



International
Sweeteners
Association



FACTSHEET

Sugar Reduction and Low/no Calorie Sweeteners

At a time when the rates of obesity and diet-related non-communicable diseases are a worldwide challenge, low/no calorie sweeteners can contribute towards a healthier food environment. Low/no calorie sweeteners in food and drinks are tools that help individuals eat fewer free sugars and calories with the aim of achieving a healthy diet and weight, when consumed as part of a healthy active lifestyle, and in line with public health recommendations globally.

The World Health Organization recommended in 2015 to reduce the intake of free sugars to less than 10% of total energy intake in the diet.¹ Similarly, at national level Public Health England (PHE) recommended a lower goal of 5% of total calories from free sugars and called for reformulation of food and drink to help people achieve that goal.² A PHE report recognises low/no calorie sweeteners as useful and safe ingredients that enable both lower free sugar and calorie content of reformulated products.³

Data from more than 5,500 people over four years showed that consumers of low/no calorie sweetened drinks had a better quality diet, lower in free sugars, and nearer the UK recommendation for lower sugar intake, than those who drank sugar-sweetened beverages.⁴

Help to meet lower sugar targets

A wide range of food and drinks contain low/no calorie sweeteners which allow calorie-free, or low-calorie sweet taste to be enjoyed as part of a balanced and varied diet⁵ thus contributing to a healthier food environment.

As low/no calorie sweeteners are intensely sweet only minute amounts are needed to achieve a sweet taste. Their use is controlled by food legislation and their presence is clearly labelled on food packaging (see factsheet 'Safety and Regulation of Low/no Calorie Sweeteners').

Some food and drinks contain more than one low/no calorie sweetener to achieve a flavour profile consistent with the product when it is reformulated to reduce free sugars and calorie content.^{6,7}

The amount of low/no calorie sweeteners used singly or in blends is in line with the Acceptable Daily Intake (ADI) set for each particular low/no calorie sweetener.

An ADI is the amount of a low/no calorie sweetener, or other food ingredient, that can be consumed daily over a lifetime without appreciable risk to health. ADIs have a 100-fold safety factor built in to ensure the safety of different groups in the population and the most vulnerable such as children and pregnant women (see factsheet 'Safety and Regulation of Low/no Calorie Sweeteners').



Low/no calorie sweeteners can also be a significant aid to weight control by helping reduce intake of excess sugars and overall calories.⁸

Sugar and calorie saving swaps

Significant calorie and free sugars 'savings' can be made by choosing low/no calorie sweeteners food and drink options, and also by adding low/no calorie sweetened rather than sugar, to hot drinks. For example, one teaspoonful of sugar (4g) in coffee or tea contains 16kcal compared to 0-1kcal in the amount of table-top sweetener needed to replace the teaspoonful of sugar.

Item	Sugar-sweetened products	Low/no calorie sweetened products
Iced tea (250ml)	15g of sugars 60kcal	0-1g of sugars 5kcal
Cola-type soft drink (250ml)	25g of sugars 100kcal	0g of sugars 1kcal
Low-fat (1%) fruit yoghurt (200g)	25g of sugars 160kcal	15g of sugars 110kcal
1 tablespoon ketchup (17g)	4g of sugars 16kcal	1g of sugars 7kcal
1 large scoop of full fat vanilla ice cream	22g of sugars 170kcal	8g of sugars 120kcal

Table: Calorie and sugars content in sugar-sweetened versus comparable low calorie sweetened products (on average or range of values). Source: USDA Food Composition Databases. Available at: <https://ndb.nal.usda.gov/ndb/>

References

1. World Health Organization (WHO) Guideline: Sugars intake for adults and children. Geneva: World Health Organization; 2015. Available at: http://www.who.int/nutrition/publications/guidelines/sugars_intake/en/
2. Public Health England. Sugar Reduction: The Evidence for Action, 2015 Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/470179/Sugar_reduction_The_evidence_for_action.pdf
3. Public Health England. Sugar Reduction: Achieving the 20%. 2017 Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/604336/Sugar_reduction_achieving_the_20_.pdf
4. Patel L, Alicandron G, La Vecchia C. Low-calorie beverage consumption, diet quality and cardiometabolic risk factor in British adults. *Nutrients* 2018; 10: 1261.
5. Gibson S, Drewnowski J, Hill A, Raben B, Tuorila H, Windstrom E. Consensus statement on benefits of low calorie sweeteners. *Nutrition Bulletin* 2014; 39(4): 386-389.
6. Miele NA, Cabisidan EK, Galiñanes Plaza A, Masi P, Cavella S, di Monaco R. Carbohydrate sweetener reduction in beverages through the use of high potency sweeteners: Trends and new perspectives from a sensory point of view. *Trends in Food Science & Technology* 2017; 64: 87-93.
7. McCain HR, Kaliappan S, Drake MA. Invited review: Sugar reduction in dairy products. *J Dairy Science* 2018; 101: 1-22.
8. Rogers PJ and Appleton KM. The effects of low-calorie sweeteners on energy intake and body weight: a systematic review and meta-analyses of sustained intervention studies. *Int J Obes* 2020. <https://doi.org/10.1038/s41366-020-00704-2>