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for Global Health

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## Policy Brief

A strategic win-win opportunity to revitalise salt reduction and combat cardiovascular disease

# Promoting the Use of Lower-Sodium Salt Substitutes to Improve Cardiovascular Health in the United Kingdom

April 2026

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## Executive Summary

### Promoting Lower-Sodium Salt Substitutes (LSSS) for Cardiovascular Health in the United Kingdom (UK): A Strategic Win-Win Opportunity to Revitalise Salt Reduction and Combat Cardiovascular Disease

Cardiovascular disease (CVD) is the leading cause of death in the UK, accounting for approximately one in four premature deaths. High blood pressure (hypertension), often driven by excessive sodium intake, affects around 14.4 million people in the UK, or more than one in four adults, and is a major risk factor for heart attack, stroke, and kidney disease. Despite early progress, the UK's salt reduction efforts have stalled, with average daily salt intakes of 8.4 g in men and 6.8 g in women, well above the recommended 6 g/day.

#### What are Lower-Sodium Salt Substitutes?

Lower-sodium salt substitutes (LSSS) are modified salts that replace a portion of sodium chloride with potassium chloride. This simple substitution preserves the familiar taste of salt while reducing sodium intake and increasing potassium intake, both of which help lower blood pressure. Several LSSS products are already available on the UK market, making this an accessible and practical option for improving heart health.

#### Proven Benefits and Growing Global Support

**There is now strong international evidence supporting the switch from regular salt to LSSS:**

2021: The Salt Substitute and Stroke Study (SSaSS) in China found a 12% reduction in all-cause mortality, a 13% reduction in cardiovascular events, and a 14% reduction in stroke with LSSS use.

2022: A Cochrane review concluded that LSSS reduced blood pressure and cardiovascular risk in adults, with no evidence of serious harm.

2024: European Society of Cardiology (ESC) hypertension guidelines recommend reducing salt intake and increasing potassium intake to lower blood pressure, and advise that LSSS may be considered for people with hypertension without moderate to advanced chronic kidney disease.

2025: The World Health Organization (WHO) released a guideline on the use of LSSS for policymakers, programme managers, health professionals, and other stakeholders seeking to reduce sodium intake and lower

the risk of hypertension and related non-communicable diseases (NCDs) through a range of policy actions and public health interventions.

2025: The American Heart Association/ American College of Cardiology guideline recommends LSSS as a first-line lifestyle intervention to reduce blood pressure, except for individuals with serious kidney disease.

#### Potential Risk of Hyperkalaemia

Clinical trial data show that LSSS modestly increase serum potassium levels but do not cause clinical harm in the general population. The potential risk of high potassium (hyperkalaemia) is limited to a small group of individuals with advanced chronic kidney disease (CKD), those prescribed potassium-sparing medications, or those taking potassium supplements, and can be managed through:

- Appropriate labelling and public health messaging
- Education of consumers and healthcare professionals
- Targeted advice for individuals at risk

## NICE Position Statement and UK Scientific Guidance

The UK's Scientific Advisory Committee on Nutrition (SACN) and the Committee on Toxicity (COT) jointly concluded in their *2013 report* that LSSS offer public health benefits and are safe for most of the population. Building on this, *the NICE hypertension guidelines from 2019* recommend that clinicians encourage most people with hypertension to reduce salt intake or switch to salt substitutes as part of a broader strategy to reduce blood pressure.

## Policy Recommendations

The UK has a renewed opportunity to lead global salt reduction efforts by supporting the safe and appropriate use of LSSS alongside continued efforts to reduce overall salt intake. Given the growing and robust body of international evidence, organisations responsible for clinical guidance, national healthcare delivery, and public health are well placed to advance this evidence-based intervention.

This includes guidance-setting bodies such as the National Institute for Health and Care Excellence (NICE) and the British and Irish Hypertension Society (BIHS); healthcare system leaders including NHS England; and public health organisations, including the Department of Health and Social Care (DHSC) and its Office for Health Improvement and Disparities (OHID), as well as other relevant bodies. To support the safe and effective use of LSSS, we recommend the following actions:

### 1. NICE: Clinical Guidance and Quality Standards



*NICE should consider reviewing and incorporating evidence on LSSS into relevant clinical guidelines and quality standards, particularly:*

- Hypertension (NG136)
- Cardiovascular disease: risk assessment and reduction (CG181)
- Stroke and transient ischaemic attack in over 16s: diagnosis and initial management (NG128)

Endorsing LSSS as a safe and effective sodium-reduction strategy, while recognising populations for whom it may not be suitable, would send a strong signal to clinicians, commissioners, and the food system that LSSS has a role in routine prevention strategies.

### 2. NHS England and Public Health Bodies: Implementation and Messaging



*NHS England, the Department of Health and Social Care (DHSC), including its Office for Health Improvement and Disparities (OHID), and other relevant public health bodies are encouraged to incorporate LSSS-related advice into public health and dietary messaging by:*

- Identifying opportunities for health professionals to recommend LSSS to appropriate patients, such as those with hypertension or at risk of CVD, as part of dietary advice;
- Aligning public health messaging with WHO recommendations on sodium and potassium intake, including the safe and appropriate use of LSSS.

### 3. Research Funders and the Research System: Evidence Generation



*Through its evidence review and guideline development functions, NICE, alongside research funders and academic partners, can help identify priority evidence gaps and evaluation needs, particularly in relation to:*

- UK-specific data on effectiveness, feasibility, cost-effectiveness, and equity impacts;
- Safe use in specific subgroups, including people with chronic kidney disease, those taking potassium-retaining medications, or those using potassium supplements.

This would support future evidence reviews and strengthen the basis for national decision-making.



#### 4. Cross-System Collaboration: Policy Coherence and Scale-Up

- National organisations should collaborate to ensure that guidance and policy positions on LSSS are aligned and inform wider salt reduction strategies and implementation plans. This includes NICE, OHID, NHS England, the Food Standards Agency (FSA), and other relevant bodies.
- Through coordinated action, these organisations can support a coherent, system-wide approach to salt reduction and cardiovascular prevention. Alongside continued efforts to reduce overall salt intake, promoting the appropriate use of LSSS offers a scalable, evidence-based, population-level intervention with the potential to improve cardiovascular health and save lives.

## Reversing Stalled Progress to Reduce Salt Intake in the UK

The UK has historically been a global leader in salt reduction, achieving significant early successes, primarily through food reformulation. However, over the past decade, progress has stalled. Reducing salt intake remains challenging for consumers, food manufacturers, and restaurants, and this difficulty is shared across many countries.

A promising and potentially more feasible approach is not to replace efforts to reduce salt intake, but to complement them by encouraging a shift from regular salt to lower-sodium salt substitutes (LSSS). While reducing overall salt consumption remains beneficial, LSSS may offer an additional and practical strategy for lowering sodium intake. These products reduce sodium (Na) intake while increasing potassium (K) intake, offering dual cardiovascular health benefits, as demonstrated by robust randomized controlled trial (RCT) evidence.

However, scaling up the use of LSSS will require coordinated, multisectoral action. Governments must lead by creating enabling environments, using policy levers, public procurement policies, fiscal incentives, and potentially mandating LSSS use in specific settings.

The food industry must be engaged to reformulate products and actively promote LSSS. Meanwhile, consumer uptake hinges on awareness, affordability, and cultural acceptance, which can be hindered by established cooking practices and taste preferences. Without alignment across government, industry, and consumers, adoption is likely to remain slow and uneven.

While the health benefits of LSSS are substantial, including reductions in blood pressure and cardiovascular risk, the strategy also raises concerns around cost and the potential risk of hyperkalaemia. Hyperkalaemia is a condition where potassium

levels in the blood become too high, which can affect heart rhythm and, in severe cases, be life-threatening. A recent commentary by Trieu et al. (2025) reinforces that potassium-enriched salt substitutes can safely support both cardiovascular and kidney health when used appropriately, even in populations with elevated baseline risk (*The Lancet Global Health, 2025*).

This risk is primarily relevant for individuals with impaired potassium excretion, such as those with advanced chronic kidney disease (CKD stages 4–5), or individuals taking potassium-sparing diuretics or potassium supplements. Therefore most people with CKD, particularly those with early-stage disease, could safely benefit from LSSS when supported by simple risk-mitigation strategies (*Hypertension, 2024*).

However, although around 10% of the global population has chronic kidney disease, only about 2% progress to late-stage disease where hyperkalaemia becomes a serious risk, and from large-scale trials, there is no evidence of an increased incidence of clinically significant hyperkalaemia with LSSS use (*Hypertension, 2024*).

Reflecting on this evidence, if choosing to use table salt, the WHO suggests replacing regular table salt with LSSS that contain potassium (conditional recommendation). This recommendation is intended for adults (not pregnant women or children) in general populations, excluding individuals with kidney impairments or with other circumstances or conditions that might compromise potassium excretion (*WHO, 2025*).

Integrating this updated perspective into UK policy would enable broader population benefit while maintaining appropriate protections for those at risk.

**To mitigate these risks a tailored rollout strategy should include:**

- **Clear front-of-pack labelling** with appropriate health warnings.
- **Clear and consistent potassium content labelling**, including the amount of potassium per serving, to support informed and safe use of LSSS.
- **Public education campaigns** to raise awareness of who should and shouldn't use LSSS.
- **Targeted guidance for at-risk groups**, especially those with diagnosed kidney disease or on medications that influence potassium levels.

These safeguards can help ensure both safety and public trust in LSSS as a viable public health intervention.

In the UK, implementation would initially focus on discretionary use and collaboration with key stakeholders such as food manufacturers and the hospitality sector. By embracing this innovative approach, the UK can reinvigorate its salt reduction agenda and achieve significant, long-term public health gains.





## Background

In the UK, high blood pressure is the single biggest risk factor for death, contributing to thousands of preventable deaths each year. Cardiovascular diseases (CVDs), including heart attacks, strokes, and heart failure, remain a major public health challenge, with hypertension as the foremost modifiable risk factor globally. Excessive sodium consumption, primarily from salt (sodium chloride), is a well-established contributor to high blood pressure and associated CVDs.

Lower-sodium salt substitutes (LSSS) offer a simple but powerful intervention. These products work by replacing a portion of sodium with potassium or other minerals to reduce cardiovascular risk. The World Health Organization (WHO) recognises their potential in its 2025 guideline on the use of LSSS, recommending the replacement of regular salt with LSSS as a key strategy to reduce hypertension and cardiovascular disease. The WHO also calls on member states to integrate LSSS into national salt reduction strategies, highlighting their cost-effectiveness, scalability, and public health impact.

In response to this growing body of evidence and global momentum, this evidence brief summarises key findings and resources to support UK policymakers, NGOs, and health advocates in supporting the uptake of LSSS as a proactive, population-wide measure to improve cardiovascular health.

The George Institute has led research over the past twenty years into the health benefits of this approach to sodium reduction, with the completion of the *China Salt Substitute and Stroke Study (SSaSS) in 2021*. While SSaSS was conducted in a non-Western setting, its findings are supported by a growing body of international evidence, including studies in high-income and Western countries, demonstrating that switching from regular salt to LSSS is both effective and feasible across diverse populations and dietary contexts.

Critically, acceptability of LSSS is high: in the SSaSS trial, 92% of more than 10,000 participants assigned to LSSS were still using it after five years, demonstrating sustained use at scale. Collectively,

the evidence shows that a widespread switch to LSSS is very likely to generate substantial health gains, is acceptable to consumers, practical for governments to support, and sustainable in the long term.

Importantly, the UK population also falls short of recommended potassium intake levels. Most people in the UK do not meet the daily recommended intake of 3,500 mg of potassium, which is essential for maintaining healthy blood pressure and reducing cardiovascular disease risk. Increasing potassium intake, alongside reducing sodium, is a well-established strategy for improving cardiovascular outcomes.

### Potential Risk of Hyperkalaemia

From clinical trials among the general population, there is no evidence that LSSS cause clinically significant hyperkalaemia. However, high-risk groups, such as individuals with chronic kidney disease, have typically been excluded from these trials. There is a recognised rationale for increased risk in specific populations, particularly those with severe chronic kidney disease or those taking potassium supplements or potassium-sparing diuretics, if these products are consumed in excess. These risks are generally well understood by healthcare professionals and individuals managing such conditions. Nonetheless, they can be further mitigated through clear labelling of potassium content on food products and salt substitutes, targeted education for vulnerable groups, and appropriate professional guidance.

Importantly, risk–benefit modelling studies conducted in both *China* and *India* reinforce the conclusion that the population-level benefits of switching to LSSS significantly outweigh the potential risks. For example, modelling from China estimated that replacing regular salt with LSSS could prevent approximately 462,000 cardiovascular deaths annually—a benefit-to-risk ratio of more than 45 to 1 (*BMJ*, 2020). Similarly, modelling in India projected that 214,000 (95% uncertainty interval, 92,764–353,054) deaths



could be averted each year through nationwide implementation of LSSS, again with a substantial net health benefit, even under conservative assumptions regarding hyperkalaemia risk (*Hypertension, 2023*).

Taken together, the evidence strongly supports the conclusion that while vigilance is warranted for certain at-risk groups, the overall use of LSSS remains a safe and highly effective public health strategy to reduce cardiovascular disease at the population level.

The evidence presented here strongly supports the widespread switch from regular salt to LSSS as a pragmatic and effective strategy to enhance cardiovascular health. LSSS have consistently demonstrated substantial reductions in stroke, major cardiovascular events, and overall mortality, with no significant safety concerns.

Switching from regular salt to LSSS is a low-cost, life-saving intervention and should be promoted by governments and used by the food industry, salt manufacturers, and consumers.

## Overall Conclusion

Alongside continued efforts to reduce overall salt intake, the evidence supports the wider use of LSSS as a pragmatic, effective, and scalable strategy to reduce hypertension and improve cardiovascular health in the United Kingdom. With appropriate safeguards for at-risk groups, LSSS offer an important opportunity to strengthen national salt reduction efforts and support population-level prevention of cardiovascular disease.

Switching from regular salt to LSSS is recommended for the general population. Caution remains appropriate for individuals with advanced kidney disease due to the potential risk of hyperkalaemia, although emerging evidence indicates that many people with earlier-stage CKD may also be able to benefit safely with appropriate clinical guidance.

Together, these findings point to a clear opportunity to improve public health in the UK by addressing the persistent sodium-potassium imbalance in contemporary diets. They also highlight an important role for policymakers, healthcare organisations, and industry stakeholders in supporting the safe and appropriate use of LSSS as part of broader strategies to reduce hypertension and cardiovascular risk.

# A Call to Action for a National Shift to Lower-Sodium Salt Substitutes

The collective evidence from high-quality trials, systematic reviews, and modelling studies across diverse populations and geographies strongly supports a population-wide shift from regular salt to LSSS as a highly effective, feasible, and scalable strategy to reduce the global cardiovascular disease burden.

The Salt Substitute and Stroke Study, alongside multiple corroborating studies, including those conducted in Western, low- and middle-income, and elderly care populations, has demonstrated that switching to LSSS can lead to meaningful reductions in blood pressure, stroke, major cardiovascular events, and all-cause mortality.

These benefits are not only clinically significant but also offer strong economic value, with large-scale modelling in China and India projecting that widespread adoption of LSSS could prevent hundreds of thousands of deaths annually, reducing long-term healthcare costs and easing the burden on health systems.

Given the growing and robust body of international evidence, we urge organisations responsible for clinical guidance, national healthcare delivery, and public health to consider how the promotion and appropriate use of low-sodium salt substitutes (LSSS) can be better reflected in national clinical and public health guidance, particularly in relation to the prevention and management of hypertension, cardiovascular disease (CVD), and stroke.

This includes guidance-setting bodies such as the National Institute for Health and Care Excellence (NICE) and the British and Irish Hypertension Society (BIHS); healthcare system leaders including NHS England; and public health organisations, including the Department of Health and Social Care (DHSC) and its Office for Health Improvement and Disparities (OHID), as well as other relevant bodies. Within this remit, we recommend the following actions:

## 1. NICE: Clinical guidance and quality standards

NICE should consider reviewing and incorporating evidence on LSSS into relevant clinical guidelines and quality standards, particularly:

- Hypertension (NG136)
- Cardiovascular disease: risk assessment and reduction (CG181)
- Stroke and transient ischaemic attack in over 16s: diagnosis and initial management (NG128)

Endorsing LSSS as a safe and effective sodium-reduction strategy, while recognising populations for whom it may not be suitable, would send a strong signal to clinicians, commissioners, and the food system that LSSS has a role in routine prevention strategies.

## 2. NHS England and public health Bodies: Implementation and messaging

NHS England, the Department of Health and Social Care (DHSC), including its Office for Health Improvement and Disparities (OHID), and other relevant public health bodies are encouraged to incorporate LSSS-related advice into public health and dietary messaging by:

- Identifying opportunities for health professionals to recommend LSSS to appropriate patients (e.g. those with hypertension or at risk of CVD), as part of dietary advice;
- Aligning dietary messaging with WHO guidance on sodium and potassium intake, including the safe use of LSSS.

## 3. Research funders and the research system: Evidence generation

NICE, alongside research funders and academic partners, should help identify priority evidence gaps and evaluation needs, particularly in relation to:

- UK-specific data on effectiveness, feasibility, cost-effectiveness, and equity impacts;
- Safe use in specific subgroups, including people with chronic kidney disease, those on potassium-retaining medications or using potassium supplements.

This would support future evidence reviews and strengthen the basis for national decision-making.

## 4. Cross-system collaboration: policy coherence and scale-up

National organisations should collaborate to ensure that guidance and policy positions on LSSS are aligned and inform wider salt reduction strategies and implementation plans. This includes NICE, the Office for Health Improvement and Disparities, NHS England, and the Food Standards Agency.

Through coordinated action, NICE can ensure that any recommendations it makes contribute to a coherent, system-wide approach to salt reduction. In doing so, NICE would reinforce the United Kingdom's position as a global leader in cardiovascular disease prevention and help lay the foundation for a scalable, evidence-based strategy to improve population health.



## Acknowledgements

This policy brief was developed by The George Institute for Global Health UK and Imperial College London, drawing on a growing body of international and UK-focused research into the role of lower-sodium salt substitutes (LSSS) in reducing high blood pressure and preventing cardiovascular disease.

The George Institute has been at the forefront of global salt reduction efforts for over two decades. Our work includes major clinical trials, such as the Salt Substitute and Stroke Study (SSaSS), policy engagement with the World Health Organization,

and ongoing support to governments, regulators, and civil society to advance sodium reduction strategies.

This brief forms part of our wider evidence and advocacy initiative, Switch the Salt, aimed at supporting the safe, equitable, and widespread adoption of LSSS in the UK and globally. The programme is working with health professionals, government agencies, retailers, and food manufacturers to explore policy pathways, consumer awareness strategies, and regulatory enablers for LSSS.

## Annexure

### Evidence summary

#### 1. Evidence for LSSS on Cardiovascular Disease and Mortality

##### New England Journal of Medicine Study (NEJM, 2021)

**Reference:** Neal B, Wu Y, Feng X, et al. *N Engl J Med.* 2021;385(12):1067-1077. doi:10.1056/NEJMoa2105675

**Study Focus:** Investigated the effect of LSSS on cardiovascular outcomes in a large-scale randomised trial.

**Results:** LSSS use led to a 14% reduction in stroke, 13% reduction in major cardiovascular events, and 12% reduction in all-cause mortality.

**Interpretation:** Substitution of regular salt with LSSS significantly reduces cardiovascular risk and mortality.

**Safety:** No significant increase in serious adverse events attributed to hyperkalaemia.

##### Systematic Review and Meta-analysis (Heart, 2022)

**Reference:** Yin X, Rodgers A, Perkovic A, et al. *Effects of salt substitutes on clinical outcomes: a systematic review and meta-analysis.* *Heart.* 2022;108:1608–1615. doi:10.1136/heartjnl-2022-321332.

**Study Focus:** Assessed clinical outcomes associated with LSSS use.

**Results:** LSSS reduced systolic blood pressure by ~7 mmHg and lowered risks of stroke and CVD death.

**Interpretation:** Confirms cardiovascular benefit of salt substitutes across diverse populations.

**Safety:** Increased serum potassium levels, but no adverse clinical outcomes.

#### 2. Evidence for LSSS on CVD and Mortality in Subgroups

##### Cochrane Review (2022)

**References:** Brand A, Visser ME, Schoonees A, Naude CE. *Replacing salt with low-sodium salt substitutes (LSSS) for cardiovascular health in adults, children, and pregnant women.* *Cochrane Database Syst Rev.* 2022;8:CD015207. doi:10.1002/14651858.CD015207.

**Study Focus:** Evaluated LSSS in adults, children, and pregnant women.

**Results:** Slight reductions in blood pressure, non-fatal stroke, and heart disease mortality in adults.

**Interpretation:** Likely benefits extend to multiple subgroups.

**Safety:** Potassium increase not linked to adverse effects; limited data on rare harms.

##### Nature Medicine Study in Elderly Populations (2023)

**Reference:** Yuan Y, Jin A, Neal B, Feng X, Qiao Q, Wang H, Zhang R, Li J, Duan P, Cao L, Zhang H, Hu S, Li H, Gao P, Xie G, Yuan J, Cheng L, Wang S, Zhang H, Niu W, Fang H, Zhao M, Gao R, Chen J, Elliott P, Labarthe D, Wu Y. *Salt substitution and salt-supply restriction for lowering blood pressure in elderly care facilities: a cluster-randomized trial.* *Nat Med.* 2023 Apr;29(4):973–981. doi:10.1038/s41591-023-02286-8.

**Study Focus:** Assessed salt substitution in elderly care facilities.

**Results:** 7.1 mmHg drop in systolic BP; reduced cardiovascular events.

**Interpretation:** Demonstrates effectiveness and tolerability in elderly populations.

**Safety:** Modest rise in potassium; no associated clinical harm.

#### 3. Evidence for No Harms Relating to LSSS

##### Modelled Risk in Chronic Kidney Disease Populations

**References:** Marklund M, Singh G, Greer RC, Cudhea F, Matsushita K, Micha R, et al. *Estimated population-wide benefits and risks in China of lowering sodium through lower-sodium salt substitution: modelling study.* *BMJ.* 2020;369:m824. doi:10.1136/bmj.m824; Marklund M, Singh G, Greer RC, et al.

*Estimated Benefits and Risks of Using a Reduced-Sodium, Lower-Sodium Salt Substitute in India: A Modelling Study.* *Hypertension.* 2021;77(6):2084–2092. doi:10.1161/HYPERTENSIONAHA.120.16890.

**Study Focus:** Estimated population-wide risk-benefit ratios.

**Results:** In China, estimated 462,000 CVD deaths prevented vs 10,000 hyperkalaemia deaths. In India, similar net benefit observed.

**Interpretation:** Risk of hyperkalaemia is limited and outweighed by cardiovascular benefits.

**Safety:** Supports use with appropriate labelling and education.

#### SACN and COT UK Report (2013)

**Reference:** *Scientific Advisory Committee on Nutrition (SACN) and Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment (COT). Potassium-based sodium replacers: assessment of the health benefits and risks of using potassium-based sodium replacers in foods in the UK. 2013.*

**Study Focus:** Evaluated health risks and benefits of potassium-based salt replacers.

**Results:** Identified modest benefits and low risk.

**Interpretation:** Supports cautious use, particularly in chronic kidney disease populations.

**Safety:** No adverse clinical outcomes found.

#### 4. Evidence for Scaling Up

##### Implications for Scale-Up Study (Hypertension, 2023)

**Reference:** *Yin X, Paige E, Tian M, et al. The Proportion of Dietary Salt Replaced with Lower-Sodium Salt in the SSaSS: Implications for Scale-Up. Hypertension. 2023;80(5):956-965. doi:10.1161/HYPERTENSIONAHA.122.20115.*

**Study Focus:** Estimated effects of partial salt replacement.

**Results:** 72% substitution still delivered significant health gains.

**Interpretation:** Demonstrates that even partial adoption of LSSS can lead to measurable public health impact.

**Safety:** Mean serum potassium increased by 0.23 mmol/L in the intervention group; however, this was not associated with an increased rate of clinically significant hyperkalaemia or adverse events.

##### Evidence on Consumer Behaviour and Acceptability

###### SSaSS Adherence Data

**Reference:** *Neal B, Wu Y, Feng X, Zhang R, Zhang Y, Shi J, et al. Effect of Salt Substitution on Cardiovascular Events and Death. N Engl J Med. 2021 Sep 16;385(12):1067-1077. doi: 10.1056/NEJMoa2105675.*

**Study Focus:** Assessed long-term adherence to LSSS.

**Results:** 92% adherence after five years.

**Interpretation:** High acceptability and sustainability.

**Safety:** Long-term use did not result in increased adverse events; serum potassium levels were elevated slightly but remained within safe limits in the general population.

###### Systematic Reviews

**References:** *Brand A, Visser ME, Schoonees A, Naude CE. Replacing salt with low-sodium salt substitutes (LSSS) for cardiovascular health in adults, children, and pregnant women. Cochrane Database Syst Rev. 2022;8:CD015207. doi:10.1002/14651858.CD015207;*

*Yin X, Rodgers A, Perkovic A, et al. Effects of salt substitutes on clinical outcomes: a systematic review and meta-analysis. Heart. 2022;108:1608-1615.*

**Study Focus:** Reviewed the effects of salt substitutes on health outcomes, consumer acceptability, and behaviour change.

**Interpretation:** Behaviour change is facilitated by factors such as taste, familiarity, and ease of substitution. Interventions including public education and institutional implementation improve uptake.

**Safety:** Reviews noted mild elevations in potassium levels with no corresponding increase in adverse events, supporting safe implementation at population level.

#### 5. Evidence on Food Industry Reformulation

##### SACN/COT Report (2013)

**Reference:** *Scientific Advisory Committee on Nutrition (SACN) and Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment (COT). Potassium-based sodium replacers: assessment of the health benefits and risks of using potassium-based sodium replacers in foods in the UK. 2013.*

**Study Focus:** Evaluated feasibility of reformulation in food manufacturing.

**Results:** Technically viable and health-promoting.

**Interpretation:** Endorses reformulation as part of public health strategy.

**Safety:** Identified no adverse health impacts associated with food reformulation using potassium-based sodium replacers when used appropriately.

##### WHO Guidelines and Endorsement

**Reference:** *World Health Organization. Use of LSSS: WHO guideline Geneva; World Health Organization; 2025. Licence: CC BY-NC-SA 3.0 IGO.*

**Recommendation:** To reduce blood pressure and risk of cardiovascular diseases, WHO has recommended reducing sodium intake to less than 2 g/day (strong recommendation). In this context, using less regular table salt is an important part of an overall sodium reduction strategy. If choosing to use table salt, WHO suggests replacing regular table salt with LSSS that contain potassium (conditional recommendation). This recommendation is intended for adults (not pregnant women or children) in general populations, excluding individuals with kidney impairments or with other circumstances or conditions that might compromise potassium excretion.

**Safety:** Moderate-certainty evidence supports the safety of LSSS in the general population. Use of LSSS resulted in modest increases in serum potassium but no significant increase in risk of hyperkalaemia. WHO advises that LSSS should be clearly labelled and accompanied by public education and risk communication, especially in settings with undiagnosed chronic kidney disease.

**Reference:** *World Health Organization. Global report on hypertension: The race against a silent killer. 2023.*

**Interpretation:** Industry reformulation encouraged as critical part of salt reduction.

**Recommendation:** Promote LSSS use in processed foods.

**Safety:** WHO identifies the intervention as safe and beneficial for public health, provided that product labelling and guidance are clear and targeted for at-risk groups.



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*Switch the Salt – The George Institute*

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