

# Vitamins Health: The Sugar Tax – sweet saviour or bitter pill?

## The UK Government has introduced a sugar tax in response to our obesity crisis. But will it improve health outcomes?

In April 2018, the Soft Drinks Industry Levy came into effect, charged to manufacturers and importers of sugar-sweetened drinks. Broadly speaking the tax is 18 pence or 24 pence per litre depending on the density of added sugar in the drink, although naturally occurring sugars and milks are exempt.<sup>1</sup>

The story behind the tax starts with our overconsumption of sugar in the UK and the detrimental health effects that we now know come as a consequence. Our addiction to sugar begins in childhood: for example, just 1% of girls aged 4-10 have an intake of 'free sugar' that is within the recommended allowance.<sup>2</sup> The Scientific Advisory Committee on nutrition recommends keeping sugar intake below seven teaspoons a day<sup>3</sup> compared against the actual adult intake of around 13-16 teaspoons.<sup>2</sup>

Manufacturers have a strong incentive to add sugar to foods. It can replace fat in the flavour stakes allowing foods to be branded as low-fat to convince consumers they are "healthy". Furthermore, sugar has a similar impact on the body to addictive substances such as drugs and alcohol, activating the reward centres of the brain to make us feel good. What's more: we suffer withdrawal symptoms such as headaches and dizziness when we stop eating it.<sup>4</sup>

The aim of the tax is therefore twofold: an incentive to drinks manufacturers to use less sugar in recipes and an upward pressure on prices, deterring us from buying sugary products.

### What's so bad about sugar anyway?

It won't be news to anyone that sugar is bad for you, but the extent of its negative effects on the body is relatively recent information. Previously saturated fat and cholesterol were the baddies of the nutritional world. Now there's a question mark above this wisdom; since official guidelines have recommended cutting down on saturated fat, obesity rates have increased significantly. 6% of Britons were obese in 1980. Within 20 years that figure trebled,<sup>5</sup> and now 26% of Britons are obese.<sup>6</sup> Many now think of sugar as the main evil behind our obesity crisis.

The reason overeating sugar causes obesity is mostly due to excess glucose being stored in fat cells around the body. Additionally, fructose (fruit sugar) increases the resistance of the brain to leptin, which tells our body it's full. And while there are instances of people maintaining fitness alongside weight issues, one study found that, for each 5-unit increase in BMI above 25 kg/m<sup>2</sup>, the corresponding increases in risk were 49% for cardiovascular mortality, 38% for respiratory disease mortality, and 19% for cancer mortality.<sup>7</sup> Additionally, you needn't be obese to suffer ill effects from eating sugar. High consumption is linked to type 2 diabetes, tooth decay, non-alcoholic fatty liver disease, and metabolic syndrome.<sup>4</sup> It's also been associated with poor long-term mental health.<sup>8</sup>

<sup>1</sup> <https://www.gov.uk/government/news/soft-drinks-industry-levy-comes-into-effect>

<sup>2</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/699241/NDNS\\_results\\_years\\_7\\_and\\_8.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/699241/NDNS_results_years_7_and_8.pdf)

<sup>3</sup> <https://www.nhs.uk/news/food-and-diet/sugar-intake-should-be-drastically-reduced-says-report/>

<sup>4</sup> <http://www.theactuary.com/features/2015/09/the-sweetest-taboo/>

<sup>5</sup> <https://www.theguardian.com/society/2016/apr/07/the-sugar-conspiracy-robert-lustig-john-yudkin>

<sup>6</sup> <https://digital.nhs.uk/data-and-information/publications/statistical/statistics-on-obesity-physical-activity-and-diet/statistics-on-obesity-physical-activity-and-diet-england-2018>

<sup>7</sup> <https://www.hsph.harvard.edu/news/press-releases/overweight-obesity-mortality-risk/>

<sup>8</sup> <http://www.nature.com/articles/s41598-017-05649-7>

As the world has woken up to the long-term damage that sugar causes, our excessive consumption has increasingly come under scrutiny.

## Will the tax mean people eat less sugar?

Initial signs have been promising. Well before the tax came into effect, manufacturers were cutting the sugar content in their products, with over 50% of them working on changing recipes in the two years since its announcement.<sup>1</sup> Irn-Bru has entirely stopped producing the full-sugar version of their drink<sup>9</sup> with multiple reports of people stockpiling the original recipe before it disappeared. Meanwhile, studies modelling potential impacts suggest a reduction of 12-24% in sugar consumption and 1.5% to 22% in overweight/obesity prevalence, depending on sex and socioeconomic status.<sup>10</sup>

Many other countries have similar taxes in place but, intriguingly, very little analysis has been done on their efficacy. However, in California consumption of sugary beverages declined by 21% between the twelve months before tax and after tax.<sup>11</sup> In France, despite only small price increases being passed through to the consumer, purchasing of regular soft drinks has decreased.<sup>12</sup>

It remains to be seen if the tax will achieve its goal of reducing sugar consumption and childhood obesity. Its impact will be dependent on a few things, e.g. if manufacturers adapt their recipes to avoid paying, and if manufacturers pass the cost onto consumers and this changes our behaviours.

## What does this mean for pension schemes and insurers?

In decades past, obesity rates among children and adults have continued to rise, although this has not prevented life expectancy from rising. However, in recent years longevity improvements have levelled off. Could the sugar tax help to kick them back onto a more upward trajectory?

The impact of the tax is likely to vary by demographic and is expected to have the biggest impact in lower socioeconomic groups where obesity levels are highest. Club Vita analyses longevity improvements across different groups, exploring trends for “Comfortable”, “Making-Do” and “Hard-Pressed” pensioners, so will capture the subtleties in the ways the tax impacts health outcomes for different demographics.<sup>13</sup> You can use this analysis to help set longevity improvement assumptions.

It's worth noting that these benefits to health outcomes may not be borne out if we focus on sugar consumption alone – people may simply replace sugar with a new demon. A wider look at balanced diets and moderation in all major food groups will be critical in driving longevity.

It will be important to monitor the outcomes related to the sugar tax. There may be a long way to go to deal with obesity in the UK, but the tax should be a step in the right direction.

**What do you think? Please join the discussion in the Friends of Club Vita group on LinkedIn.**

## About: VitaMins Health

Health behaviours and levels of morbidity are key drivers for future mortality rates and can be thought of as key components of the “longevity pipeline”. The levels of health and morbidity in a population today will be stored up and reflected in how long people live in the future.

<sup>9</sup> <https://www.bbc.co.uk/news/health-43372295>

<sup>10</sup> <https://uic.pure.elsevier.com/en/publications/estimating-the-potential-of-taxes-on-sugar-sweetened-beverages-to>

<sup>11</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5024386/>

<sup>12</sup> <https://www.tse-fr.eu/seminars/2017-impact-french-soda-tax-prices-purchases-and-tastes-ex-post-evaluation>

<sup>13</sup> [https://www.clubvita.co.uk/assets/images/general/170623\\_16\\_PLSA-Longevity-model.pdf](https://www.clubvita.co.uk/assets/images/general/170623_16_PLSA-Longevity-model.pdf)

CLUB VITA LLP

One London Wall | London EC2Y 5EA | T 020 7082 6060 | F 020 7082 6082

[www.clubvita.co.uk](http://www.clubvita.co.uk)

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