

Sugar and alternatives

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SUGAR & ALTERNATIVES

Natural sweeteners

For the purpose of this article, I will only discuss three natural sweeteners:

- Xylitol
- Erythritol
- Stevia

1. Xylitol

Xylitol is made from the Birch wood Tree. It is a sugar alcohol.

Advantages:

- It is not converted to acids in the mouth and therefore does not cause tooth decay
- It has a similar sweetness to can sugar but with 40% less calories.
- It does not raise blood sugar levels and has a low Glycemic index.

Disadvantages:

- It is highly toxic to dogs even in small amounts
- can cause diarrhea and intestinal pain and gas
- people with IBS or on the low FODMAP diet should avoid it.
- It is expensive, retailing around R140 pkg here in South Africa.

What does it do in baking?

Xylitol absorbs a lot of moisture and so one needs to make adjustments to the recipe to add more moisture.

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2. Erythritol

It is a naturally occurring sugar alcohol made from corn using enzymes and fermentation.

Advantages:

- 70% sweetness of cane sugar
- Ratio of 1.3 : 1 in baking
- Much easier on the digestive system than xylitol although it can cause digestive issues if consumed in large amounts.
- Does not spike blood sugar levels or insulin
- Claims to protect against dental cavities and tooth decay.
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Disadvantages:

- It can cause digestive issues if consumed in large amount.
- It is costly at R100 pkg
- It does not dissolve as well as cane sugar and therefore also does not reach caramelisation point.

What does it do in baking?

- It leaves a cooling sensation on the tongue that can be unpleasant.
- It dries baked good out, reducing moisture and therefore has a very limited shelf life. Normally only good on the day of bake.

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3. stevia

Stevia is taken from the Stevia Rebaudiana plant and is related to the Asteraceae and ragweed family. It is 200 times sweeter than cane sugar.

Advantages:

- It is a non nutritive sweetener (no calories)
- Studies have found that stevia can lower bad cholesterol and increase good cholesterol
- It retails as tablets, powder and drops.
- You need to use 1.5 tsp stevia to 1 cup of cane sugar (therefore yo use less)

Disadvantages:

- It can leave a bitter aftertaste which some find unpleasant
- The FDA says that not enough is known of whole stevia leaves or crude stevia extracts and their potential on kidney and cardiovascular problems.
- Since Stevia is normally a liquid, it requires you to replace the bulk in a recipe that the sugar would of taken up. Replacements can be apple sauce, banana, mesquite powder, whipped egg whites or yogurt.

Out of the above there, Erythritol with a bit of Stevia is my choice. I do not use Xylitol due to it's affect on the digestive system of which I have experienced myself and I also do not like the fact it is **harmful to dogs**.

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Sugar alternatives

There are many sugar alternatives, some equal or similar to the fructose content and calories of sugar. However some of these do have more nutrient content and a few added advantages over can sugar.

1. Coconut sugar

It is derived from the coconut palm tree and is a natural sugar made from the sap of the coconut palm.

Advantages:

- Low GI index
- Can substitute 1:1 in recipes
- It contains some nutrients like iron, zinc, calcium, potassium.
- It contains inulin which improves gut health
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Disadvantages:

- It contains the same amount of fructose as that of cane sugar, gram for gram.
- It is high in carbs and calories
- It can give baked goods a darker color, so if making a vanilla cake, it won't be white.

What does it do in baking?

- It burns at a lower temperature than cane sugar and so it will not reach soft ball stage
- It adds a richer, more intense flavor to baking.
- It works really well in baked goods like carrot cake, adding a caramel note.

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2. Honey

Honey is a sweet syrup like liquid that is produced by honey bees.

Advantages:

- It contains trace amounts of vitamins and minerals and antioxidants
- It contains flavonoid
- It does still increase blood sugar levels, although not as high as cane sugar

Disadvantages:

- It contains fructose and glucose sugar and is high in calories containing 64 calories in a teaspoon.
- If not used in moderation, it can lead to weight gain

What does it do in baking:

- It is known that Heating honey does lose a lot of its nutritional value
- It browns a lot quicker due to the **maillard reaction** so you may need to reduce the temperature of your oven.
- It does affect the texture of baked goods, making them moister but denser
- you use less honey than sugar as honey is sweeter than sugar.
- because it is a liquid, you might need to either reduce the other liquids in the recipe or increase the dry ingredients like flour. It can take some adjusting.
- I have found that some baked items get a bitter taste but this is just my experience.
- And lastly honey costs a lot more than sugar so it is not a cheap way of baking.

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Other healthy sugar alternatives:

1. Yacon Syrup
2. Monk Fruit
3. Mesquite Powder
4. Lucuma powder

Mesquite powder

Mesquite powder is taken from the pods of the Mesquite tree. The pods are ground to form a powder.

Advantages:

- Low GI index of 25
- Contains calcium, magnesium, potassium, iron and zinc.
- lovely caramel nutty taste
- Can promote good digestion due to being rich in soluble fiber which can speed up bowel elimination process.
- promotes better absorption of vitamins and minerals
- high amounts of Omega 3 fatty acids which can lower heart disease and stroke
- 17% protein, promotes muscle growth and repair

Disadvantages:

None that I know of!

What does it do in baking:

It replaces cane sugar and adds sweetness. It also adds a subtle caramel note to baked goods and can be used successfully in bakes like cheesecake.

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Lucuma powder

Lucuma powder is made from the fruit of the Pouteria Lucuma tree native to South America.

Advantages:

- 75% less sugar than cane sugar
- Low GI index
- Contains insoluble fiber which adds bulk to stool and prevents constipation and soluble fiber which is beneficial to gut bacteria
- it contains some calcium, iron, potassium, niacin, vitamin C.
- Contains antioxidants **polyphenols and carotenoids** which are two groups of antioxidants known for their anti-inflammatory and cancer fighting properties.

What does it do in baking?

It can be used in recipes that require brown sugar. Replace with a ratio of 2:1 and add more liquid when necessary. It adds a slight caramel note to baked goods.

I do like to use coconut sugar as an alternative due to its added benefits over cane sugar, however, like can sugar, it should be used in moderation. Mesquite powder and Lucuma powder are excellent alternatives that are not as well known and deserve more attention. However these two superfoods are quite pricey and therefore probably not as affordable to use.