



Most people on low-carb find that once they get used to the diet, the cravings for sugar go away. Many even claim not to use any sweeteners at all. However, you may find it hard to give up sweets, especially at the beginning. I've been researching for natural low-carb sweeteners as well as other healthy alternatives to sugar. As always, there are many sweeteners you should avoid.

I personally avoid using sweeteners regularly and only use them for occasional treats. In fact, most of my recipes in [KetoDiet](#), [KetoDiet Basic](#) and [my new cookbook](#) don't include any sweeteners at all. If your target is weight loss, sweeteners may impair your progress, as even so-called "zero-carb" sweeteners may cause cravings. If [your weight is stalling](#), avoiding sweeteners or joining my [30-Day Clean Eating Challenge](#) is a good way to break the weight loss plateau.

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Best Natural Low-carb Sweeteners

Following is an overview of healthy sweeteners you could use provided your net carbs limit allows for it. People with very low net carbs limit should avoid using anything other than "zero-carb" sweeteners, like Stevia, Monk fruit sweetener or Erythritol.

1. Stevia

Stevia is an herb, which is commonly known as "sugar leaf". The extract from this herb is used as a sweetener and sugar substitute. Based on the USDA database, Stevia belongs to a group of non-nutritive sweeteners. This means there are no calories, vitamins or any other nutrients. The availability of Stevia can vary from country to country.

Nowadays, it is commonly used in the US and was approved for use in the EU in 2011. The health effects of Stevia have been questioned for the past few decades. However, based on recent studies of the WHO (World Health Organization), Stevia extract [doesn't appear to have any harmful effects](#). Use in modest amounts, it's usually 200-300 times sweeter than sugar! You can get Stevia powder ([natural green](#) or refined/white) or Stevia glycerite (liquid, drops).



Commercially available Stevia-based sweeteners are [NuNaturals](#), [SweetLeaf](#) and other. If you can, get the liquid stevia / drops, not powdered stevia products. Beware of sweeteners, especially powdered stevia products, that may additionally contain artificial sweeteners, dextrose, maltodextrin (e.g. *Stevia in the Raw*) or even sugar. Sweeteners with [dextrose and maltodextrin are known to raise blood sugar](#). These may be the hidden carbs you are eating which may be the reason you

can't get to ketosis. Also, Dextrose is usually made from GMO corn while Maltodextrin is made from rice and may contain monosodium glutamate (MSG) which is not required by law to be labeled.

Some brands may leave a bitter aftertaste, which also depends on your perception. I suggest you try more brands until you find the one you like. Liquid Stevia from [SweetLeaf](#) is one of my favourite sweeteners.

If you notice that your liquid stevia product sometimes gets "cloudy", bin it. Even on the official product websites, don't seem to know either if it's safe to consume or not. The common advice is to bin it. When I noticed that myself, I wasn't sure whether it got "contaminated" when handling it or it simply has short shelf life. Since I didn't want to take any risks, I ended up binning a few bottles. It could be quite upsetting as it's not a cheap product and it's supposed to last for several months. Here is what I've found out: The problem stopped when I started storing my stevia in the fridge. I'm also very careful when handling it, so that I don't accidentally contaminate it. Problem solved!

2. Erythritol

Erythritol is naturally found in fruits, vegetables and fermented foods. It is a sugar alcohol that does not affect blood glucose and has zero calories. Unlike Xylitol, the laxative effects are [not reported to be as common](#). It's because 90% of Erythritol is [absorbed before](#) it enters the large intestine.

According to medical research, the human body can safely tolerate daily doses of [1 gram per kilogram of body weight](#). However, in large quantities, it can cause [stomach discomfort](#).

Erythritol has a GI of 0 and 0.2 calories per gram. It [does not affect blood sugar](#) and is suitable for a low-carb diet. Its sweetness is about 0.7 of sugar and you may need to use a bit more than sugar.

Erythritol is commonly used in low-carb cooking and is one of my favourites. You can try commercially available sweeteners like [Erythritol \(non-GMO\)](#) or [Swerve](#) (a combination of erythritol and oligosaccharides). Another



product I've recently come across and would recommend is [Lakanto](#), which is made from non-GMO Erythritol and loo han guo fruit (monk fruit.)

3. Monk fruit powder (Lo Han / Luo Han)

Monk fruit, also known as *luo han guo* or *longevity fruit*, is a fruit native to China and northern Thailand. It's 300 times sweeter than sugar and has been used in traditional Chinese medicine to [treat obesity and diabetes](#). It's as sweet as stevia but without the bitter aftertaste of most stevia products.

As with all products, you have to be careful what ingredients they contain. Although pure monk fruit is claimed to have no calories and carbs, most products contain other sweeteners like inulin, which [contains a few calories](#).

Avoid anything containing dextrose and maltodextrin or artificial sweeteners and unnecessary additives. A good product should ideally contain only ingredients like monk fruit extract and inulin. Products containing Monk fruit are: *Kal Monk Fruit Powder* (mostly monk fruit-based), [Swanson Lo Han Sweetener](#) (mostly inulin-based) or [NuNaturals Lo Han Supreme](#) (monk fruit, vegetable glycerine, alcohol and water).



I would personally avoid a product called *Nectresse* for several reasons. When you visit their website, it's hard to find out what ingredients it contains. This raises the first alarm. Secondly, the manufacturer is the same as the one selling Splenda which is an artificial sweetener. So, after browsing the internet, I discovered that *Nectresse* contains the following ingredients: Erythritol (non-GMO?), sugar (for me that's a no-no), monk fruit (good) and molasses (possibly from GM beets).

4. Inulin-based sweeteners

Chicory root inulin (chicory root fibre) is probably the most popular inulin-based sweetener. A product based on chicory inulin, commercially known as [Just Like Sugar](#), additionally contains vitamin C,

calcium and orange peel. Although the packaging claims there are almost no calories and no carbs, this isn't exactly true. [Studies show](#) that the human body can absorb 150 kcal / 100 grams of inulin on average which means there are some carbs from which we derive calories. *Note: I used the same technique for calculating the amount of net carbs like I did in sugar alcohols. It may not be accurate but it's a "safe" way of calculating net carb values (see above).*

Apart from chicory root, there are other natural sources of inulin such as Jerusalem artichoke, banana, garlic, jicama, onion or yacon. You may find products made from these foods - just make sure you avoid unnecessary additives and additional sweeteners.

Unlike sugar alcohols, inulin-based sweeteners don't have any cooling effect and shouldn't cause digestive problems if the recommended amount is not exceeded. [Studies show](#) that inulin has a beneficial effect on blood sugar and it one of the best sugar alternatives for diabetics and those on a low-carb diet. The [nutritional values of chicory inulin](#) are about 150 kcal and 37 g net carbs per 100g / 3.5 oz.



Unlike chicory root, which is [not recommended](#) for women who are pregnant or breastfeeding, chicory inulin is generally recognised as being safe (GRAS). Inulin has shown to have [prebiotic effects](#) beneficial for our health. One of the inulin-type prebiotics are called *fructooligosaccharides (FOS)*. It's a type of carbohydrate which our body cannot fully digest. Consumption of FOS [does not increase](#) blood sugar.

Ideally, you should not use sweeteners containing FOS for baking, as the structure of FOS [breaks down](#) at high temperatures (over 120 C / 248 F).

When it comes to side effects, inulin has shown to not only feed the good bacteria, but also bad bacteria. This may lead to gas formation and digestive issues. [Studies have shown](#) that a daily dose up to 20 grams is well tolerated.

5. Mannitol

Mannitol [does not affect blood sugar](#) but has more calories compared to Erythritol - about 1.5 calories per gram.

Recent research shows that Mannitol may be a [potential treatment for Parkinson's disease](#). As for the side effects, Mannitol is not recommended for people with [anuria and congestive heart failure](#).

Mannitol is soluble at higher temperatures and great for candy coating but I haven't tried it.

6. Xylitol

[Xylitol](#) is a sugar alcohol that naturally occurs in the fibres of certain fruits and vegetables. It's a sugar substitute that tastes like sugar but has fewer calories.

Like Stevia, it doesn't contain many nutrients but has some other [benefits for dental health](#) and may [prevent osteoporosis](#). It's also used in cosmetics and medicines. Xylitol should be used moderately as a sweetener. Although the human body gets adapted after several weeks of consumption, [this study shows](#) that doses over 65 grams can cause diarrhoea. Note that "high doses" for some people may be as low as 40-50 grams per day.

Xylitol has a GI of 13 and has 3 calories per gram. It [does not affect blood sugar significantly](#) if consumed in moderation. It is 1 to 1.3 times sweeter than sugar, so you can use the same or less than sugar.

Also, be aware Xylitol can be [toxic for dogs](#), so keep it safe out of their reach! I personally don't use Xylitol, as I experienced minor insulin spikes and digestive problems.



Other types of sugar alcohols

Other types of sugar alcohols are Sorbitol, Maltitol, Lactitol, etc. Almost all of these affect blood sugar levels. Be careful with any "low-carb" or "zero-carb" products. All these commonly use Maltitol that affects blood sugar but is omitted from the net carbs count. It's a good marketing strategy, so don't be fooled! To read more about sugar alcohols, have a look at this great article at MarksDailyApple.com, a website devoted to paleo life-style.

How many carbs do sugar alcohols really have?

When you look at the label of most sweeteners containing sugar alcohols, they claim to be "sugar-free" or "carbs-free". These products often contain Sorbitol and Maltitol. They use a simple rule:


Net Carbs (including sugar alcohols, polyols) = Total carbs - Fiber

This is not exactly true, as sugar alcohols may affect blood sugar and contain calories, too. Sugar Alcohols (polyols) are carbohydrates that the human body does not completely absorb. The keyword here is "not completely". I have spent a while trying to figure out how to count the net carbs of sugar alcohols. A reliable source of information is Mendosa.com. You can find a list of sugar alcohols, calorie content & their effects on blood sugar in the table below. I made the following assumptions to estimate the carb content in sugar alcohols included in my table:

1. all calories are derived from sugar alcohols (a type of carbohydrates),
2. our body [cannot derive any calories from most fiber \(insoluble\)](#), and
3. and there are 4 calories in every gram of net carbohydrates,

then net carbs in sugar alcohols can be estimated as follows:

Sugar Alcohols	GI (glucose = 100)	Calories / 100g	Net Carbs / 100g	
Maltitol	36	270	67	Studies show that our body can only partially derive calories and carbs from sugar alcohols. The exact amount depends on the type of sugar alcohols.
Xylitol	13	300	75	
Isomalt	9	210	52	Some sugar alcohols such as Xylitol and Mannitol are known for their laxative effects when recommended intake is exceeded.
Sorbitol	9	250	62	
Lactitol	6	300	75	Be aware: In many cases, net carbs from Maltitol that is commonly used in "low-carb" products, are not added to the total net carbs count!
Erythritol	0	20	5	
Mannitol	0	150	37	The best sweetener from sugar alcohols with minimum negative effects is Erythritol (lowest in calories and net carbs and has no effect on blood sugar).

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This may be a conservative way of calculating net carbs but when you are on a low-carb diet, it's better to be safe than sorry. In fact, the main reason I use this method is to avoid overconsumption of sugar alcohols because they may be perceived as foods to be consumed freely. Overconsumption will result in digestive issues and in some cases even in sugar cravings.

When you find "zero-carb" products, always be skeptical. There is no definite rule for counting carbs content in sugar alcohols or [chicory inulin](#). Actually, the effect could be different for each individual.

My advice is that you pay attention to any carbs consumed - even from alcohol sugars, as they may disrupt ketosis & weight loss, as I explain in another post: [Not Losing Weight on Low-Carb Ketogenic Diet? Don't Give Up and Read Further](#).

7. Tagatose (if available)

Tagatose is a sugar substitute, a monosaccharide naturally occurring in dairy products, fruits and cacao. Since 2001, tagatose has been generally recognised as safe (GRAS).

The taste is very similar to table sugar and Erythritol. It has a very mild cooling effect - it's 92% as

sweet and contains only 38% calories of sugar (< 1.5 kcal / g). It has no unpleasant aftertaste and browns and caramelises just like sugar... Somebody said low-carb crème brûlée? :-)

Tagatose only has a [small effect on blood sugar](#) and insulin levels, therefore is recommended for low-carb diets. It has a glycemic index of 3 which is very low. It also [inhibits digestive enzymes](#) and degradation of carbohydrates in the small intestine which results in inhibition of carbohydrate absorption in the body - that's why the amount of available carbohydrates (net carbs) is quite low (see [this table](#) at the bottom of this post).



Among [other benefits linked to consuming tagatose](#) are increased HDL cholesterol (reduced risk of heart attack), prebiotic effect (feeding healthy bacteria in your gut) and antioxidant effect. Tagatose has been indicated to be a potential treatment for anaemia, haemophilia, infertility and it doesn't promote tooth decay. It's beneficial for treating type 2 diabetes and obesity.

When it comes to side effects, higher doses of tagatose have been shown to cause mild [stomach discomfort](#), however, lower doses of 10-30 grams have been shown to be well tolerated.

Tagatose is currently not available on Amazon.

8. Organic Yacon sweetener (syrup or powder)

[Yacon syrup](#) is a sugar substitute extracted from *yacon plant* from its tuberous roots grown in South America, Andes. The root has been used for its nutritional and medical purposes for hundreds of years. Like to maple syrup, it's made via natural evaporation. It has a slightly caramel taste and is similar to blackstrap molasses and coconut palm sugar.



Yacon syrup has been known for its anti-diabetic properties. It consists of 50% of fructooligosaccharides (FOS) and a fiber called inulin which [does not increase blood sugar](#). FOS are also extracted from fruits and vegetables such as bananas, onions, chicory root, garlic, asparagus, jicama and leeks.

Yacon syrup is also high in antioxidants and potassium which is an essential micronutrient, when [dealing with the symptoms of "Keto-flu"](#).

However, the root consists of primarily free fructose at about 35%, so you should consume this sweetener with caution (see [this table](#) at the bottom of this post).

Yacon syrup has other health benefits thanks to its [significant antioxidant properties](#) and keeping the [kidneys and gut healthy](#). A study has shown that a daily intake of yacon syrup resulted in a significant decrease in body weight, waist circumference and body mass index when given to obese pre-menopausal women.

When it comes to side effects, excessive consumption of yacon syrup can lead to stomach discomfort. This is due to the fiber content and you should not use more than a few teaspoons a day. Also, you should not use yacon syrup for baking, as the structure of FOS breaks down at high temperatures (over 120 C / 248 F).



9. Freeze-dried berry powder

Berries are generally known to be the most nutritious and lowest in net carbs from all fruits. If you can find freeze-dried berries and berry powders with no additives, try them in smoothies, yogurt and baked goods.

[Fruit powders](#) add a lot of flavour and you will only need to use a very small amount, so you don't have



to worry about excessive carbs.

The net carbs content of freeze-dried fruit varies from 30 to 70 grams per 100 grams (raspberries contain less, while blueberries more carbs). If you want to know how you can use it, have a look at my recipe for [No-bake Mini Berry Cheesecakes](#).

10. Lucuma powder

Lucuma, also known as *egg fruit*, is a subtropical fruit native to Peru, Chile and Ecuador. [Lucuma powder](#) tastes similar to apricots, sweet potato, maple and mango. It's high in carotene and B vitamins, especially B3, potassium, phosphorus, magnesium and calcium.

It's mildly sweet and you can use the powder to sweeten up smoothies or baked goods.

Although it's great for flavouring, don't expect lucuma powder to add a lot of sweetness.



11. Dark Chocolate (75% cacao or more)

Dark chocolate can be added to your breakfast "cereal" (such as my recipe for [Faux keto oatmeal](#) from KetoDiet), baked goods or yogurt.

When looking for high-quality dark chocolate with the least amount of net carbs, opt for products with over 75% cacao. I personally don't mind a small amount of added sugar but avoid products containing certain sugar alcohols which raise blood sugar (sorbitol, maltitol, etc.) which tend to be added in large quantities. If you can, find products free of unnecessary additives. Small amounts of [soy lecithin are acceptable](#), unless you suffer from soy allergies.



Other Sweeteners - Mostly Avoid

Sugar is sugar - no matter how healthy the sweetener is, it will always impair your weight loss and potentially kick you out of ketosis. The following sweeteners can be labeled "healthy" only if consumed in small quantities. In general, these are not suitable for weight loss but can be added for weight maintenance. Note that they are not organised in any particular order.

Fresh fruit juices

Although fruits and fresh fruit juices should be avoided on very low-carb diets, you can use them in small quantities to sweeten yogurt or smoothies.

Not all berries are the same. While blackberries, raspberries and strawberries have the least amount of net carbs (6-8 g per cup), blueberries contain more than twice the amount of net carbs.



Dried dates and figs

Although some people can metabolise carbs well, most of us are not as fortunate. If you are insulin resistant, you will most likely store any excess carbs as body fat.

Dried fruits like figs and dates are often recommended on paleo diets and may be acceptable for weight maintenance. However, these are not always great for weight loss, in which case you should avoid using dried fruit high in carbs. If you use them, opt for organic fruit with no added sugar.



Rice malt syrup

Unlike honey and maple syrup, rice malt syrup is virtually fructose-free. It contains complex carbohydrates, maltose and glucose. As with all nutritive sweeteners, they are not suitable for a very low-carb diet and also, there is a [controversy regarding the safety of rice malt syrup](#), as it may contain potentially harmful levels of dietary arsenic. Additionally, rice malt syrup [has a very high GI \(98\)](#) which is even higher than table sugar. This means that if you use this sweetener, you will likely experience large blood sugar spikes.

Raw honey

Together with blackstrap molasses and maple syrup, unfiltered raw honey is one of the best nutritive natural sweeteners. The Glycemic Index of honey varies from 32 to 85, depending on the botanical source. While honey could have relatively high GI, the GL (Glycemic Load) is average. About 40% of the sugar content in honey comes from fructose.

Raw honey is different to the processed types you often find in supermarkets. It is worth getting one from your local farmer or a specialty store. Processed honey lacks essential nutrients, which are destroyed during pasteurisation and heating processing.

Additionally, processed honey often contains added sugar. Always look for simple indicators to determine the quality of honey you buy. For example, honey with bee pollen and a part of the comb is more likely to be high in quality than the ones in squeezable plastic bottles.

High-quality honey tends to crystallise, as it contains nutrients and enzymes not present in processed



types. Honey contains flavonoids, which are frequently found in fruits, and vegetables and are known for their [antioxidant ability](#). Honey could be included in your diet with caution, because it contains a high amount of carbohydrates.

Coconut palm sugar

Coconut palm sugar comes from *coconut palm blossom* and has a slightly caramel taste and smell. Like blackstrap molasses, it's rich in minerals such as magnesium, potassium and zinc.

The [sugar content in coconut palm sugar](#) is mostly sucrose, which is half fructose and glucose.



Remember, when looking for a healthy sweetener, **the lower the fructose content, the better**.

[Several studies](#) have shown that too much fructose in our diet is responsible for what is known as "fatty liver" and the storage of dangerous visceral fat surrounding the internal organs in the abdominal area.

Organic maple syrup

Pure maple syrup is made from evaporated maple tree sap. According to the USDA database, it is high in magnesium and zinc and helps in maintaining optimal immune system function.

Maple syrup is also rich in calcium and contains B vitamins as well as vitamin A and antioxidants. It contains less net carbs than honey and coconut palm sugar.



If used in moderation, maple syrup is suitable for a low-carb diet. Just be aware of your net carbs level: If it's just 20-30 grams a day, avoid it completely.

Organic date syrup

Organic date syrup has a rich flavour and can be used as a substitute to processed sugar. Its mineral content includes potassium, magnesium and iron. Date syrup can be used in moderation but should be avoided when your aim is weight loss through ketosis, as even just a teaspoon may disrupt it.

Unsulphured blackstrap molasses

Blackstrap molasses is a healthy nutritive sweetener. It has a relatively low amount of sugar and high amounts of nutrients. According to the USDA database, blackstrap molasses is particularly rich in potassium. It's also rich in other nutrients such as copper, iron, calcium, and B vitamins.

Molasses is actually a by-product of the sugar-refining process. The flavour is sweet and bitter - it is perfect for baking or even for meat and vegetable meals. Look for unsulphured blackstrap molasses from organic sugar and always use with caution.



Sweeteners to Always Avoid

HFCS (High-Fructose Corn Syrup) and sugar, etc.

Other sweeteners such as processed sugar or high-fructose corn syrup **must be avoided completely**. In fact, it's probably the worst sweetener you could possibly use - yes, even worse than sugar! Have a look at this video presentation: [The Trouble with Fructose: a Darwinian Perspective](#) by [Robert Lustig, MD](#). Dr Robert Lustig explains all you need to know about sugar, especially fructose and its evil health effects.



Agave syrup

I used to include agave syrup in the list of suitable sweeteners and used to believe it was good for me. There are some websites that recommend using agave syrup due to some positive health effects, while others advise against it. I recently came across an [interesting article](#) by a reputable weight loss expert Dr. Johny Bowden, who says:

"Agave nectar/ syrup is basically high-fructose corn syrup masquerading as a health food."

Some basic facts: Agave syrup is produced from the blue agave, which is also used in making tequila. It's about 1.5 times sweeter than sugar, but also provides 1.5 more calories - the effect is in result the same. It has a lower GI than sugar but it's 90% fructose, which has damaging effects on our metabolism. Verdict: Avoid it.

Artificial sweeteners

If you plan to use any artificial substitutes like Aspartame, Saccharin, Acesulfame K or Sucralose, beware of potentially negative health effects. Specifically, based on a review of studies regarding the [safety of Aspartame](#) I do not recommend using it. When it comes to other artificial sweeteners like Sucralose, there is inconclusive evidence about their safety in the long term and I personally avoid them.

Do artificial sweeteners kick you out of ketosis? The effects of artificial sweeteners vary between individuals. Some people experiencing ketosis claim that certain artificial sweeteners contained in diet drinks put them out of ketosis. According to [this article by Mark Sisson](#), there is only a little effect (if any) on insulin levels from most artificial sweeteners.

Sometimes it's quite difficult to know what ingredients some commercially available products contain. If you want to know the ingredients in various products, have a look at this list: [Comprehensive All Sweetener List](#) (scroll down to see *List of Sweetener Brand Names*).

Sweeteners in a Nutshell

As mentioned above, there is no definite rule for counting carbs content in sugar alcohols or inulin and oligofructose and the effect could be different for each individual. The table below shows estimates of net carbs in various sweeteners following a conservative approach of counting net carbs, where all calories are derived from them.

Here in a quick overview of sweeteners you can use as part of your healthy diet. You can download a [print-friendly version here!](#)

Overview of Sweeteners (average estimated nutrition values)

<i>Use mostly</i>	Stevia	Erythritol	Monk fruit powder		
Glycemic Index	0	0	0	The exact amount of net carbs varies for all products. Most products also contain other sweeteners such as inulin, so keep that in mind, as the nutrition values and net carbs vary for different products!	
Net Carbs / 100g	5	5	0 - 25		
Net Carbs in grams / serving	0 (few drops)	0.5 (tbsp)	0 (pinch)		
Kcal / 100g	20	20	0 - 100		
<i>Use in moderation</i>	Mannitol	Tagatose	Inulin-based sweeteners	Xylitol	Yacon syrup / powder
Glycemic Index	0	3	0	13	1
Net Carbs / 100g	37	37	25 - 37	60	40 / 62
Net Carbs in grams / serving	3.7 (tbsp)	3.7 (tbsp)	2.5 - 3.7 (tbsp)	6.2 (tbsp)	8 / 6.2 (tbsp)
Kcal / 100g	150	150	100 - 150	240	168 / 250
Other to be used in moderation: lucuma powder, freeze-dried berry powder, dark chocolate (75% and more)					
<i>Use sparingly</i>	Raw honey	Coconut palm sugar	Maple syrup	Date syrup	Blackstrap molasses
Glycemic Index	32 - 85	35	54	40 - 50	55
Net Carbs / 100g	82	92	67	64	61
Net Carbs in grams / serving	17.3 (tbsp)	11 (tbsp)	13.4 (tbsp)	13.4 (tbsp)	12.1 (tbsp)
Kcal / 100g	304	370	260	284	235
Other to be used sparingly: dried dates and figs, fresh fruit juices					
Avoid Completely: HFCS and sugar, agave syrup, artificial sweeteners (Splenda, Equal, aspartame, etc.)					