Action on Salt

Action on Salt Response to the Proposed Salt Targets

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Action on Salt (formerly Consensus Action on Salt & Health, CASH) is an organisation supported by 24 expert members. We are working to reduce the salt intake of the UK population to prevent deaths, and suffering, from heart disease, stroke, kidney disease, osteoporosis, stomach cancer and obesity. For more information, please contact: Mhairi Brown, Policy Coordinator mhairi.brown@qmul.ac.uk

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Summary

- With strong leadership, reformulation has the potential to be the most effective public health programme available, to tackle the huge burden of diet-related disease and ill-health
- To be effective, a salt reduction programme is gradual, has a level-playing field and is independently and transparently monitored and evaluated, with targets reviewed and reset regularly
- Impact on population salt intake measured as a priority
- International examples of innovative programmes to deal with high salt intake could be adapted for the UK setting to help drive reformulation, including mandatory targets and clear, mandatory labelling
- The Out of Home sector (OOH) must be brought on board, and make their nutritional information available for more scrutiny due to contribution of OOH food to daily salt intake
- Health effects of salt must be communicated to the public and overwhelming evidence considered when setting policies
- Salt reduction is cost-effective, benefits all health and should have a higher priority in health policy

Our recommendations

- Previous salt targets should be maintained and expanded to all processed food with added salt
- Change4Life must highlight salt and an additional public awareness campaign must be implemented
- Urinary sodium measurements must take place at regular intervals (every 2-3 years) to track progress and inform policy
- Annual, transparent monitoring reports are required
- Mandated targets, including a target of 1g/100g for all bread products could help bring OOH in line with retail sector
- Fiscal measures such as levies on industry could be applied to the main contributors of salt to the UK diet, including categories such as processed meat
- Front of pack, traffic light labelling should be made mandatory
- An information sharing platform must be developed to allow SME's to access necessary information to engage with reformulation programmes
- DHSC must release guidelines on the use of potassium salt
- Strict targets must be set for OOH, aligning them with retail targets, which are thoroughly disseminated to the sector. We recommend progress monitoring be taken on by local authorities, potentially as part of the trailblazer programme
- All OOH companies should at a minimum be required to provide nutrition information online, with a phased approach to providing that information at the point of sale
- If OOH sector does not engage with voluntary salt reduction measures, we recommend that DHSC review menu labelling and implement high salt warning labels on all dishes with more than 5g per portion, and lower thresholds for children's meals.

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Why a salt reduction programme is needed

We were pleased to see salt mentioned as a priority in the Green Paper. Based on current trends in salt reduction (0.8g reduction between 2005 and 2014) and assuming no salt reductions have been made since then, we estimate that 3,650 deaths per year would have occurred from stroke and heart attack which could have been prevented, over half of which would have been premature. This is a tragedy for public health.

Reducing salt is by far the most simple and cost effective public health measure to improve health and reduce incidence of cardiovascular disease, as evidenced on a global scale (1-4). Chronic excess salt intake is related to numerous negative health outcomes and in the UK average salt intake is a third higher (8.1g/day) than the recommended maximum intake of 6g (5). Despite this, awareness of salt and concern of salt levels in food is falling, as demonstrated by the latest Food Standards Agency (FSA) Public Attitudes Tracker (6). The health effects of salt are frequently forgotten in healthy diet messaging but a high salt intake affects the health of the whole population and it is vital that the overwhelming evidence linking salt to health is considered when developing salt reduction policies. The National Institute for Health and Care Excellence (NICE) recommend salt intake should be reduced further, to 3g per day (7). With this in mind, strict measures should be explored, particularly when considering children. Dietary habits in childhood and adolescence influence eating patterns in later life. Liking salt and salty foods is a learned taste preference and the recommendation that the adult population reduce their salt intake will be more successful if children do not develop a preference for salt in the first place. This can only be achieved if children are given a diet which is low in salt (8, 9).

Salt reduction currently sits within Public Health England's reformulation programme, which is linked to the government's Childhood Obesity Plan. However, as we lay out below, salt reduction is vital for everyone's health, including children.

Blood Pressure

The causal relationship between salt intake and blood pressure is well established, as evidenced by several lines of research including animal experiments, human genetics, physiological studies, epidemiology, migration, population-based intervention studies, and clinical trials (10). Two meta-analyses have demonstrated that a modest reduction in salt intake over a longer period of time (which corresponds to the current public health recommendations) has a significant effect on blood pressure in those with and without high blood pressure, in men and women, and in all ethnic groups, with a linear dose-response relationship within the range of 3 to 12g/day.

Raised blood pressure throughout its range, starting from 115/75mmHg, is a major cause of cardiovascular disease (CVD), including stroke and heart disease, which is a leading cause of death and disability in the UK (11). A reduction in salt intake lowers blood pressure, which is associated with a lower risk of CVD and all-cause mortality (12-16).

There is compelling evidence that, in children and adolescents, salt intake plays an important role in regulating blood pressure and a reduction in salt intake lowers blood pressure (17, 18). Although hypertension and CVD events occur most frequently after the age of 40, there is clear evidence that blood pressure tracks from childhood into adult life. Individuals with higher blood pressure in earlier life are more likely to develop hypertension later in life. Studies have shown that the tracking correlation increases throughout childhood, peaking at late adolescence or early 20s (19, 20).

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Kidney Health

There is convincing evidence that salt intake is related to chronic kidney disease (21). High salt intake is linked to many risk factors for the progression of the disease, such as raised blood pressure, fluid retention, proteinuria, inflammation, oxidative stress, and endothelial dysfunction (22, 23). A Cochrane review found consistent evidence that reducing salt intake in those with chronic kidney disease had health benefits beyond the lowering of blood pressure, such as a lower risk of proteinuria (24). A recent study demonstrated that salt restriction could slow the progression of autosomal dominant polycystic kidney disease (25).

Stomach Cancer

The evidence has consistently shown a link between salt intake and stomach cancer for many years. High intra-gastric sodium causes mucosal damage and inflammation, which can increase cell proliferation and endogenous mutations (26-28). High salt intake can also change the viscosity of the protective mucous barrier and increase the colonization by H. pylori, which is a recognised risk factor for stomach cancer (29, 30). Furthermore, a more recent meta-analysis of 268,718 participants from 10 cohorts found an association between high salt intake and an increased risk of stomach cancer (31).

Osteoporosis

A high salt diet increases the risk of renal stones by increasing urinary calcium excretion as calcium is the major component of most urinary stones (32). An increase in salt intake leads to a negative calcium balance, which stimulates compensatory mechanisms to increase intestinal absorption of calcium and mobilize calcium from the bone. Cohort studies have shown that the loss of hipbone density in post-menopausal women was related to baseline salt intake and this association was as strong as that related to calcium intake (33).

Obesity

A high salt intake is associated with an increased risk of overweight and obesity through increasing sugar-sweetened beverage consumption (34, 35). There is also evidence suggesting a direct link between salt intake and overweight/obesity, independent of total calorie intake or SSB consumption (36). An observational study in Portugal found higher salt intakes in boys aged 8-9 years was associated with higher systolic blood pressure, particularly in those who were overweight or obese (37). A further systematic review and meta-analysis of observational studies found an association with higher sodium consumption and greater body mass index and waist circumference (38). Animal experiments indicated that salt intake might have a direct effect on body fat metabolism (39).

Cost-effectiveness

Numerous cost-effective analyses from high-, middle- and low-income countries have shown that population-wide salt reduction is highly cost-effective in reducing death from cardiovascular disease and premature deaths (4, 40-42). The UK's salt reduction programme has prevented ≈9,000 CVD deaths per year and saved the healthcare service ≈£1.5 billion per annum (7). In the US, a 3g/day reduction in salt intake is estimated to prevent 146,000 new CVD cases and more than 40,000 deaths per year (40). The health impact of achieving this reduction would be on par with that from reductions in tobacco use or obesity, saving 194,000-392,000 quality-adjusted life-years and $10-24 billion in health care costs annually (41).

Essential elements of a robust salt reduction programme

Action on Salt have identified the essential elements of an effective salt reduction programme (43), which include:

- determining salt intake by measuring 24 hour urinary sodium in a representative sample of the population
- setting gradual, achievable and progressively lower salt targets for different categories of food, with a clear time frame for the food industry to achieve
- working with and engaging the food industry to encourage reformulation of food to contain less salt to meet these targets
- introducing clear labelling of salt content in food, on front of pack and on menus
- conducting consumer awareness campaigns of the health benefits, and where salt is hidden in the diet
- monitoring progress

This model was adapted by the Food Standards Agency (FSA) in their world leading salt reduction policy. Under their leadership there was a reported 20-40% reduction in the salt content of many food products, and between 2003 and 2011 average population salt intake fell by 15%, i.e. from 9.5 to 8.1g/day. This was accompanied by a significant fall in population blood pressure and mortality from stroke and ischaemic heart disease (14). NICE estimated that salt reduction campaigns have prevented around 9,000 deaths due to stroke and ischaemic heart disease a year, resulting in significant healthcare savings (7).

Salt targets

Salt reduction targets were set across more than 80 categories of food in 2006, to cover all processed foods with added salt. The intention was to gradually reduce salt content across all products to a) reduce population salt intake and b) reduce taste preference for salt. In doing so, we can ensure the sustainability of the policy and help prevent consumers from adding extra salt to their food at the table. However, the Green Paper highlights that the 2023 salt reduction targets will only cover the main contributors of salt intake.

We strongly urge DHSC to maintain previous salt targets and continue salt reduction across all processed food with added salt, including those categories that currently do not have a target, such as hot sauces and marinades.

The 2017 targets, set in 2014, were not as low as originally proposed, or were set new maximum targets that were higher than the average salt content of products in 2013, leaving industry unchallenged (44). This was most flagrant in meat and cheese products, both of which figure among the top 10 contributors to salt intake in the UK population (45). Some members of industry might argue that these targets are unachievable, however our research shows that there is a variation in the salt content of ham and bacon sold at major retailers – Asda, Tesco and Sainsbury's – with the salt content of ham ranging from 1.3g to 2.8g per 100g and the salt content of bacon ranging from 1.98g to 5g per 100g. This clearly demonstrates that it is possible to produce ham and bacon with less salt and if some responsible companies are able to lower salt in products with no health and safety issues, then all should be encouraged to follow their example. If companies refuse to comply with voluntary measures, then additional levers such as mandated targets or fiscal measures should be applied.

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Public Awareness Campaign

The FSA developed a successful public awareness programme featuring Jenny Éclair and 'Sid the Slug', which ran from 2004-2009 (46). Within a year, the proportion of people expressing awareness of the need to not exceed 6 g a day had risen from 3% to 34% (47). However, there have been no national messages since on the importance of reducing salt in the diet. While behaviour change programmes have been shown to have varying levels of success in achieving impact (3), the FSA's public awareness programme created public demand for lower salt foods which acted as an added incentive for food industry to comply.

Change4Life is the public health platform for messaging at PHE, designed to encourage the public to 'eat well, move more, live longer'. The campaign covers 6 main areas - sugar swaps, saturated fat, salt, snacks, '5 a day' and labelling. However, most Change4Life messages cover sugar and obesity with a lack of focus on salt. Technology could be harnessed to help increase awareness of salt. A recent study found that evidence-based eHealth tools increased awareness of salt intake and its effect on health significantly (48).

We strongly urge PHE to include a focus on salt in Change4Life and we urge DHSC to approve the implementation of a public awareness campaign on salt and its effects on health, as an integral part of the salt reduction programme.

Urinary Sodium Analysis

Regular 24 hour urinary sodium analyses to measure population salt intake are required to evaluate the effectiveness of a salt reduction policy. Urinary sodium measurements took place in 2006, 2008, 2011 and 2014 (5, 49-51). While we are aware urinary sodium analysis is currently taking place and is due next year, it has been 5 years since salt intake was measured.

Measurements must take place at regular intervals (every 2-3 years) to track progress and inform policy.

Monitoring

We have previously highlighted the issues that arose with the transfer of the salt reduction programme from the independent FSA to the Public Health Responsibility Deal (52). Research has since highlighted that stalled salt reduction could be associated with an extra 9,900 cases of cardiovascular disease and 1,500 cases of stomach cancer between 2011 and 2017. It is also estimated that between 2011 and 2017, the relaxation of the salt reduction targets cost the economy around £160 million. Without any further change or urgent action on salt reduction, an estimated further 26,000 cases of cardiovascular disease, and 3,800 cases of stomach cancer are likely to occur between 2019 and 2025, costing the economy an estimated additional £960 million (53).

Key to the success of the FSA's programme was their robust and public monitoring and evaluation of the programme, ensuring transparency. The Green Paper has highlighted that a monitoring report for the 2020 salt reduction targets will be released in 2024. We do not feel this evaluation report is sufficient to monitor progress, or encourage the food industry to work on salt reduction effectively.

Annual, transparent monitoring reports are required, as had been done under FSA management, to properly track food industry progress, inform policy and maintain momentum.

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How we can strengthen the UK's salt reduction policy

The Global Burden of Disease Study shows that suboptimal diets are associated with 11 million deaths worldwide, 10 million of which are caused by cardiovascular disease (54). Around 3 million of those deaths caused by CVD are linked to high salt intake and are entirely preventable. We must address high salt intake as a priority for the benefit of public health and to achieve the World Health Organization's target of lowering relative population salt intake by 30% by 2025 (55). International examples of salt reduction programmes can help strengthen the UK's salt reduction policy.

Mandatory salt reduction targets and taxes

While the UK's salt reduction programme has always been voluntary, many countries now have mandated salt targets in place which have helped ensure reformulation. **DHSC should review progress made with mandated targets in other countries.**

- Argentina

In 2013, Argentina introduced a 'sodium reduction law' (Act 26905) which came into effect in December 2014. The law mandated salt reduction targets with expected reductions in salt content of 5-18%, across three main food categories (with a total of 18 sub-categories), including meat and meat products, bread products and soups, dressings and preserves. The law also includes public awareness campaigns and a restaurant strategy to restrict saltshakers and create low-salt menus (56).

A 2015 analysis found that, of the 18 sub-categories covered by the legislation, 15 had already met their salt reduction target before the law was introduced. Between 2011 and 2016 the average daily consumption of salt fell from 11.2g/day to 9.2g/day, an 18% reduction (57). In 2018, a joint resolution ensured that the targets were reset to lower targets and a 2019 analysis found that 90% of products complied with their targets (58, 59).

- South Africa

South Africa's Minister of Health introduced legislation in 2013 to make salt reduction in the food industry mandatory. The first set of mandatory targets were due to be met by 2016, with a second set of targets due to be met by 2018. The targets cover a wide range of food categories including bread, breakfast cereals, margarines, meat products, snack foods and soup mixes. A 2017 analysis found that when the 2016 targets were implemented, two-thirds of products already met their targets and many more products had salt levels close to the target (60).

- Bread

Bread is a common staple food worldwide and is a main contributor of salt to diets in the UK, and many countries worldwide, due to the quantity of bread consumed each day. Consequently, bread has been a key target for salt reduction efforts worldwide. Mandated salt targets for bread exist in many countries including Portugal, Belgium, Netherlands, Paraguay, Bulgaria, Greece and Hungary (61). In the UK, salt levels in packaged sliced bread have seen more success with salt reduction, with more than 70% of packaged breads meeting their target compared to just 41% of breads produced in the out of home sector (62). A recent study found that consumption of low salt (0.3g/100g) bread over a five-week trial lowered salt intake by 1.7g/day and systolic blood pressure by 3.3mmHg (63).

A mandated target of 1g/100g for all bread products, including morning goods, could help bring OOH in line with retail sector. Industry must be encouraged to increase availability of low salt bread, particularly for consumers with hypertension.

- Taxes

Similar to mandatory targets, taxes could help reduce consumption of salt. In Mexico, the Ministry of Health implemented an 8% tax on nonessential food items with more than 285kcal per 100g in 2014. Such taxes led to a reduction in purchases of taxed foods by an average 6% over two years post-implementation (64).

The UK's Soft Drinks Industry Levy (SDIL) also sets a valuable precedent, as it is effectively a mandated sugar reduction target, with demonstrable success. The latest sugar reduction progress report showed that under Public Health England's voluntary sugar reduction programme, retailers and manufacturers have reduced sugar content in the main contributors of sugar to children's diets by 2.9% since 2015 and a 4.7% reduction in the out of home sector. In comparison, since April 2018 the Soft Drinks Industry Levy (SDIL) has achieved a 28.8% sugar reduction per 100ml in retailer own brand and manufacturer branded products and a 27.2% reduction per 100ml for drinks consumed out of home (65).

Fiscal measures such as levies on industry can drive reformulation work and could be applied to the main contributors of salt to the UK diet, including categories such as processed meat. PHE's 2018 analysis highlighted that only 43% of meat products had met their targets (62) but they contribute more than 25% to daily salt intake in adults.

Labelling

We welcome the review of nutrition labelling due to take place later this year. **Action on Salt recommend front of pack traffic light labelling be made mandatory but we also recommend a review of labelling in other countries.**

As part of the Chilean Food Labelling and Marketing Law, mandatory front of pack warning labels were implemented in June 2016 (66) on all products with:

- Salt – more than 0.75g per serve
- Calories – more than 200kcal per serve
- Sugar – more than 18g per serve
- Saturated fat – more than 3g per serve

While the impact evaluation of these labels is ongoing, initial results indicate that the labels are well known by mothers and children from different socioeconomic backgrounds and children in particular have positive attitudes towards the labels, acting as ambassadors for healthier products in their households (67). In 2017, Peru's Ministry of Health announced that they would also implement mandatory warning labels on products, following Chile's criteria, which were implemented in 2018 (68). Peru's labels differ from Chile's as they appear on advertisements in addition to packaging.

Small and Medium Enterprises (SMEs)

Public Health England's engagement with the out of home industry is currently limited to larger companies with more than 250 employees. However, in the accommodation and food services sector, there are a total of 168,040 total out of home businesses, of which 167,520 are SMEs. SME's account for 56% of turnover in the sector (69).

To ensure successful salt (in addition to sugar and calorie) reduction programmes and a gradual reduction in taste preference for salt, SMEs must be included in reformulation efforts. In Australia, the Healthy Eating Partnership develop innovative approaches to work with the food industry to lower salt. As part of this, they developed innovation grants for SMEs, who find reformulation

challenging due to limited resources for innovation, consumer testing and research and development (70). Food companies can also obtain advice from experts in food innovation and technology through a new online platform that was developed by Food Innovation Australia Ltd (FIAL).

We would encourage the UK's salt reduction policy to include guidelines on an information sharing platform, allowing SME's to access necessary information to engage with reformulation programmes.

Potassium Salt

In 2017, the Scientific Advisory Committee on Nutrition (SACN) and the Committee on Toxicity (COT) released their report on potassium-based sodium replacers, concluding that the government should encourage food industry to consider the use of these replacers to reduce the salt content of food (71).

Action on Salt want to see salt levels reduced and in turn a reduction in taste preference for salt. However, for the few food categories where salt reduction still proves to be challenging, replacing their salt content with potassium salt should be encouraged as a short-term measure, rather than avoiding resetting salt targets for those categories or removing those categories from the salt reduction programme.

We recommend that DHSC release guidelines on the use of potassium salt.

The need to include the Out of Home sector

Food and drink consumed when eating out or getting takeaways is a significant contributor to people's diets and at least a fifth of our salt intake comes from food consumed outside the home. Research also suggests that people are eating out more often; in 2014, 75% of people said they had eaten out or bought takeaway food in the past week, compared to 69% in 2010 (72, 73). Food consumed outside the home tends to be higher in salt than food bought in the retail sector.

OOH – defined as any outlet where food or drink is prepared in a way that means it is ready for immediate consumption by the person who buys it, including restaurants, cafes, coffee shops, pubs and bars serving food, and takeaway outlets – was not included in the original FSA salt reduction policy. The 2017 targets included targets for OOH meals but they were lenient and much higher than the retail targets (74). Despite this, 30% of products included in PHE's analysis of the targets had salt levels above their maximum target (62). This fails to create a level playing field, which is needed for all companies to fall in line and achieve the biggest reductions.

We strongly recommend stricter salt reduction targets for OOH, aligning them with retail targets, which are thoroughly disseminated to the sector. We recommend progress monitoring be taken on by local authorities, potentially as part of the trailblazer programme.

While monitoring of OOH is difficult, given that there are at least 370,000 catering outlets in England, an immediate solution would be to require nutrition labelling in the sector. We acknowledge that DHSC has consulted on implementing calorie labelling in OOH, the outcome of which is pending, but **all companies should at a minimum be required to provide nutrition information online, with a phased approach to providing that information at the point of sale.** All companies know what goes into their recipes and larger chains especially will have the resources required for nutritional analysis, and so there is no excuse for only the more responsible companies displaying this information. Given the justified and necessary response to allergy labelling, providing

information on what is in our food in the OOH sector is proportional. **For SMEs, knowledge sharing, access to nutrition experts and grants must be made available.**

In recognition of the impact the out of home sector has on our intake of products high in salt, sugar and fat, New York City was the first city to implement calorie labelling in the out-of-home sector (75). A modelling study suggests that since its implementation, the point-of-purchase provision of calorie information on chain restaurant menus reduced body mass index (BMI) by 1.5% and lowered the risk of obesity by 12% (76). Another study analysed over 100 million transactions in Starbucks stores before and after the Implementation of the New York Labelling Law and found a statistically significant 6% reduction in mean calories per transaction. The reduction was mainly due to calories from foods rather than from drinks. In May 2018, the US Food and Drug Administration made calorie labelling on menus mandatory in all restaurants and similar food establishments that have 20 or more locations (77).

All chain food service establishments in New York City and Philadelphia are required to display a warning icon next to items on menus that have more than 5g salt per portion, with an explanatory note where customers place their orders (78, 79). Our research has shown that of 351 children's meals surveyed in the OOH sector, 41% were high in salt, with more than 1.8g of salt per portion and 37% had more than 2g salt per portion, which is the maximum recommended daily intake for 1-3 year olds (61).

If the OOH sector does not engage with voluntary salt reduction measures, we recommend that DHSC review menu labelling and implement high salt warning labels on all dishes with more than 5g per portion, and lower thresholds for children's meals.

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