
THE 12
BIGGEST
SWEETENER MYTHS
REVEALED
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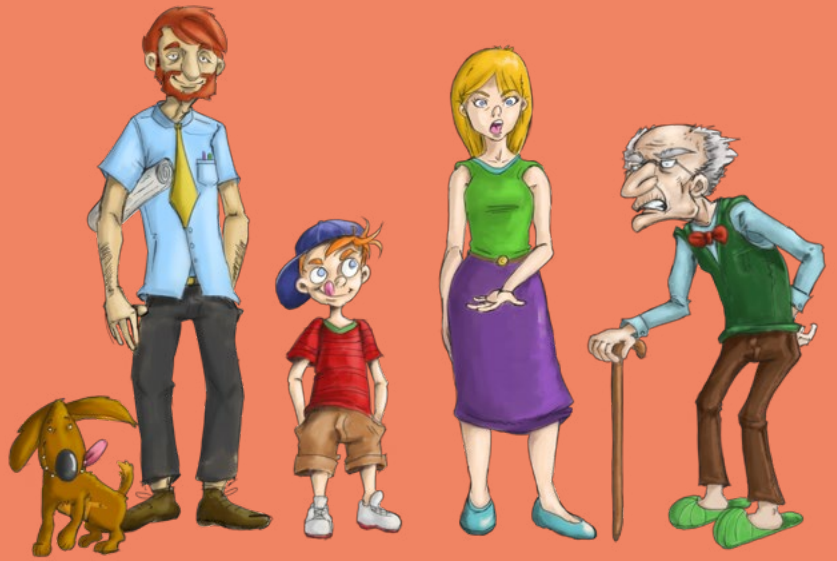


Meet the Sweet family.
The Sweet family is rather sceptical about sweeteners.
They're said to cause cancer, make you fat and cause diarrhoea - at least,
that's what it says on the internet, and their friends have told them about it too.

Reason enough to carefully examine the 12 biggest sweetener myths in this brochure together with the Sweet family.

The 12 biggest sweetener myths revealed

Sweeteners are among the most strictly controlled food additives ever. They have been repeatedly checked by the European Food Safety Authority (EFSA) and classified as harmless by the respective regulatory authorities. Namely for adults, as well as for children and pregnant women. Although they have long been disproved, some myths surrounding sweeteners stubbornly persist. The result is that some consumers believe that sweeteners are not safe, or even that they are partly responsible for the emergence of obesity. Quite the opposite is true.

Sweeteners don't have any calories, nor do they have a negative effect on dental health or blood sugar levels. Therefore sweeteners can contribute to a delicious and nutritionally balanced diet, improving many people's quality of life.

With this booklet, we would like to clearly address the most common questions and preconceptions about sweeteners and answer them in a coherent way.

Would you like to know more?
Visit our german websites
www.suessstoff-verband.info and
www.so-suess-wie-du.de – we will gladly answer your queries there.

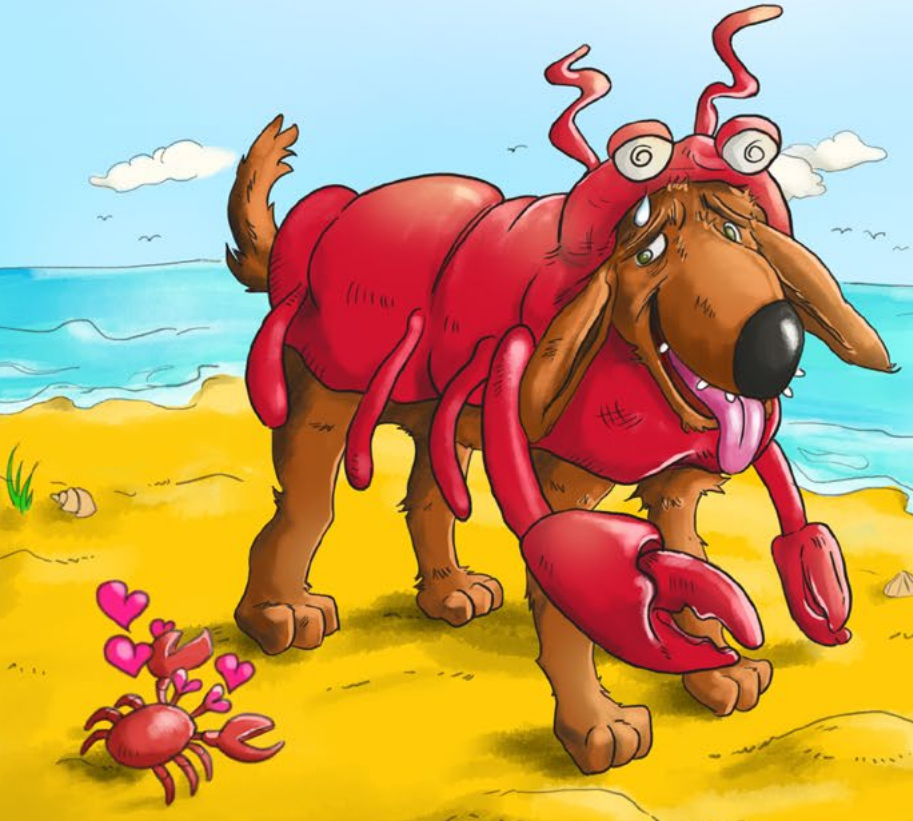
Isabelle Begger
Chairman of the Sweetener Association Germany, Austria and Switzerland (Registered Association)

so süß wie du

Myth

1 Sweeteners cause cancer

Actually: All EU-approved sweeteners are safe.



How are sweeteners approved?

In order to be approved, sweeteners are tested to find out how they behave in the body, whether there is a possibility that they will accumulate and how they are metabolised. Furthermore tests determine whether the additive causes interdependencies or has an effect on nutrient absorption. Only when it is proven that the additive - in this case, the sweetener - is not harmful to health is it approved.

Do sweeteners cause cancer?

The approval process has already investigated any possible danger of cancer. If in hindsight there is any suspicion, this will also be investigated. Thus far, no indication has been found that sweeteners cause cancer. The cancer information service of the German Cancer Research Center clearly suggests that: **"there is no risk of cancer from approved sweeteners"**.

But haven't sweeteners caused cancer during animal testing?

In order to reach a similarly high dose as that given to animals in these studies, for example, a person would have to drink more than one hundred cans of a drink containing sweeteners each day. In this quite unlikely scenario, it isn't the sweetener that is the problem but the amount of liquid.

What about aspartame?

Although aspartame has been the object of thorough research, including animal testing, clinical studies and epidemiological studies for more than 30 years, the myth that aspartame causes dementia, multiple sclerosis or cancer, for example, still persists.

In 1984, 1988, 2002 and most recently 2013, the European Food Safety Authority (EFSA) confirmed however that aspartame is completely harmless to humans and the EFSA totally rejects all claims to the contrary.

Myth

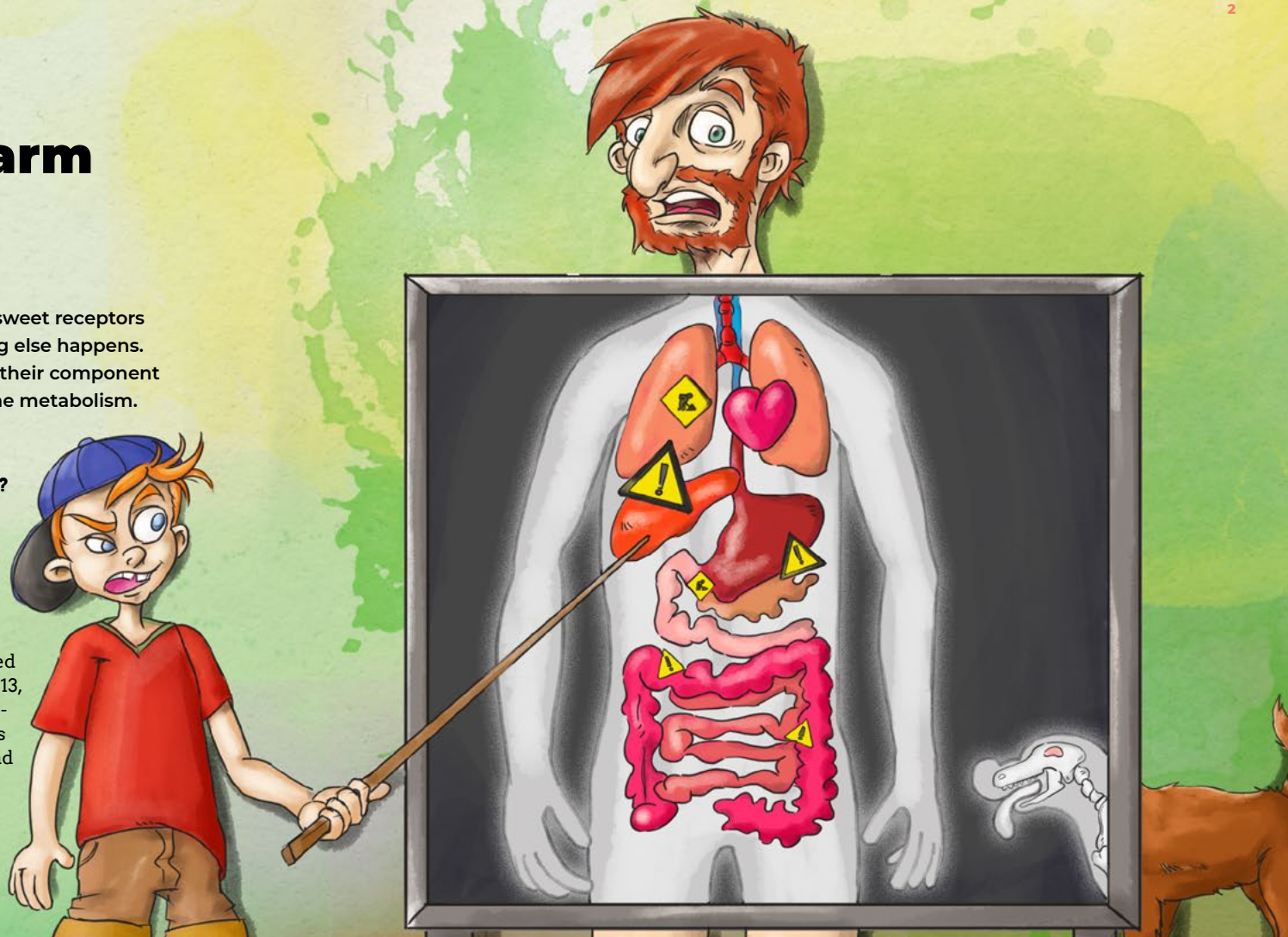
2 Sweeteners **harm our body**

Actually: Just like sugar, sweeteners activate the sweet receptors on the tongue. That is how we taste sweetness – nothing else happens. In terms of digestion, sweeteners are broken down into their component parts or excreted unchanged. They do not interfere in the metabolism.

But doesn't methanol come from consuming aspartame?

The fact is that a glass of tomato juice contains 5 to 6 times more methanol than a glass of a diet drink sweetened with aspartame. Like aspartame, methanol is found in many natural foods and, in these very low amounts, has no effect on how the body works, let alone poisonous ones.

Aspartame has been extensively and comprehensively tested by international committees of experts. Most recently in 2013, it was confirmed as safe by the European Food Safety Authority (EFSA). According to this, aspartame and its by-products are harmless to the general public (including to children and pregnant women).



3 Myth
Sweeteners make you **hungry**

Actually:

Sweeteners don't make you hungry. But they don't fill you up either.

It is frequently argued that the pancreas expects a sugar hit because of the sweetener signals, for example, when we drink a diet drink, and therefore it releases insulin. Because the sugar hit never arrives, thanks to the consumption of sweeteners, the blood sugar level decreases again. According to the theory, the body then reacts by feeling hungry.

But the pancreas will not be tricked!

Numerous studies show that water mixed with sweetener has the same effect on the body as pure water. The blood sugar level and insulin level, as well as the emptying of the stomach, remain unchanged. There is no craving as a result.

Myth

4 Sweeteners make you fat

Actually: Sweeteners don't contain any calories. The only exception is 'practically calorie-free' aspartame, which does indeed contain calories, but in practice is only used in such small quantities that there is nothing of any significance in the end product. As sweeteners don't provide any energy, it's impossible for them to cause you to gain weight.

Several studies show that body weight can be lowered by consuming sweeteners. This is how test subjects who consumed diet drinks instead of sugary soft drinks can lose weight even more effectively than those who only drank water.

Losing weight with sweeteners?

Sweeteners alone won't make you slim. But they can contribute to a generally better dietary pattern.

Myth

5 Sweeteners change your intestinal flora

Actually: Overview studies show that sweeteners have no effect on the bacteria in your intestine.

Concerns about the effects of sweeteners on the intestinal microbiome were sparked by a 2014 Israeli study. The study concluded that the consumption of sweeteners changes the composition and function of the intestinal microbiome. According to the study, the risk of a glucose tolerance disorder is increased.

Have studies shown that sweeteners alter the intestinal microbiome?

No. Errors in conducting or structuring a test results in incorrect results that cannot be generalised. This was clearly demonstrated in a review in the specialist journal Food and Chemical Toxicology, and later confirmed by a further review in early 2019. In each case, the researchers concluded that neither the Israeli study nor any other known studies provide clear evidence of an adverse effect of sweeteners on the human intestinal microbiome.

Humans are not rats

The authors examined 17 or 18 primary research articles, in which the effect of sweetener intake on the intestinal microbiome was investigated. The majority of these were animal experiments, mainly involving rodents. Only three of the studies examined involved humans. Animals should not be put on the same level as humans in this context, because they have different intestinal bacteria. In addition, the animals were given extremely large amounts of sweetener.

Studies involving humans do not take into account total food intake

In the three studies involving humans, the scientists did not take into account the total amount of food the test subjects had consumed during the day. It is therefore not acceptable to attribute changes in the intestinal microbiome solely to sweeteners.

Not everything ends up in your intestine

Another point made by the researchers is that some sweeteners are broken down before they go into the intestine, or do not end up there at all.

Myth

6 Sweeteners make piglets grow faster

Actually: At the end of the 1980s, sweeteners were approved for use in pig feed. Certainly not to fatten up piglets, but to make it easier to wean them from sweet pigs' milk on to animal feed. Sweeteners do not provide any calories and do not encourage either muscle growth or fat build-up. In modern animal feeding products, it is uncommon to use them.

Myth

Sweeteners are dangerous for **children** and **pregnant woman** 7

Actually: Sweeteners can be consumed harmlessly by all types of people. Before being approved for use in foods and drinks, sweeteners are tested extensively. Only without any harmful effects whatsoever, including, for example, for pregnant women and unborn babies, will approval be granted.

Sweeteners and children

Most children love sweet things. Sweeteners mean that they can enjoy sweet things without taking in calories, damaging their teeth or affecting their blood sugar level. In spite of these positive attributes, the following is true: Sweet things should be enjoyed in moderation and sweeteners therefore, just like sugar, should be consumed only in children's portions.

Sweeteners during pregnancy

During pregnancy, women need twice as much of particular types of nutrients like folic acids and iron. At the same time, their daily calorie requirement only increases by 255 calories. Expectant mothers should therefore consume foods which are low in energy but rich in nutrients. This is where foods sweetened with sweeteners can help. They produce the same vitamins and minerals as foods sweetened with sugar, but contain about a third fewer calories.

Myth

8 Sweetener blends are even **more dangerous**

Actually: Sweeteners are just as harmless to health on their own as they are in blends. They neither react to each other, nor do they interfere with the metabolism. They just convey a sweet taste to the tongue.

Why are sweetener blends used?

Not every sweetener is equally suitable in a technological sense. Furthermore, each one tastes different. The way they taste can also change if sweeteners are used in different areas - for example, when preparing fruit or in milk products. By mixing different sweeteners, the sweetness quality and the way the sweetener feels in the mouth is often more 'rounded' and more similar to sugar, meaning that the taste is improved. A further advantage: Instead of higher amounts of sweetener, sweetener blends contain a noticeably lower amount of different sweeteners.

Myth

Sweeteners are all the same 9

Actually: Sweeteners have very different molecular structures, so don't expect there to be very many similarities. The raw materials and manufacturing processes used may also differ. But all sweeteners share certain properties that allow them to be called "sweeteners".

Common characteristics of the sweetener family

What all sweeteners have in common is that they are able to activate the same taste receptors on the tongue as sugar, and therefore provide a sweet taste. However, they are much sweeter than sugar. What's more, all sweeteners are calorie-free or do not provide any calories for practical use. In other words, they do contain calories, but these can be neglected due to the small amount of sweetener used. Another criterion for a substance to be classed as a sweetener is that it does not cause a rise in blood sugar or insulin secretion, and is not carcinogenic. In other words, it does not provide any nourishment for oral bacteria.

Differences

Depending on the sweetener, the sweetening power is 30 to 37,000 times that of sugar. But this is not the only difference. Some sweeteners unleash their sweetness very quickly, whereas others do this gradually. With some sweeteners, the sweetness stays in the mouth for a very long time, or higher concentrations leave an after-taste. Some sweeteners can also act as flavour enhancers, e.g. which intensify citrus aromas.

In some cases, there are synergies between different sweeteners, which can lead to an even stronger sweetening power or a better sweetness profile. For this reason, sweetener mixtures are used in a wide range of products. Furthermore, sweeteners take a different route through the body. Some do not go into the intestines, i.e. they are broken down beforehand, and others leave the body unchanged via the intestines or kidneys.

10

Myth

Sweeteners cause diabetes

Actually: Sweeteners do not cause diabetes. In fact, the opposite: They improve the quality of life for many diabetics for whom, without sweeteners, their enjoyment of sweet things would be greatly reduced.

People with diabetes or an impaired glucose tolerance must be mindful of their diet and make sure that they get sufficient exercise. In contrast to sugar, sweeteners have the advantage that they produce a sweet taste without having any effect on blood sugar levels.

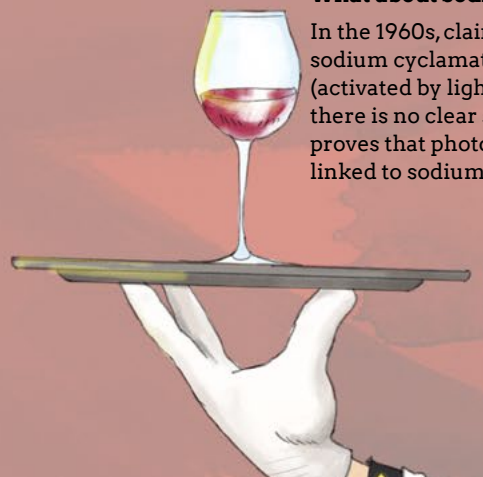
Furthermore, the American Diabetes Association has emphasised that 'sweeteners have the potential to lower the total intake of calories and carbohydrates'. For that matter, diabetics can include sweeteners in their everyday diet without having to count carbohydrates or calories.

Myth

11 Sweeteners cause allergies

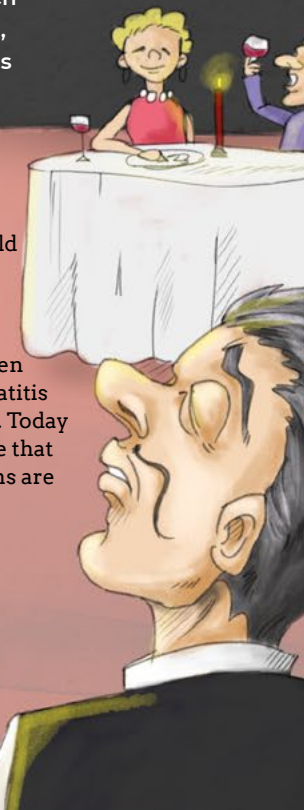
Actually: Sweeteners cannot cause any allergies in the typical sense. An allergy means that the body reacts to something by increasing production of antibodies. Causes can include egg white products, for example. Typical foods which can cause allergic reactions include: Milk and milk products, eggs, fish, shellfish and crustaceans, celery, nuts, soya beans and grains containing gluten.

'Real' allergies do not include 'pseudo-allergic' reactions. Natural food components can cause these, as well as additives and flavour enhancers. If the cause of a pseudo-allergic reaction is medically confirmed, it should be avoided and the symptoms should rapidly improve.



What about sodium cyclamate?

In the 1960s, claims of a link between sodium cyclamate and photodermatitis (activated by light) were published. Today there is no clear scientific evidence that proves that photosensitive reactions are linked to sodium cyclamate.



12

Myth

Sweeteners give you **diarrhoea**

Actually: **Sweeteners have no effect on digestion. They do not cause either flatulence or diarrhoea.**

Sweeteners are often mistaken for sugar substitutes which, if consumed in excessive quantities, can have laxative effects. Sugar substitutes include, among others, sorbitol, xylitol or erythritol, for which it is advised that 'excessive consumption can have a laxative effect'.

For example, for a sodium sweetener to cause flatulence and diarrhoea, you would have to consume a daily dose of 17 litres of sweetener. It is similar for sodium cyclamate: In a study conducted on dogs, laxative effects were noted. When applied to humans, however, this translates to a dose of 50 to 100 sweetener tablets - per day. This effect is not due to the sweetener, but to the sodium content.

Visit our sweet information portals

Did you know that sweeteners were discovered by a German scientist, and first mass-produced in a factory near Magdeburg in 1887? Or that in the early 20th century saccharine was smuggled into Germany from Switzerland inside sculptures of saints (known as “sweet saints”)?

Visit our online information portals to find out everything you need to know about EU-approved sweeteners. And why not try our “sweet” personality test?

We look forward to seeing you there!

www.so-suess-wie-du.de

www.suessstoff-verband.info

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Contact
Dipl. oec. troph. Anja Roth
Tel.: +49 (0)2203 20 89 45
info@suessstoff-verband.de

Written and edited by
Dipl. oec. troph. Anja Roth

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