

## Evidence briefing 3

### Health and economic benefits of a levy on key categories of unhealthy food

This evidence briefing outlines the economic and health benefits of a levy on unhealthy foods, defined by their UK 2004-5 Nutrient Profiling Model<sup>i</sup> score and inclusion within existing placement and promotion<sup>ii</sup> and advertising<sup>iii</sup> restrictions on select High Fat, Salt and Sugar (HFSS) products.

Specifically, it focuses on new evidence on the potential sugar and salt reductions that could result from a category-based levy, as well as the potential health implications of these changes. The research was conducted by The London School of Hygiene and Tropical Medicine (LSHTM)<sup>1</sup>, commissioned by Recipe for Change, and is based on a tax design originally developed by Nesta.<sup>iv</sup>

#### Box 1

### Headline figures

New analysis of the potential sugar and salt reductions and the resulting health impacts that could be achieved from a levy applied to key categories of food designed by Nesta<sup>v</sup> shows that such a levy could<sup>2</sup>:

- Reduce average sugar intake by **3.94g per day** and salt intake by **0.08g per day** in the UK

As a result of these specific reductions in salt and sugar, a levy could:

- Prevent over **450,000 cases of chronic disease**, including **203,000** cases of cardiovascular disease, **170,000** cases of type 2 diabetes, **4000** cases of cancer and more than **77,000** cases of respiratory disease over 25 years
- Provide gains of more than **740,000 quality-adjusted life years**, worth £15.6 billion to society over 25 years

<sup>1</sup> For details on LSHTM methodology, see technical report [here](#).

<sup>2</sup> Box 1 figures are based on a 'central scenario' of medium level reformulation (see Box 2 below).

## Background

Recipe for Change is a campaign focused on building political and public support for a new levy on manufacturers that builds on the success of the Soft Drinks Industry Levy (SDIL). SDIL is an example where a levy on sugar has been an enormous success, with huge reductions in average sugar intake whilst maintaining overall sales.<sup>vi</sup> We have an opportunity to build on the success of SDIL and help ensure that healthier food options are affordable and accessible for everyone.

A new levy would encourage companies to reformulate food products to make them healthier, for example by reducing salt, sugar, saturated fat or calorie content, or increasing fruit, vegetable and fibre content of products, helping to shift sales towards healthier options. Reformulation of food and drink products is a public health intervention used in the UK and globally to improve population diets and prevent ill health. This can be achieved by small, gradual changes in the recipes and/or pack or portion sizes, as well as new product development and range review. Most people will not notice the changes due to flavour profile matching, or tastes will adapt to small changes. Ideally, sweetness or saltiness should be gradually reduced and artificial sweeteners not used. Where manufacturers choose not to reformulate a product, the revenue raised from the levy should be put towards interventions for improving children's health, such as the Healthy Start Scheme.

## What could a new levy look like?

The Recipe for Change campaign, in collaboration with academic researchers, is exploring two options for a new levy on food.

The first policy option is based on proposals developed as part of the National Food Strategy: The Plan<sup>vii</sup>, focused on an upstream sugar and salt levy on manufactured food sold in retail, restaurants and catering. An earlier briefing summarised the potential health and economic gains from implementing this levy.<sup>viii</sup>

The second policy option focuses on applying a levy to specific categories of non-staple products, using either a nutrient or health classification system, such as the Nutrient Profile Model or traffic light label cut offs, to ascertain whether a product is less healthy, and therefore should have the levy applied.

Here we present new analysis focused on the potential sugar and salt reductions that could result from one such category approach, as well as the health impacts specifically attributable to these reductions, drawing on a tax designed by Nesta. The Nesta model used focuses on the 12 food categories<sup>ix</sup> that are in scope of the existing regulations on restricting the placement and promotion<sup>x</sup> and advertising<sup>xi</sup> of less healthy foods and uses the 2004-5 NPM model to score products for their healthiness.

For those products scored as 'less healthy' (i.e. an NPM score of 4 or more), a levy of £0.06 per kg would be applied for every 1 NPM score increase i.e. products with an NPM score of 4 would pay £0.06 per kilo in tax, while a product with an NPM score of 20 would pay £1.02 per kilo in tax, assuming no reformulation. The levy would be applied to the manufacturers of in-scope products, to products sold in all retail locations for home consumption, e.g. supermarkets and convenience stores. This excludes food sold in the out-of-home sector.<sup>xii</sup>

## What are the potential reductions in sugar intakes?

The maximum daily recommended intake of free sugars for adults is 30g, with no more than 5% energy from free sugars.<sup>xiii</sup> Less than 1 in 10 children (9%) and less than 1 in 5 adults (19%) meet this recommendation, with current average intakes double or more than the recommended level for both children and adults in the UK.<sup>xiv</sup> The daily recommendation for salt is no more than 6g/day in adults. The average intake is 40% higher than this recommendation, with intakes of 9.2g/day for men and 7.6g/day for women.<sup>xv</sup> Two thirds (66%) of children exceed age-specific recommendations on salt.<sup>xvi</sup>

With any levy, the potential sugar and salt reduction from the application of the levy depends on the manufacturer response, as well as the tax design itself. The assumptions on manufacturer response in 3 scenarios for Nesta's NPM-based category levy used for this research are shown in Box 2, and show calculations for a range of potential sugar and salt reductions.

This new modelling finds that under a 'central' scenario the reduction in sugar intake could be 3.94g per day, however this could range from 3.24g (scenario 1, low reformulation) to 6.56g (scenario 3, high reformulation) per day, depending on the level of reformulation.<sup>3</sup> The impact on salt intake from this tax is relatively low, with a reduction of 0.08g under the central scenario, and ranging from 0.06g (scenario 1, low reformulation) to 0.15g (scenario 3, high reformulation) per day.

This relatively small reduction reflects the way this levy focuses on categories defined in part by pre-existing legislation for their high contribution of sugar and/or calories, rather than salt, to children's diets.

These reductions clearly demonstrate the potential role of a levy to support diets which are lower in sugar and salt, as part of a wider suite of policies focused on improving the food environment.

## Potential health and economic gains

Two thirds of adults in the UK are either overweight or living with obesity.<sup>xvii</sup> It has been estimated that in the UK there are over 8 million people living with cardiovascular disease (CVD),<sup>xviii</sup> 4.1 million people with type 2 diabetes,<sup>xix</sup> 394,000 new cases of cancer every year<sup>xx</sup>, and over 80,000 deaths from respiratory disease.<sup>xxi</sup>

This new analysis shows that, as a result of the sugar and salt reductions, a targeted category levy has the potential to reduce cases of CVD, type 2 diabetes, cancer and respiratory disease, thus having a beneficial impact on population health. These health gains are predominantly due to reductions in sugar intake, with a small additional benefit from reductions in salt intake. Under the central scenario, the total number of preventable cases of chronic disease could be reduced by over 450,000 over 25 years as a result of the sugar and salt reductions seen under this levy (see Box 1).

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<sup>3</sup> These figures represent the estimated reduction in sugar intake, derived by assuming absolute reductions of 33–65kcal, including adjustments for a 23% dietary compensation effect (see further Nesta report<sup>xxv</sup>). We then assume that 35% of the reduced energy intake is attributable to sugar. A conversion factor of 4 kcal per gram of sugar was applied to convert energy reductions to grams of sugar.

In a scenario where there were high levels of reformulation by manufacturers (scenario 3), over a 25-year period the salt and sugar reductions could result in gains of:

- 354,000 fewer cases of CVD
- 278,000 fewer cases of type 2 diabetes
- 4900 fewer cases of cancer
- 127,000 fewer cases of respiratory disease

Even with the lowest reformulation of products (scenario 1, low reformulation), over 359,000 cases of these diseases could be averted.

Data has also shown that this reduction in preventable chronic diseases could in turn improve life expectancy and quality-adjusted life years (QALYs).<sup>4</sup> Under a high reformulation scenario, 1.3 million additional QALYs could be gained across the UK population, worth an estimated £27.1 billion over 25 years. Even with the lowest response from industry (scenario 1, low reformulation), over 580,000 QALYs could be gained, worth £12.2 billion<sup>5</sup> to society.

## Conclusion

The food industry currently produces and sells too much food that is contributing to poor health and which in turn is imposing an economic burden on the UK. Analysis shows that the majority of manufactured food produced by the

largest companies are still classified as unhealthy based on the 2004/5 NPM score of their portfolio.<sup>xxii</sup>

The findings from the new research presented here demonstrate that there could be meaningful health and economic gains achieved in the UK by introducing a new levy on manufacturers and retailers, building on the success of SDIL. In the central scenario, with medium levels of salt and sugar reformulation from industry, the total number of preventable cases of chronic disease could be reduced by over 450,000 over 25 years, including reductions in CVD, type 2 diabetes, respiratory disease and cancer as a result of salt and sugar reductions. This in turn could contribute to a higher national life expectancy in the UK, of 1 month, and gains of more than 740,000 QALYs, worth £15.6 billion to society over 25 years. This research builds on Nesta's own analysis which found that a category levy could reduce obesity by as much as 16% as a result of the reduction in calories and further impacts due to wider reformulation of nutrients that could take place.<sup>6</sup>

An NPM-based HFSS levy benefits from being targeted at less healthy foods and incentivises improvements across a range of products (all with a score over 4). For ease and policy coherence, it uses the categories in scope of the promotion and advertising legislation, selected due to contributing excessive amounts of sugar to children's diets.

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<sup>4</sup> Quality-adjusted life years (QALYs) is a measure of disease burden, and considers both the quality and quantity of life lived.

<sup>5</sup> See technical report [here](#) for further details of the monetary value of QALY used.

<sup>6</sup> This analysis builds on Nesta's earlier work, which estimated that a category levy could reduce obesity by up to 16% through reductions in total calorie intake. Unlike Nesta's modelling, this report does not capture potential health impacts from calorie reductions beyond sugar (e.g. saturated fat), and therefore the total benefits of an NPM-based levy are likely to be higher. However, Nesta's results cannot be directly combined with those in this report due to overlap between Nesta's calorie-based modelling and the sugar-specific estimates presented here.

However, while focusing on these categories has some benefit, it also comes with some shortfalls. For instance, it means certain categories of food continue to be out of scope despite being less healthy under the NPM, particularly categories known to contribute high amounts of salt. Further impacts could also be seen if the levy design was extended to food sold out of the home in restaurants, fast food outlets, and cafes, which contribute approximately 14% of an adult's food calories<sup>xxiii</sup>, all of which currently escape policies such as the multi-buy price promotions restrictions. When considering the approach to tax design, trade-offs between ease and coherence, with impact need to be considered.

Regardless, with levels of obesity and chronic diseases increasing, and dietary targets remaining unachievable for many, a new levy focused on key categories of food that drive high sugar diets amongst our children, could be a vital intervention to rebalance the cost of healthy and unhealthy foods, and support healthier populations up and down the country. Such an approach should be considered alongside the development and implementation of the new Healthy Food Standard, announced in July 2025 as part of the NHS 10 Year Health Plan.

## Box 2

### How might manufacturers respond?

This briefing focuses on the salt and sugar reductions that could result from a category levy, drawing on a tax model developed by Nesta.<sup>xxiv</sup> Specifically, new analysis is presented that makes assumptions on sugar reductions that could result from that levy, based on calorie and NPM reductions, and provides further health modelling of the potential salt reductions (see [technical appendix](#) on Recipe for Change website).

As part of Nesta's levy design, three scenarios were modelled, representing a range of potential industry responses to the tax. These are categorised as low, central, and high reformulation.

Reformulation assumptions across the three scenarios varies by a) proportion of products that reformulate b) average improvement in healthiness (reduced NPM score) and c) the share of reformulation is driven by salt and calories across distinct grouped categories of food.

In practice, manufacturers may take a range of actions in response to a levy, for example adjusting marketing expenditure. In all scenarios, the model assumed that full costs of the levy were passed to consumers, although in reality many manufacturers may decide to absorb some of the cost of a levy. Nesta also assumed that consumers would offset calorie reductions from taxed products by 23% via increasing consumption of other foods, in line with existing evidence on calorie compensation.

Box 2 cont.

Assumptions on manufacturer response in NESTA's modelling		Scenario 1:	Scenario 2:	Scenario 3:
		Low reformulation	Central scenario (medium reformulation)	High reformulation
Proportion of products that reformulate	Salt and carbohydrate heavy products	10%	30%	65%
	Sugar and saturated fat heavy products	5%	20%	50%
	Chocolates	2.5%	10%	15%
Reduction in NPM score for products that reformulate	Salt and carbohydrate heavy products	1	3	4
	Sugar and saturated fat heavy products	1	2	3
	Chocolates	1	1	1
Share of reduction in NPM score from salt and calories	Salt and carbohydrate heavy products	20% - calories 10% - salt	30% - calories 20% - salt	40% - calories 30% - salt
	Sugar and saturated fat heavy products	20% - calories 5% - salt	30% - calories 10% - salt	40% - calories 20% - salt
	Chocolates	10% - calories 0% - salt	20% - calories 0% - salt	30% - calories 0% - salt

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**Recipe for Change** is a campaign calling for a new industry levy to help make our food healthier, while raising revenue that can be invested back into children's health. We are a coalition of organisations led by The Food Foundation, Sustain and Obesity Health Alliance, with support from British Heart Foundation and Action on Salt and Sugar, and with funding from Impact on Urban Health. Please see our website for more information and how to get involved: [recipeforchange.org.uk](https://recipeforchange.org.uk)