerns about the risks of hyperkalemia**, a medical problem in which there is too much potassium in the blood, among a sub-segment of the population who are under medical supervision. This only applies to alternatives containing potassium.



Early successes

- Demand for lower-sodium salt alternatives among food and beverage operators has approximately doubled since the Singapore HPB's announcement of its efforts to promote lower-sodium salt alternatives in September 2022.
- To date, one in five sauces and seasonings purchased are lower in sodium.

The benefits of low-sodium salt alternatives

Too much salt can be deadly. It is associated with increased risk of heart disease and stroke, and worldwide is responsible for an estimated 1.9 million deaths each year — more than any other nutritional risk factor.

Lower-sodium salt alternatives replace some sodium chloride in table salt with minerals such as potassium and magnesium or glutamate enhancers. Using low-sodium salt alternatives in place of regular salt can achieve sodium reduction of at least 30%. [Research](#) on the use of low-sodium salt alternatives shows significant decreases in blood pressure and the risk of death.*

*Among persons who had a history of stroke or were 60 years of age or older and had high blood pressure, the rates of stroke, major cardiovascular events, and death from any cause were lower with the salt substitute than with regular salt.