

Smart swaps as part of a healthy diet The role of low/no calorie sweeteners

HIGHLIGHTS

Smart swaps involve making small and manageable changes to daily eating and drinking habits by replacing a typical food or drink choice with a lower calorie option.

By using low/no calorie sweeteners in place of sugars and by swapping a sugar-sweetened food or drink with its low/no calorie sweetened equivalent, people can reduce both sugars and energy (calories) in their diet.



Low/no calorie sweeteners are used in food and drink products in place of sugars to confer the desired level of sweet taste while contributing very little or no energy at all to the final product. ¹ Therefore, by substituting sugars with low/no calorie sweeteners, it is possible to lower the energy density in a variety of foods and especially in drinks. ² This means people can continue to enjoy the sweet taste while reducing or managing their daily calorie intake, which in turn can assist with weight management and glycaemic control. ^{3,4} In addition, swapping sugars for low/no calorie sweeteners in food products such as sugar-free chewing gum may also offer dental health benefits. ⁵

Research indicates that humans' preference for sweet taste is something that we are born with. ⁶ However, this innate propensity for sweet taste does not mean that individuals have to give up the taste they enjoy in order to maintain a healthy weight. Complete diet makeovers such as cutting out sweet tastes from the diet can be overwhelming. By choosing to make small changes with smart swaps that maintain the palatability of the diet, such as by swapping sugars for low/no calorie sweeteners, the transition to a better dietary pattern can become more manageable, enjoyable, and sustainable over the long term. ⁷

Smart swaps with low/no calorie sweeteners can help individuals to:



Decrease excess sugars intake while maintaining the sweet taste in foods and drinks



Reduce the total amount of sugars and calories in the diet



Maintain an optimal body weight



Manage blood glucose levels more efficiently

Smart swaps to help cut down on sugars

By swapping everyday food and drinks for lower-sugar or sugar-free alternatives, people can improve the overall diet quality. 8.9 Smart swaps leading to sugars intake reduction can also help adults and children follow a tooth-friendlier diet. 5

There are plenty of food or drink swaps individuals can make to reduce excess sugars and energy intake from the diet. For example, by adding table-top sweeteners instead of table sugar in beverages, people can "save" approximately 4 g of sugars and 16 kcal for each teaspoon of added sugars. Similarly, by switching to a zero-sugar soft drink which contains less than 1 kcal, energy intake can be reduced by around 100 kcal per glass (or 140 kcal per can of 330ml) as compared to the regular sugar-sweetened product. More smart swap options are provided in the table.

Swap a sugar-sweet	Swap a sugar-sweetened product			for a low/no calorie sweetened alternative		
Type of product	Energy (kcal)	Sugars (g)	Type of product	Energy (kcal)	Sugars (g)	
1 teaspoon (4 g) of sugar (white, brown)	16	4	Table-top sweeteners	1	0	
1 glass (250 ml) of sugar-sweetened cola-type soft drink	100	25	1 glass (250 ml) of diet/ light/ zero cola-type soft drink	<1	0	
1 glass (250 ml) of iced tea drink with sugar	60	15	1 glass (250 ml) of iced tea drink with LNCS	<5	0-1	
1 portion (200 g) of low fat (1%) fruit yogurt with sugar	160	25	1 portion of low fat fruit yogurt with LNCS (200 g)	110	15	
1 large scoop (100 g) of vanilla ice cream with sugar (full fat)	170	22	1 large scoop (100 g) of vanilla ice cream with LNCS (full fat)	120	8	
A serving of raspberry jelly with sugar	80	20	A serving of raspberry jelly with LNCS	10	2	
1 tablespoon (20 g) of jam with sugar	40-50	10-12	1 tablespoon of jam with LNCS	10-20	2-5	
1 tablespoon (17 g) of ketchup with sugar	16	4	1 tablespoon of ketchup with LNCS	7	1	
1 piece of chewing gum with sugar	10	2,5	1 piece of chewing gum with LNCS	<5	0	
1 piece of hard candy with sugar	25	4	1 piece of hard candy with LNCS	10	0	

Table: Energy (calories) and sugars content in sugar-sweetened versus comparable low/no calorie sweetened products (on average or range of values). Source: U.S. Department of Agriculture, Agricultural Research Service. FoodData Central, 2019. fdc.nal.usda.gov.

References

- 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
- Gibson S, Ashwell M, Arthur J, et al. What can the food and drink industry do to help achieve the 5% free sugars goal? Perspect Public Health. 2017;137(4):237-247
- 3. Ashwell M, Gibson S, Bellisle F, et al. Expert consensus on low-calorie sweeteners: facts, research gaps and suggested actions. Nutr Res Rev. 2020;33(1):145-154
- Rogers PJ, 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 (Lond). 2021;45(3):464-478
- FDI Policy Statement: Sugar substitutes and their role in caries prevention. Adopted by the FDI General Assembly, 26th September 2008, Stockholm, Sweden. Available at: https://www.fdiworlddental.org/sugar-substitutes-and-their-role-caries-prevention (Accessed 26 January 2024)
- Drewnowski A, Mennella JA, Johnson SL, Bellisle F. Sweetness and Food Preference. J. Nutr. 2012;142:11425–11485
- Peters JC, Beck J. Low calorie sweetener (LCS) use and energy balance. Physiol Behav. 2016;164(Pt B):524-528
- 8. Patel L, Alicandron G, La Vecchia C. Low-calorie beverage consumption, diet quality and cardiometabolic risk factor in British adults. Nutrients. 2018;10:1261
- Barraj LM, Bi X, Murphy MM, Scrafford CG, Tran NL. Comparisons of Nutrient Intakes and Diet Quality among Water-Based Beverage Consumers. Nutrients. 2019;11(2):314