

LOW- AND NO-CALORIE SWEETENERS: THE BASICS

Low- and no-calorie sweeteners (LNCS) are intensely sweet compounds that can be used in very small amounts to provide sweetness in food and beverages while helping to reduce sugar and calorie intake.¹



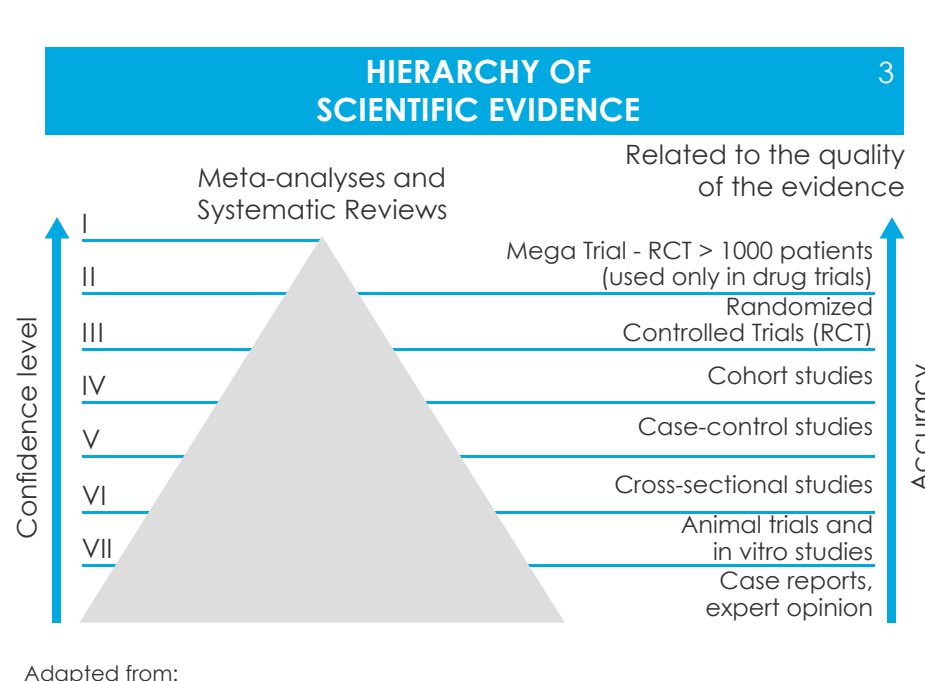
ALL LOW/NO CALORIE SWEETENERS APPROVED FOR USE ARE SAFE AND ARE AMONG THE MOST STUDIED SUBSTANCES BY REGULATORY AND SCIENTIFIC BODIES AROUND THE WORLD.

HOW DO YOU KNOW IF A SWEETENER IS SAFE FOR CONSUMPTION?

When you find conflicting information, it is important to verify using a trusted source such as:



Sweeteners are among the most studied substances around the world. Regulatory bodies examine the total weight of evidence before a clear indication of the safety of a sweetener is given. All approved low- and no-calorie sweeteners are safe for use.



HOW DO YOU ASSESS SCIENTIFIC STUDIES?

There are criteria used to evaluate the quality of scientific studies. Some points to consider are:²

- Number of people studied (n)
- Type of population studied
- Type and robustness of the study
- Duration of the intervention

WHAT IS ADI (ACCEPTABLE DAILY INTAKE)?

ADI is the estimated quantity of substance (mg) per kg of body weight per day that a person can consume for a lifetime without posing any health risk.

The ADI values are rigorously defined and consider a large margin of safety. Therefore, it is unlikely that one would reach the ADI.

Sweetener	Acceptable ⁴ Daily Intake (ADI) (mg/kg/day)
Acesulfame -K	15
Aspartame	50
Cyclamate	11
Steviol glycosides	4
Saccharin	15
Sucralose	15
Neotame	0.3

Busting common myths

Based on the scientific literature, approved LNCS:

- Do not cause obesity, cancer or other conditions.^{5, 6}
- Do not have a negative impact on the gut microbiota.⁷
- Support glycaemic response, as they do not alter glycaemic levels and insulin response.⁸
- Are non-cariogenic.⁹



Globally, rates of obesity and chronic disease are rising. Public health authorities recommend limiting the intake of free sugars in the diet. The World Health Organization (WHO) recommends reducing free sugar intake to less than 10% of the daily caloric intake. For example, for a 2,000 kcal/day diet, it is recommended to consume less than 50 grams of sugar. LNCS can help reach this goal as they provide sweetness without significant calories.

Which is the best LNCS?

The best LNCS is the one that is best suited to your taste preference! To find your favourite:

- 1°** Explore various flavours.
- 2°** Choose the format of your preference (drops, sachet, bulk, etc.)
- 3°** Consider the price

References

1. 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.
2. Daher MI, Matta JM, Abdel Nour AM. Non-nutritive sweeteners and type 2 diabetes: Should we ring the bell? Diabetes Res Clin Pract. 2019 Sep;155:107786. doi: 10.1016/j.diabres.2019.107786. Epub 2019 Jul 19. PMID: 31326455.
3. Cook DJ, Guyatt GH, Laupacis A, Sackett DI, Goldberg RJ. Clinical recommendations using levels of evidence for antithrombotic agents. Chest 1995;108(4):227S-230S. DOI: 10.1378/chest.108.4_supplement.227s
4. EFSA Panel on Food Additives and Nutrient Sources added to Food (ANS); Scientific Opinion Draft Guidance for submission for food additive evaluations. EFSA Journal 2012; 10(7): 2760. [65 pp.]. Available at: <https://www.efsa.europa.eu/en/efsajournal/pub/2760>
5. Rogers PJ, Appleton KM. The effects of low-calorie sweeteners on energy intake and body weight: a systematic review and meta-analysis of sustained intervention studies. Int J Obes 2020;45:464-78. <https://doi.org/10.1038/s41366-020-00704-2>.
6. Toewen I, Lohner S, Küllenberg de Gaudry D, Sommer H, Meerpohl J J. Association between intake of non-sugar sweeteners and health outcomes: systematic review and meta-analysis of randomised and non-randomised controlled trials and observational studies BMJ 2019; 364 :k4718 doi:10.1136/bmj.k4718.
7. Alexandra R. Lobach, Ashley Roberts, Ian R. Rowland, Assessing the in vivo data on low/no-calorie sweeteners and the gut microbiota, Food and Chemical Toxicology, Volume 124, 2019, Pages 385-399, <https://doi.org/10.1016/j.fct.2018.12.005>.
8. Lohner S, Kuellenberg de Gaudry D, Toewen I, Ferenci T, Meerpohl JJ. Non-nutritive sweeteners for diabetes mellitus. Cochrane Database Syst Rev 2020;2020. <https://doi.org/10.1002/14651858.CD012885.pub2>.
9. Moynihan & Kelly. Effect on caries of restricting sugars intake: systematic review to inform WHO guidelines. J Dent Res 2014 Jan;93(1):8-18. doi: 10.1177/0022034513508954. Epub 2013 Dec 9