

# TogetheriCan

13

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## BLOOD SUGAR AND INSULIN EXPLANATION

### A Review of daily food intake and what happens internally

People eat meals the way they were taught and the times they were taught: breakfast, lunch, and dinner. Some call the last meal of the day supper. It doesn't really matter what we call it. What matters is: "Is it healthy for us"?

**People choose foods** for *convenience*, because *they're healthy*, because they're *grown organically*, or sometimes because they *just like the taste*. They also choose foods for many wrong reasons: *Ignorance of facts*, swayed by *false advertising*, and for a myriad of other reasons they are led down the path to ill health.

Some of the reasons are valid, while some are not.

**Until we stop and challenge our beliefs, we will never know the real truths.**

Sometimes even knowing what those truths are, people will choose to ignore them.

**I have people tell me all the time that they have stopped eating sugar.**

When I ask the question, "Do you eat fruits and vegetables?", their answer is, "Of course."

**There are three basic macro nutrients.**

1. **Carbohydrates**
2. **Proteins**
3. **Fats**

**Anything that is not classified as a fat or a protein, falls into the carbohydrate family.**

All carbohydrates, with the exception of fiber, provide some form of sugar to the body.

Simple sugars (sucrose) found in white bread, cakes, cookies, and ice cream, pass directly through the stomach wall into the bloodstream as glucose.

**All fruits contain a sugar classified as fructose**, a natural sugar found in all fruits. It is not the same as the processed high fructose corn syrup. Fructose, broken down in the stomach, must be passed to the liver before it can be broken down into glucose. The fact that it takes longer means that the blood sugar will not rise as fast as when driven up by sucrose.

For those who eat **vegetables, they contain a natural sugar called galactose.**

Galactose must also be broken down by the liver into glucose. As with fructose, it takes longer to get into the bloodstream.

Why does this matter? It matters because **blood sugar must be regulated in order for us to be healthy**. The body uses insulin to lower blood sugar spiking. If blood sugar gets too low, the body has another mechanism— it releases a chemical called glucagon. Glucagon in turn passes a signal to the

liver to release stored sugar.

**Many times if the blood sugar spike is high, then the release of insulin will also be high.** When the Blood Sugar spike combines with Insulin, they combine to form triglycerides, which is stored as fat. If the Blood Sugar spiking gets too high, the body can, and often does, release an overabundance of insulin. This can create a situation where the blood sugar becomes too low. In that case the glucagon will be released.

There are physical effects that take place when the blood sugar is too low, as well as when it is too high. **Low blood sugar** leads to *lack of energy, fatigue, depression*, a slowing down of the body.

To reverse the situation the body typically asks for, demands, that you eat something to bring that blood sugar back up.

This begins the vicious cycle of blood sugars spiking, a release of insulin, lowered blood sugar, and an increase in the demand for more carbohydrates/sugar.

So those saying that they don't eat sugar, but admit to eating fruits and vegetables, are essentially telling themselves and others a lie.

This leads us to a term everyone should know! **Glycemic index**. Basically, it **tells us how fast a certain food would raise blood sugar levels**.

This includes **fiber**. **Both soluble and insoluble fibers contribute 0 calories when consumed**. The soluble fibers are known to bulk the stool while the insoluble fiber acts as a scrub brush in the intestines.

**Another lie** I hear quite often is: *"I get all the fiber I need from the vegetables I eat."*

Many vegetables have very little fiber. They have a lot of bulk. Some people define bulk and fiber as the same. It is not!

Looking at the blood sugar insulin chart, you can see a relationship to the three meals a day plus snacks, and what it does to blood sugar.

**The solution** is on the lower portion of the graph. **Blood sugar balancing** is done by eating every 2 1/2 to 3 hours. These are not snacks, but something that have been identified as fuelings. Fuelings provide a proper ratio of carbohydrates (16 grams), to protein (13 grams), with a limited amount of fat. (This ratio is used during the weight loss portion of the program.)

It is also recommended that you eat one meal—what we call a lean and green. This consists of 4 to 6 ounces of lean protein (fish, chicken, pork, beef, tofu or buffalo) and a healthy portion of green vegetables.

By keeping the blood sugar from spiking and in check, the body can go into fat burning zone, and health can be restored to the body.

A term that many people are familiar with, but don't really understand what it is, is

**Ketosis: Ketones are eliminated from the body, via the urinary tract, when fat is being used as an energy source.** Ketones are a byproduct of the fat burning process.

Driving the body into a deep state of ketosis can be harmful and lead to a state of Dis-ease.

*A keto diet, or the keto zone, can't determine whether you are burning fat you have consumed or fat that has been stored in the body.*

It only shows that fat has been used for energy.

As you move from the weight loss portion of the program to the transition phase or to the maintenance phase, we suggest that you follow the same ratios of carbohydrates and protein. However, at this time we would be adding some starches (legumes) and increasing calories by a slight amount.

Also see: (3 ways of creating fat in the body)