A Simple Low Carb Life

Low Carbohydrate Substitutions

MODULE 9- Video 1

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Let's talk about some of the important low carb substitutions that you can use nearly every day.

Sweeteners:

- Stevia
- Truvia
- Erythritol
- Xylitol
- · Sugar free syrups (Torani, Monin, DaVinci, etc)
- Chicory root
- Inulin

Important properties of sweeteners:

Stevia: Zero glycemic index sweetener. Slightly bitter in pure form. Often mixed with high glycemic sweeteners to offset bitterness (like dextrose, maltodextrin, and others). BEWARE and read the ingredients on the label. Try liquid form (pure), *Truvia* (stevia/erythritol), *Sweet Leaf* brand (mixed with inulin which is a non-digestible fiber that is low calorie and a prebiotic).

Truvia: A combination of stevia and erythritol that has zero net carbs.

Stevia does not tolerate sustained heat, meaning it will NOT retain its sweetness when heated for longer than a few minutes. Not suitable for a sweetener in baked goods unless paired with another heat-tolerant sweetener like erythritol or xylitol.

Erythritol: Occurs naturally in some fruits and fermented foods. Is a polyol or sugar alcohol and about 60-70% as sweet as table sugar, has 0.2 calories per gram, does not cause tooth decay, and although partially absorbed by the body, is excreted in urine and feces. It is the least likely of the sugar alcohols to cause gastric distress (gas or bloating) unless high doses are used.

Xylitol: Normally extracted from the hard birch tree or corn cobs. Does not cause dental decay and is another polyol. About as sweet as table sugar with 33% less calories. It is absorbed slowly and has low glycemic index (does not provoke an insulin response in usual doses). **EXTREMELY TOXIC EVEN IN SMALL AMOUNTS TO DOGS** (NO OTHER ANIMAL OR HUMAN).

Special properties

Erythritol:

- Low melting point
- After heated will crystallize again when cooled
- Will NOT caramelize
- Zero glycemic index so will not increase blood sugar (the only sugar alcohol to have ZERO glycemic index)
- Has ZERO calories per teaspoon and 4 grams of carbohydrates per teaspoon (1/2 of which you can subtract to find net carbs).
- Has a cool aftertaste (like mint) if not dissolved in water
- Will not cause tooth decay
- Least likely to cause bloating or gas

Xylitol:

- Low melting point
- After heated, can turn brown and caramelize
- Will not crystallize
- Tastes like, looks like, acts like sugar
- Glycemic index of 7-13 (out of 100) depending on what source you use
- Has 10 calories per teaspoon, 4 grams of carbs (1/2 of which you can subtract to find net carbs like erythritol).
- Will not cause dental decay (used in most sugarless gums)
- Does not have a cool aftertaste

I personally like to mix them in a 2:1 mixture (2 part erythritol:1 part xylitol). This ratio makes the combined properties behave exactly like sugar.

Use them individually or combined, depending on what effect you are trying to accomplish with what you are making. Making caramel? *Use xylitol.* Making hard candy that you want to crystallize? *Use erythritol.*

The boiling point on both of these sugar alcohols is very low and they are endothermic meaning they turn heat inward. *Because of these properties, you can make fudge in about 5 minutes.*

Be careful not to splash any heated sugar alcohols on your skin to avoid severe burns.

Splenda (Sucralose):

- · Is a chlorinated sucrose molecule.
- It is many times sweeter than sugar.
- Does not absorb water and can make baked items dry.
- Does retain some of its sweetness when heated.
- It was accidentally discovered while attempting to make an insecticide.
- Has recently been suggested that it can kill good bacteria in the gut.
- Does contain calories and carbs that are often ignored.

If used at all, I would keep portions small and not use it daily. Look for stevia sweetened products instead.

Most commercial diet drinks contain EQUAL (aspartame)

Both aspartame and saccharin have been studied and cause a number of health problems.

Limit your use of aspartame containing drinks as much as possible. Coca Cola is now making a *Splenda* sweetened diet cola (*limit Splenda use too*).

There are stevia sweetened drinks at many grocers now.

Choose your sweeteners wisely.

 Beware of craving more "sweets" when using them.

Flour substitutes:

- Almond meal/flour
- Coconut meal
- Cashew meal/flour
- Soy flour
- Whey protein
- Chickpea flour (garbanzo beans)-a little higher in carbs so use sparingly. Aids in holding dough together.
- Einkorn wheat (high in carbs but not hybridized so it does not have inflammatory properties or appetite stimulant properties of modern wheat). Use a SMALL amount with low carb flours to add elasticity and use of yeast.

- Flaxseed meal
- Hazelnut meal/flour
- Macademia meal/flour
- Hemp protein powder
- Oat fiber (not oatmeal or oatbran)
- Psyllium
- Peanut flour
- TVP (textured vegetable protein)
- Additional fiber: chia seeds, flaxseeds, hemp seeds, sesame seeds.

Yeast requires sugar and gluten to function as a rising agent.

What this means is that low carb breads will be quick breads and not yeast breads, since nearly all low carb flours do not contain gluten.

The good news is, low carb breads only take about 30-45 minutes to make instead of 3-4 hours for yeast breads.

You may add yeast for flavor but without gluten or sugar, it will not cause dough to rise.

What can I use to make dough rise?

- Eggs
- Baking powder
- Baking soda and vinegar
- Add soda water or mineral water to dough containing baking powder or baking soda to improve the "rise".
- Xanthan and guar gum (helps items to remain suspended since the stickiness of gluten is absent in the dough)

Since milk contains so many carbs, what can I use to substitute for milk in low carb recipes?

- Unsweetened, plain almond milk
- · Unsweetened, plain coconut milk
- Unsweetened, plain soy milk
- Unsweetened, plain hemp milk
- Half and half
- Whipping cream or extra heaving whipping cream
- Unsweetened, plain Greek yogurt
- Ricotta cheese
- Cottage Cheese

What about thickening agents for soups and gravies?

- PB2 (peanut flour)
- Whey protein
- Coconut flour
- Soy flour
- Chickpea flour
- Hemp flour
- Commercially prepared thickeners by LC Foods, Dixie Diners, and others.

So what are HEALTHY fats?

- · Olive oil
- High oleic safflower oil
- Butter
- Clarified butter or ghee
- Lard/bacon fat
- Coconut oil
- Avocado oil
- MELT spread (is a combination of coconut oil, flaxseed, butter, palm oil, and ghee)-Tastes great! www.meltorganic.com

In smaller amounts:

- Macadamia oil
- Sesame oil
- Walnut oil
- And others

Remember to limit use of polyunsaturated oils in cooking. They break down into unhealthy byproducts at high heat. They are ok to use to drizzle onto your food.

Let's move on to

Module 9-Video 2....

To learn about more substitutions.

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