THE 12 MOST IMPORTANT FACTS ABOUT SWEETENERS

SÜßSTOFF
VERBAND E.V.

Meet the Sweet family.
What are sweeteners and what effects do they have on body and health?
Are sweeteners monitored and how do we know if they are contained within a foodstuff?
The Sweet family have critically evaluated sweeteners and carried out a lot of research.

We have collated all the most important facts together with the Sweet family, so that ongoing myths and misunderstandings about sweeteners can be seen in the correct light.

The **12** most important facts about sweeteners

Sweeteners – they are widely known, but not everyone knows exactly what this term means. Sweeteners are precisely defined, strictly controlled and extensively researched. Nevertheless, there are many myths and misconceptions, some of which have been around since the beginning of industrial sweetener production in 1887 – without ever having been proven. It is therefore high time to summarise the most important facts about sweeteners.

First things first: it is safe to consume sweeteners. Sweeteners are one of the most strictly controlled food additives. They have been repeatedly reviewed by the European Food Safety Authority (EFSA) and classified as safe by the respective national regulatory authorities. This applies to adults as well as children and pregnant women.

Sweeteners do not supply calories, are tooth-friendly and do not affect blood sugar levels or the intestinal microbiome. This means that sweeteners can contribute to a balanced diet in terms of taste and nutritional value, thereby improving the quality of life for many people. In this booklet, we wish to provide the most important information and facts about sweeteners in a concise and understandable way.

Would you like to find out more?
Please visit our website at
www.suessstoff-verband.info,
where we will be happy to answer any questions you may have.

Isabelle Begger
Süßstoff-Verband e.V.
Chairperson

so süß wie du

Fact **#1**

These **sweeteners** exist

The European regulations on sweeteners define sweeteners as substances that can be used to sweeten foodstuffs and as table-top sweeteners. Sweeteners are split into two groups – artificial sweeteners and sugar substitutes, which are also known as sugar alcohols, polyols or polyvalent alcohols. As they are considered to be additives, they are subjected to an approval process – without such approval, they are not allowed to be used in the production of foodstuffs. Furthermore, sweeteners must only be used in the production of certain foodstuffs. European regulations on additives determine what these are.

What are the features of sugar substitutes?
Sugar substitutes such as sorbitol, xylitol, or mannitol are somewhat less sweet, or about as sweet as sugar and provide about half as much energy. Erythritol is an exception as it does not provide any energy. Sugar substitutes may have laxative effects with excessive consumption and must be labelled accordingly.

What are the benefits of sugar substitutes?
Sugar substitutes can replace the volume of sugar, such as in sweets. This is why they are frequently used in combination with sweeteners. Furthermore, just like sweeteners, they do not damage teeth.

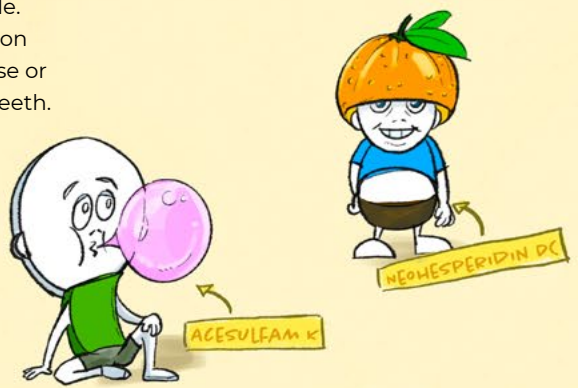
Fact **#2**

Sweeteners as sweet things

Sweeteners have an extremely high level of sweetness, which can be between 30 (cyclamate) and 37,000 (advantame) times higher than sugar.

Low-calorie sweetness
They provide no or virtually no energy. This means that they are used in such small quantities that, even if they provide 4 kcal/g, like aspartame, their calorie content is negligible. Sweeteners also have no effect on blood sugar levels, insulin release or digestion and do not damage teeth.

Are there different types of sweeteners?
There are currently eleven sweeteners approved for use in foods in the European Union. They differ in their structure, sweetness, technological properties and also in how they are broken down.



Fact **#3**

Sweeteners are **strictly controlled** additives

How is the safety of sweeteners ensured?
The EFSA (European Food Safety Authority) carries out a detailed risk assessment before a sweetener is legally permitted by the EU Risk Manager (European Commission, member states, and the European Parliament).

Approved sweeteners are tested over a period of years
Extensive scientific testing over many years is a prerequisite for approval. This covers all aspects that could have an impact on the human organism. These investigations often last more than ten years. A sweetener is only approved when it is established as harmless. In this case, the highest completely safe consumption levels are defined for each sweetener. It also sets out the products and quantities in which the sweetener can be used.

Even after approval, sweeteners are examined over time so that the assessment is always in line with the most up-to-date scientific insights.

Fact **#4**

Consumption of sweeteners is **safe**

What does the ADI value say about the safety of sweeteners?
The ADI value (Acceptable Daily Intake) states the quantity of an additive that can be consumed daily throughout life without any adverse health effects. It is not a threshold value for maximum consumption, but is a guarantee of safety that is aimed at lifelong consumption.

How is the ADI value calculated?
The ADI value is calculated based on long-term studies. In this case, initial investigations show the daily lifelong consumption levels where it is guaranteed that no adverse effects occur. This is known as the NOAEL value (No Observed Adverse Effect Level). This quantity is reduced by a high safety factor – usually a hundred times over, then apllied as an ADI value.

How much sweetener is allowed?
Based on the ADI value, maximum levels for the use of sweeteners in various food categories are set throughout the EU. Soft drinks, for example, may contain 600 mg of aspartame per litre according to legislation. The ADI value for aspartame is 40 mg*. A 70 kg person could therefore drink 23 glasses containing 0.2 litres a day for the rest of their life. However, only 150 mg of aspartame is mostly used, which increases the amount that can be safely consumed to 93 glasses.

***Per kilogram of body weight, according to the Scientific Committee on Food (SCF)**

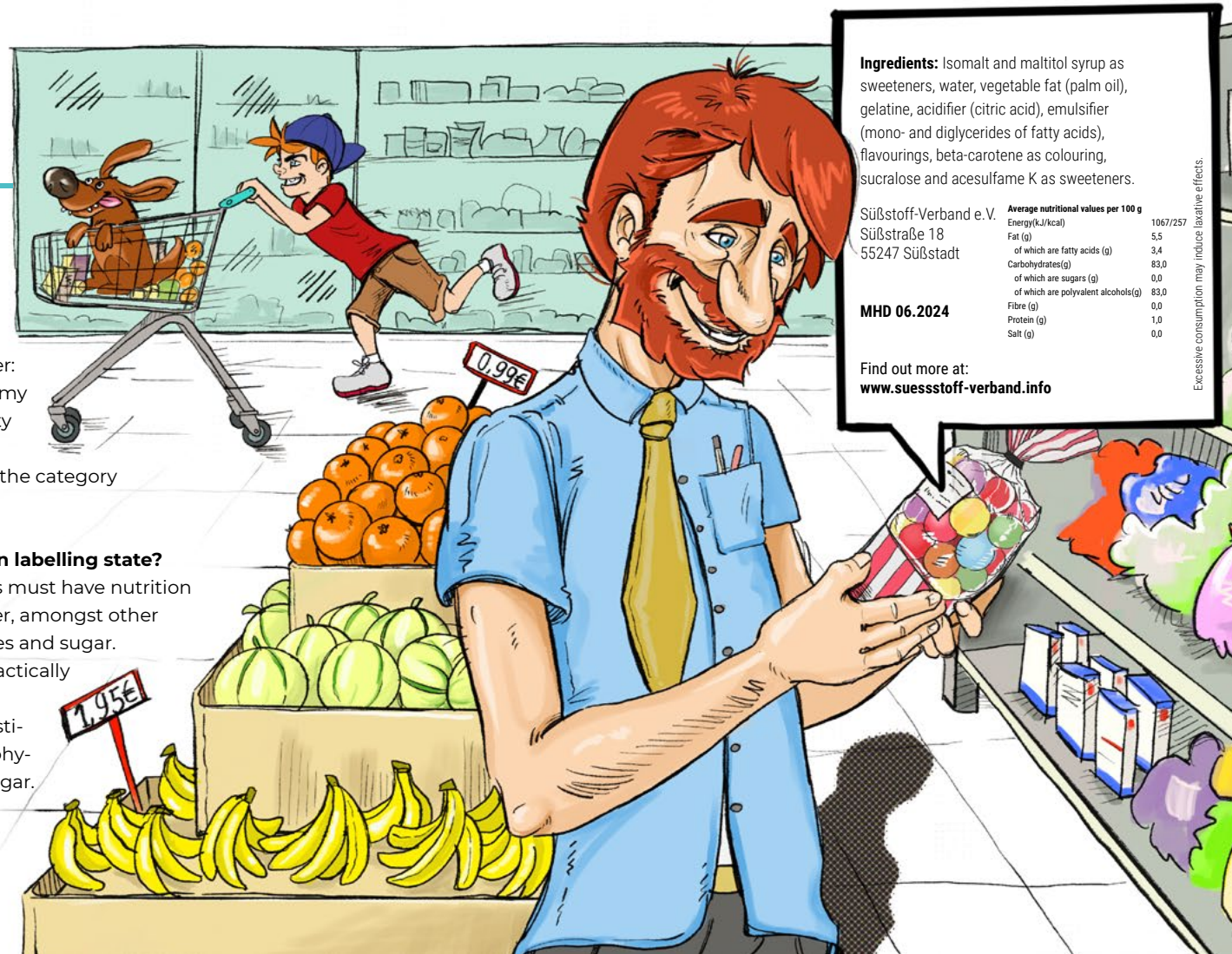
Fact **#5**

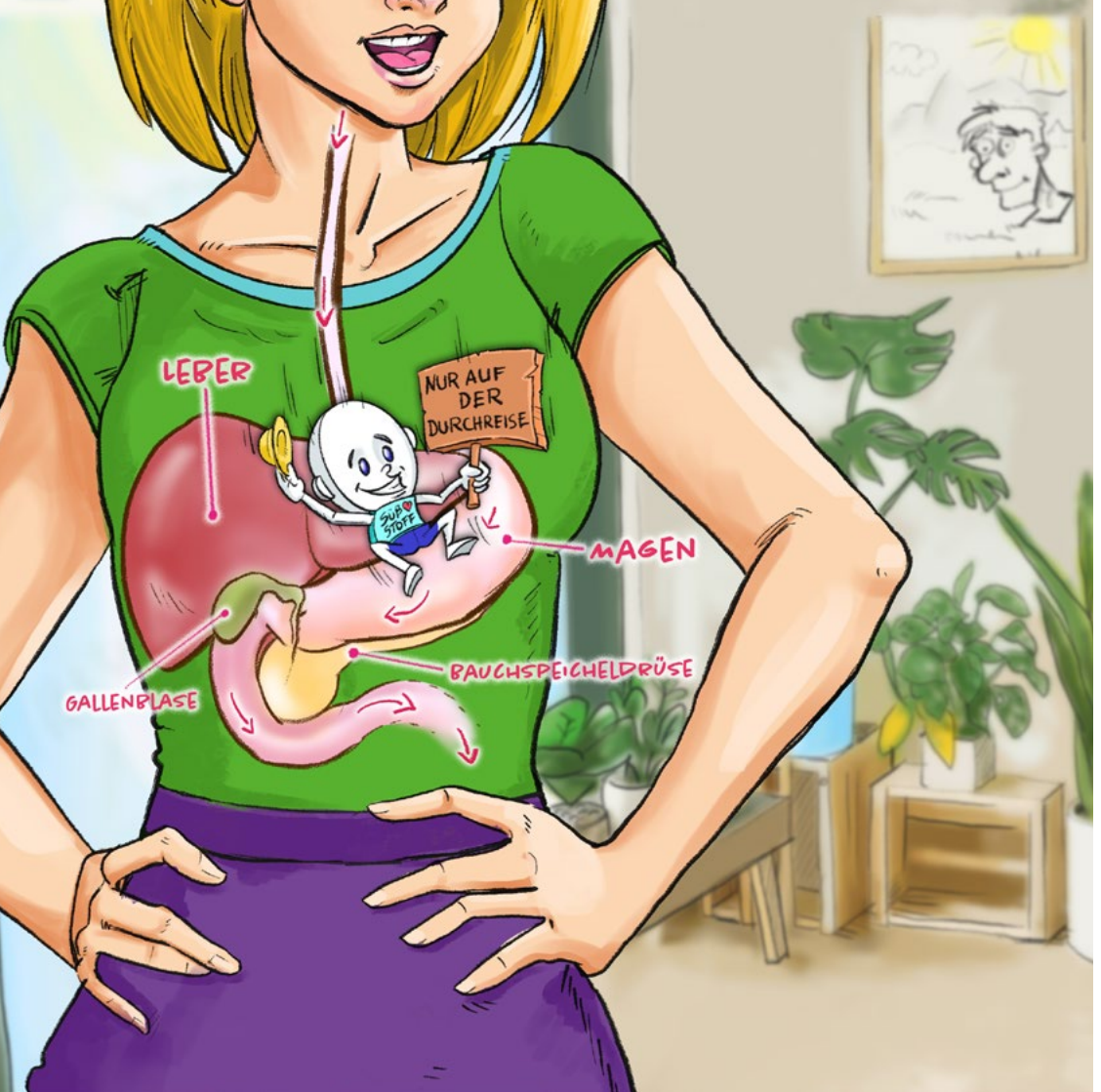
Sweetened with sweetener – the sweetener **is on the label**

In which foods are sweeteners used?
Sweeteners are mainly used in sugar-reduced products such as diet or zero-calorie soft drinks. In addition, there are powdered, liquid and table-top sweeteners that consumers can use to add calorie-free sweetness to their food and drinks.

How do I recognise foodstuffs sweetened with sweeteners?
Often, descriptions such as “zero”, “with sweetener”, “no sugar”, or “tooth-friendly” indicate the presence of sweeteners. However, EU regulations on packaging foodstuffs and a duty of disclosure are of the utmost priority here. As sweeteners are additives, they must be stated in the list of ingredients along with their class category and description, such as “Sweetener: saccharine”. Instead of the description, the E number can also be stated: “Sweetener: E 954“. The gastronomy sector also has a duty of disclosure. In this case, simply stating the category name is enough.

What does nutrition labelling state?
Packaged foodstuffs must have nutrition labelling. These cover, amongst other things, carbohydrates and sugar. Sweeteners have practically no nutritional value. However, sugar substitutes count as carbohydrates, but not as sugar.





Fact **#6**

Sweeteners have **no effect** on blood sugar levels

The thesis was proposed at the end of the 1980s that merely the sweet taste of sweeteners triggered insulin release in the body (“cephalic insulin reflex”) and whilst it appears feasible at first glance, it has not been confirmed in practice.

How do sweeteners behave in the human body?
Sweeteners leave a sweet taste on the tongue. However, various human studies have shown that water containing sweeteners acts like pure water in the body: insulin and blood glucose levels do not change after consuming sweeteners – neither immediately after eating nor during the digestive process. Hunger and appetite are also not affected.

As an example, daily consumption of two cans (330 ml each) of a fizzy drink containing sweeteners over a twelve-week period has no discernible effect on insulin sensitivity or insulin secretion on healthy and overweight people.

Health claim for sweeteners
The European Food Safety Authority (EFSA) also confirmed via assignment of a health claim that “consumption of foodstuffs with sweeteners instead of sugar lead to a lower increase in blood sugar levels after consumption than consumption of foodstuffs containing sugar”.

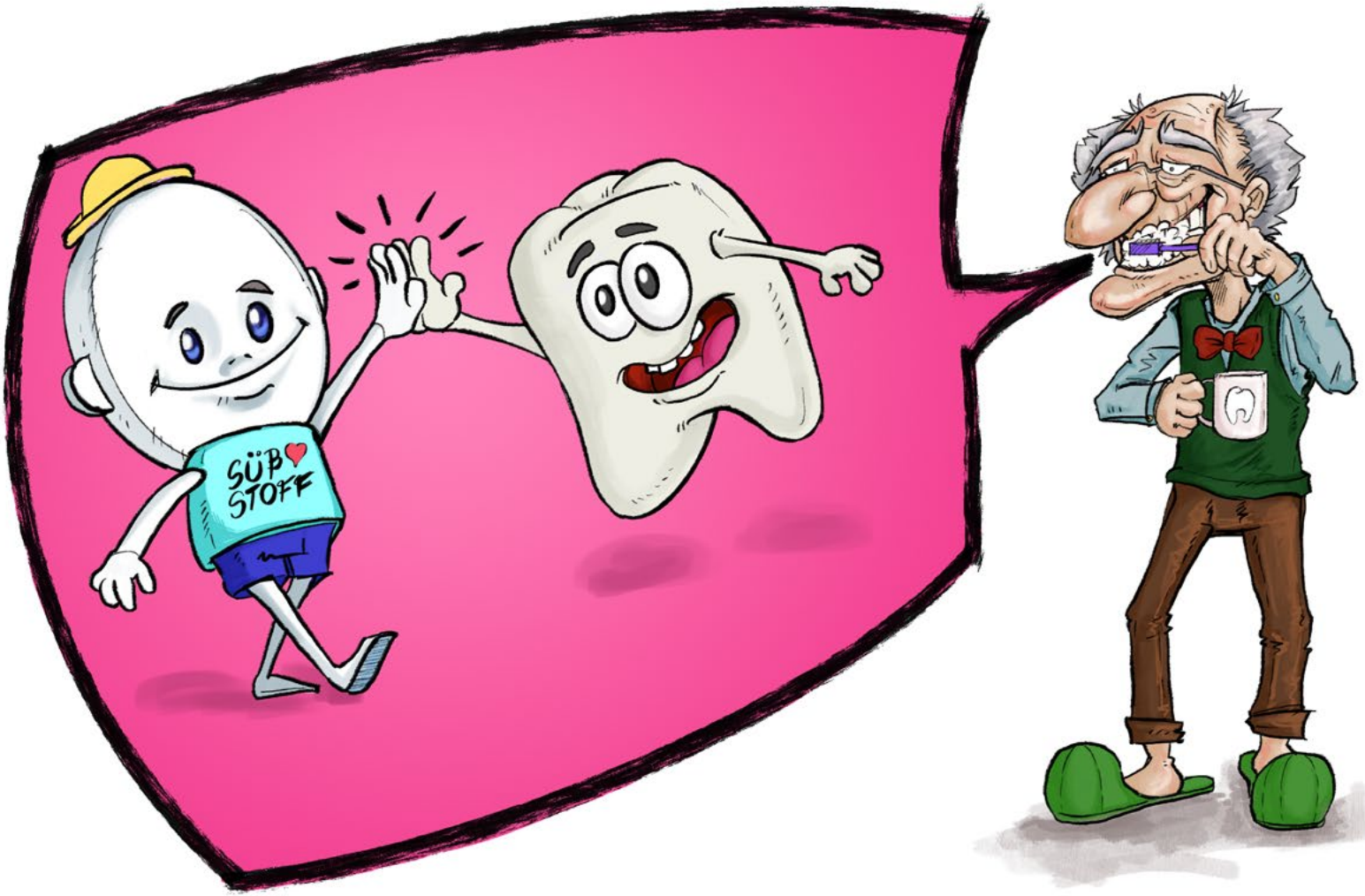
Fakt **#7**

Tastes are **different**

The preference for sweet things is innate, however various factors determine how and whether tastes change during our lives. Our genetics determine the sensitivity towards bitter, sweet, salty, sour and umami foods, and probably also with fatty foods too.

How does taste develop?
What we like also depends on what was offered to us as children and how frequently we ate something – known as the *mere exposure effect*. In contrast, there is a specific sensory saturation. This biological evolutionary process ensures increasing aversion to constantly repeating tastes. Phrases such as “eat until it comes out of your ears” are in common parlance.

What factors influence our taste?
The examples set by our parents or guardians, and how we experienced mealtimes also have an impact on our preferences and dislikes. Furthermore, our choice of food also has social, political, economic, psychological and cultural dimensions. During each person’s life, they create a personalised archive of tastes.



Fact **#8**

Sweeteners are **tooth-friendly**

The minerals in tooth enamel are extremely resilient under normal conditions. However, carbohydrates such as sugar or starch can represent a risk to them. Bacteria create acids out of carbohydrates – which destroy the protective surface of the teeth, erode the enamel and cause cavities.

Food and drinks with sweeteners lower the risk of cavities

Sweeteners do not contain carbohydrates that may ferment. For this reason, they do not provide bacteria in the mouth with anything that can help produce acids. Food and drinks containing sweetener therefore lower the risk of cavities. It is better to choose sugar-free snacks for the sake of your teeth, especially for snacks between meals. This is particularly important with chewing gum, sweets and lollipops as they come into contact with teeth for prolonged periods. As expected, good oral health is also important. Sweeteners are also used to improve the taste of oral and tooth care products that contain fluoride, so help protect against cavities.

Fact **#9**

Sweeteners tend to **not have an effect** on the gut microbiome

The human gut is unique and complex

Microbiome research over the past two decades has shown that the human gut is home to a unique and complex ecosystem that is influenced by many different factors, such as lifestyle, stress, diet and medication. Findings obtained from animal experiments cannot therefore be readily transferred to humans, studies on humans are difficult to control, and in vitro studies cannot take into account the entire complex interactive system of the human digestive system and microbiota. Studies that have examined the topic of “sweeteners and the microbiome” have also come to this conclusion.

We consume only very small amounts of sweetener

In terms of quantity, sweeteners only make up a small part of our diet. This alone means that they are unlikely to have any influence on the microbiome. To date, there are no studies that can demonstrate that sweeteners have an impact on the human microbiome under realistic conditions.

Important: The colon is not always the end of the line!

Aspartame is broken down into its components and absorbed in the small intestine. Saccharin and Acesulfame K are also absorbed in the small intestine and excreted in the urine unchanged.

Fact **#10**

Preference for sweet things is **innate**

A preference for sweet things is innate

All newborns react positively to sweet-tasting things. Bitter and sour tasting things are rejected, and salty things are accepted after the first few months. Very old structures in the brain stem in phylogenetic terms are responsible for this reflex-like preference or aversion to various tastes.

Our ancestors also liked sweet things

They searched for foods with a sweet taste. When searching for food, a sweet taste was always a sign of “no danger!”. However, if berries or roots tasted bitter or sour, caution was advised – this is also referred to as the “safe taste of evolution”. Amniotic fluid and breast milk also taste sweet.

Preference for sweet foodstuffs was necessary to survive

A sweet taste, such as from ripe fruits, also means a good source of carbohydrates and therefore calories – which was of essential importance for our ancestors. This preference for sweet foods may well have provided a survival advantage during periods when food was scarce.

Fact **#11**

Sweeteners do **not** stimulate cravings for sweet foods

Sweeteners are far sweeter than sugar
The sweetness of sweeteners can even be several thousand times higher than that of sugar. So that the sweetness corresponds to that of sugar, sweeteners are only used in exceptionally small quantities. The product does not become sweeter due to the use of sweeteners, but significantly lower in calories.

Users of sweeteners often have healthy eating behaviours
Studies show that consumption of sweet foods and drinks does not necessarily have an impact on a preference for sweet things. There is no vicious circle where consumption of sweet things leads to consuming more of them. By the same token, the eating habits of those who use sweeteners do not get worse. On the contrary: Eating habits that include the use of sweeteners or foods and drinks with calorie-free sweeteners are often associated with overall better nutrition and healthy eating habits, as shown by scientific research.

Fact **#12**

Sweeteners and the **alibi feature**

Drinks and snacks with sweeteners can help with doing without certain foods

Whilst sweeteners certainly don't aid slimming on their own, and they should not be used as an alibi for poor eating habits, they do provide a wide range of sweet-tasting options with few or even no calories. They provide a sweet hit that helps the user go without calorific drinks and snacks.

Sweeteners support a balanced diet

When used instead of sugar and as part of a balanced diet, they can play a useful part in reducing sugar and calorie intake as well as for controlling blood sugar levels. If, for example, a drink is taken with a meal, it is shown that exactly the same is consumed with calorie-free and calorific drinks. Energy intake due to calorific drinks is not reduced during the meal, but increased. Drinks sweetened with sweetener do not add any calories.

More information is available in our podcast

so! was? süßes.

Did you know that the oldest sweetener, saccharine, is already over 130 years old and was actually only discovered by accident? This and more exciting facts about sweet foodstuffs are covered in our podcast so! was? süßes. Our hostesses Anja Roth (dietician and specialist on sweeteners) and Sophie Samrock (host) talk about everything relating to diet, sweet-tasting things and sweeteners. Podcast guests come from the field of sweeteners, nutritional advice and science, sport, medicine, or simply pass comment on everything sweet from day-to-day life.

You can find out everything you need to know about sweeteners approved in the EU on our portals. We look forward to seeing you there!

Have a listen!

www.suessstoff-verband.info

SOURCES

Fact #1 // These sweeteners exist

K. Rosenplenter, U. Nöhle, (2007), Handbuch Süßungsmittel Eigenschaften und Anwendung, 2. Auflage, Hamburg.

Council Directive 90/496/EEC of 24 September 1990 on nutrition labelling for foodstuffs.

Fact #2 // Sweeteners as sweet things

Regulation (EC) No 1333/2008 of the European Parliament and of the Council of 16 December 2008 on food additives.

Magnuson BA, Carakostas MC, Moore NH, Poulos SP, Renwick AG. (2016). Biological fate of low-calorie sweeteners. Nutrition Reviews, Nov; 74(11): 670-689. doi: 10.1093/nutrit/nuw032.

Zhang R, Noronha JC, Khan TA, McGlynn N, Back S, Grant SM, Kendall CWC, Sievenpiper JL. (2023). The Effect of Non-Nutritive Sweetened Beverages on Postprandial Glycemic and Endocrine Responses: A Systematic Review and Network Meta-Analysis. Nutrients, Feb 20; 15(4): 1050. doi: 10.3390/nu15041050.

Fact #3 // Sweeteners are strictly controlled additives

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Fact #4 // Consumption of sweeteners is safe

Süßungsmittel | EFSA. (9. Januar 2025). https://www.efsa.europa.eu/de/topics/topic/sweeteners.

Regulation (EC) No 1331/2008 of the European Parliament and of the Council of 16 December 2008 establishing a common authorisation procedure for food additives, food enzymes and food flavourings.

Regulation (EC) No 1333/2008 of the European Parliament and of the Council of 16 December 2008 on food additives.

Commission Regulation (EU) No 1129/2011 of 11 November 2011 amending Annex II to Regulation (EC) No 1333/2008 of the European Parliament and of the Council by establishing a Union list of food additives.

Commission Regulation (EU) No 234/2011 of 10 March 2011 implementing Regulation (EC) No 1331/2008 of the European Parliament and of the Council establishing a common authorisation procedure for food additives, food enzymes and food flavourings.

BfR, Bewertung von Süßstoffen und Zuckeraustauschstoffen, Hintergrundinformation Nr. 025/2014 vom 1. Juli 2014.

Fact #5 // Sweetened with sweetener – the sweetener is on the label

Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers, amending Regulations (EC) No 1924/2006 and (EC) No 1925/2006 of the European Parliament and of the Council, and repealing Commission Directive 87/250/EEC, Council Directive 90/496/EEC, Commission Directive 1999/10/EC, Directive 2000/13/EC of the European Parliament and of the Council, Commission Directives 2002/67/EC and 2008/5/EC and Commission Regulation (EC) No 608/2004.

Directive 2000/13/EC of the European Parliament and of the Council of 20 March 2000 on the approximation of the laws of the Member States relating to the labelling, presentation and advertising of foodstuffs.

Fact #6 // Sweeteners have no effect on blood sugar levels

Blundell JE, Hill AJ. Paradoxical effects of an intense sweetener (aspartame) on appetite. The Lancet (1986) 1: 1092–3.

Rogers PJ, Blundell JE. (1989). Separating the actions of sweetness and calories: effects of saccharin and carbohydrates on hunger and food intake in human subjects. Physiol Behav, 45: 1093–9.

Wu T, Bound MJ, Standfield SD, Bellon M, Young RL, Jones KL, Horowitz M, Rayner C. (2013). Artificial sweeteners have no effect on gastric emptying, glucagon-like peptide-1, or glycemia after oral glucose in healthy humans. Diabetes Care, Dec; 36(12): e202-3. doi: 10.2337/dc13-0958.

Zhang R, Noronha JC, Khan TA, McGlynn N, Back S, Grant SM, Kendall CWC, Sievenpiper JL. (2023). The Effect of Non-Nutritive Sweetened Beverages on Postprandial Glycemic and Endocrine Responses: A Systematic Review and Network Meta-Analysis. Nutrients, Feb 20; 15(4): 1050. doi: 10.3390/nu15041050.

Gibbons C, Beaulieu K, Almiron-Roig E, Navas-Carretero S, Martínez JA, O'Hara B, O'Connor D, Nazare JA, Le Bail A, Rannou C, Hardman C, Wilton M, Kjølbæk L, Scott C, Moshoyiannis H, Raben A, Harrold JA, Halford JCG, Finlayson G. (2024). Acute and two-week effects of neotame, stevia rebaudioside M and sucrose-sweetened biscuits on postprandial appetite and endocrine response in adults with overweight/obesity – a randomised crossover trial from the SWEET consortium. EBioMedicine, Apr; 102: 105005. doi: 10.1016/j.ebiom.2024.105005.

Nichol AD, Holle MJ, An R. (2018). Glycemic impact of non-nutritive sweeteners: a systematic review and meta-analysis of randomized controlled trials. European journal of clinical nutrition, 72(6), 796–804. doi:10.1038/s41430-018-0170-6.

Bonnet F, Tavenard A, Esvan M, Laviolle B, Viltard M, Lepicard EM and Lainé F. (2018). Consumption of a Carbonated Beverage with High-Intensity Sweeteners Has No Effect on Insulin Sensitivity and Secretion in Nondiabetic Adults. Journal of Nutrition, 148: 1–7.

EFSA Scientific opinion on the substantiation of health claims related to intense sweeteners. EFSA Journal 2011; 9: 2229 Eur J Clin Nutr. 2018 May 15. doi: 10.1038/s41430-018-0170-6. [Epub ahead of print], 2018.

EFSA Panel on Dietetic Products, Nutrition, and Allergies (NDA). (2011). Scientific Opinion on the substantiation of health claims related to intense sweeteners and contribution to the maintenance or achievement of a normal body weight (ID 1136, 1444, 4299), reduction of post-prandial glycaemic responses (ID 4298), maintenance of normal bloodglucose concentrations (ID 1221, 4298), and maintenance of tooth mineralisation by decreasing tooth demineralisation (ID 1134, 1167, 1283) pursuant to

Article 13(1) of Regulation (EC) No 1924/2006. EFSA Journal, 9(6):2229. doi: 10.2903/j.efsa.2011.2229.
IDF (2019). Diabetes Atlas 9th edition. Available at: https://www.diabetes-atlas.org/en/resources/.

Greyling A, Appleton KM, Raben A, Mela DJ. (2020). Acute glycemic and insulinemic effects of low-energy sweeteners: a systematic review and metaanalysis of randomized controlled trials. The American Journal of Clinical Nutrition, Oct 1; 112(4): 1002-1014. doi: 10.1093/ajcn/nqaa167.

Gardner C, Wylie-Rosett J, Gidding SS, Steffen LM, Johnson RK, Reader D, Lichtenstein AH. (2012). Nonnutritive sweeteners: current use and health perspectives: a scientific statement from the American Heart Association and the American Diabetes Association. Diabetes Care, Aug; 35 (8): 1798-808.

Diabetes UK. The use of low or no calorie sweeteners. Position Statement (Updated December 2018).

Laviada-Molina H, Escobar-Duque ID, Pereyra E, Romo-Romo A, Brito-Córdova, G, Carrasco-Piña E, González-Suárez R, López-García R, Molina-Seguí F, Mesa-Pérez JA. (2018). Consenso de la Asociación Latinoamericana de Diabetes sobre uso de edulcorantes no calóricos en personas con diabetes [Consensus of the Latin-American Association of Diabetes on low calorie sweeteners in persons with diabetes]. Rev ALAD; 8: 152-74.

Evert AB, Dennison M, Gardner CD, Garvey WT, Lau KHK, MacLeod J, Mitri J, Pereira RF, Rawlings K, Robinson S, Saslow L, Uelmen A, Urbanski PB, Yancy Jr. WS. (2019). Nutrition Therapy for Adults with Diabetes or Prediabetes: A. Consensus Report. Diabetes Care, May; 42 (5): 731-754.

Fakt #7 // Tastes are different

Hübner S, Töle J, Meyerhof W. (2013). Taste and nutrition. 3. Development of taste preferences and aversions. Ernaehrungs Umschau international, 60(12): 222–227.

Peterseil M, Gunzer W, Fuchs-Neuhold B. (2016). Einflussfaktoren auf die Geschmacksentwicklung von Säuglingen. Paediatr. Paedolog. Austria, 51, 156–161. doi: 10.1007/s00608-016-0396-2.

Fakt #8 // Sweeteners are tooth-friendly

EFSA Panel on Dietetic Products, Nutrition, and Allergies (NDA). (2011). Scientific Opinion on the substantiation of health claims related to intense sweeteners and contribution to the maintenance or achievement of a normal body weight (ID 1136, 1444, 4299), reduction of post-prandial glycaemic responses (ID 4298), maintenance of normal bloodglucose concentrations (ID 1221, 4298), and maintenance of tooth mineralisation by decreasing tooth demineralisation (ID 1134, 1167, 1283) pursuant to Article 13(1) of Regulation (EC) No 1924/2006. EFSA Journal, 9(6):2229. doi: 10.2903/j.efsa.2011.2229.

Commission Regulation (EU) No 432/2012 of 16 May 2012 establishing a list of permitted health claims made on foods, other than those referring to the reduction of disease risk and to children's development and health Text with EEA relevance.

FDI World Dental Federation Policy Statement: Sugar substitutes and their role in caries prevention. Adopted by the FDI General Assembly, 26 September 2008, Stockholm, Sweden. https://www.fdiworlddental.org/sugar-substitutes-and-their-role-caries-prevention.

Aktion Zahnfreundlich – Zahnmännchen; https://www.zahnmännchen.de.

Deutsche Gesellschaft für Zahnerhaltung (DGZ): S2k-Leitlinie (Lang-version) Kariesprophylaxe bei bleibenden Zähnen – grundlegende Empfehlungen AWMF-Registernummer: 083-021 Stand: Juni 2016; gültig bis: Mai 2021.

Fakt #9 // Sweeteners tend to not have an effect on the gut microbiome

Hughes RL, Davis CD, Lobach A, & Holscher HD. (2021). An Overview of Current Knowledge of the Gut Microbiota and Low-Calorie Sweeteners. Nutrition Today, 56(3): 105. https://doi.org/10.1097/NT.0000000000000481.

Lobach AR, Roberts A, Rowland IR. (2019). Assessing the in vivo data on low/no-caloriesweeteners and the gut microbiota. Food and Chemical Toxicology, Feb; 124: 385-399. doi: 10.1016/j.fct.2018.12.005.

Ruiz-Ojeda FJ, Plaza- Díaz J, Sáez-Lara MJ, and Gil A. (2019). Effects of Sweeteners on the Gut Microbiota: A Review of Experimental Studies and Clinical Trials. Adv Nutr 10: S31–S48.

Serrano J, Smith KR, Crouch AL, et al. (2021). High-dose saccharin supplementation does not induce gut microbiota changes or glucose intolerance in healthy humans and mice. Microbiome, 9(1):11. doi: 10.1186/s40168-020-00976-w.

FAO. (2025). State of research on the interactions between food additives, the gut microbiome and the host – A food safety perspective. Food Safety and Quality Series, 22. Rome. https://doi.org/10.4060/cd5128en.

Fakt #10 // Preference for sweet things is innate

Rosenstein D, Oster H. (1988). Differential facial responses to four basic tastes in newborns. Child Development, 59(6): 1555–1568. doi: 10.2307/1130670.

Steiner JE. (1973). The gustofacial response: observation on normal and anencephalic newborn infants. Symp Oral Sens Percept, 254–278.

Grill HJ, Norgren R. (1978). The taste reactivity test. II. Mimetic responses to gustatory stimuli in chronic thalamic and chronic decerebrate rats. Brain Res, 143: 281–297.

Rozin, P. (1976). The selection of food by rats, humans and other animals. In: Rosenblatt J, Hinde RA, Beer C, Shaw E, Bd. 6, S. 21–76. Academic Press. doi: 10.1016/S0065-3454(08)60081-9.

Beauchamp GK, Cowart BJ, Mennella JA, Marsh RR. (1994). Infant salt taste: developmental, methodological, and contextual factors. Dev Psychobiol., 27(6): 353–365. dOI: 10.1002/dev.420270604.

Fakt #11 // Sweeteners do not stimulate cravings for sweet foods

Appleton KM, Tuorila H, Bertenshaw EJ, de Graaf C, Mela DJ. (2018). Sweet taste exposure and the subsequent acceptance and preference for sweet taste in the diet: systematic review of the published literature. Am J Clin Nutr, 107: 405-419. doi:10.1093/ajcn/nqx031.

Mela DJ, Risso D. (2024) Does sweetness exposure drive 'sweet tooth'? British Journal of Nutrition, Feb 26: 1-11. doi: 10.1017/S0007114524000485.

Trumbo PR, Appleton KM, de Graaf K, et al. (2020). Perspective: Measuring Sweetness in Foods, Beverages, and Diets: Toward Understanding the Role of Sweetness in Health. Advances in Nutrition, 00: 1-12; doi: 10.1093/advances/nmaa151.

Rogers PJ. (2017). The role of low-calorie sweeteners in the prevention and management of overweight and obesity: evidence v conjecture. Proc Nutr Soc, Nov 23; 1-9.

Belissle F. (2015). Intense Sweeteners, Appetite for the Sweet Taste, and Relationship to Weight Management. Current Obesity Reports, Mar; 4(1): 106-110. doi: 10.1007/s13679-014-0133-8.

Romo-Romo A, Aguilar-Salinas CA, Brito-Córdova GX, Gómez Díaz RA, Vilchis Valentín D, Almeda-Valdes P. (2016). Effects of the Non-Nutritive Sweeteners on Glucose Metabolism and Appetite Regulating Hormones: Systematic Review of Observational Prospective Studies and Clinical Trials. PLoS ONE, 11(8): e0161264. doi: 10.1371/journal. pone.0161264.

Dr. Kathrin Ohla, „Genetik, Gewöhnung und Präferenz von Süßem", Fachvortrag anl. Tag der Süße 2021.

Fakt #12 // Sweeteners and the alibi feature

Peters JC, Beck J, Cardel M, et al. (2016). The effects of water and non-nutritive sweetened beverages on weight loss and weight maintenance: a randomized clinical trial. Obesity (Silver Spring), 24: 297-304.

Tobiassen PAS, Køster-Rasmussen R. (2024). Substitution of sugar-sweetened beverages with non-caloric alternatives and weight change: A systematic review of randomized trials and meta-analysis. Obesity Reviews, 25(2), e13652. doi: 10.1111/obr.13652.

Tey SL, Salleh NB, Henry J, Forde CG. (2017). Effects of aspartame-, monk fruit-, Stevia-, and sucrose-sweetened beverages on postprandial glucose, insulin and energy intake, International Journal of Obesity, 41: 450-457.

DellaValle DM, Roe LS, Rolls BJ. (2005) Does the consumption of caloric and non-caloric beverages with a meal affect energy intake? Appetite 44, 187-193.

Rogers PJ, Hogenkamp PS, de Graaf C, et al. (2016). Does low-energy sweetener consumption affect energy intake and body weight? A systematic review, including meta-analyses, of the evidence from human and animal studies. International Journal of Obesity (Lond), 40: 381-94.

Toews I, Lohner S, de Gaudry DK, Sommer J, Meerpohl JJ. (2019). Association between intake of non-sugar sweeteners and health outcomes: systematic review and meta-analyses of randomised and non-randomised controlled trials and observational studies. BMJ, 363: k4718.

Lee HY, Jack M, Poon T, Noori D, Venditti C, Hamamji S, Musa-Veloso K. (2021). Effects of Unsweetened Preloads and Preloads Sweetened with Caloric or Low-/ No-Calorie Sweeteners on Subsequent Energy Intakes: A Systematic Review and Meta-Analysis of Controlled Human Intervention Studies. Adv Nutr, 12(4): 1481-1499.

Rogers PJ, Appleton KM. (2021). 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, 45(3): 464-478.

Laviada-Molina H, Molina-Segui F, Pérez-Gaxiola G, et al. (2020). Effects of nonnutritive sweeteners on body weight and BMI in diverse clinical contexts: Systematic review and meta-analysis. Obes Rev, 21(7): e13020.

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