



## Refined carbohydrates

Fat and refined carbs mixed can be highly addictive. If a food manufacturer wants to have soaring sales, it's tempting to produce products which mix fat with sugar.

A combination of refined carbs (such as white bread, sugar, pasta, pastries) and non-essential fats (such as margarine) has an extremely powerful effect on driving the signals that promote fat accumulation in the body.

## Insulin: The fat storage hormone

Intake of refined carbs and sugars causes insulin surges into your bloodstream



Insulin drives excess blood sugar (unused by your cells) into fat storage



As blood sugar decreases below normal levels (hypoglycaemia), appetite increases



Subsequent carbohydrate intake alleviates hypoglycaemia temporarily



The same cycle is then repeated, increasing fat storage (weight gain) and appetite



Excess body fat is accumulated, decreasing insulin efficiency (glucose uptake) in cells



Insulin resistance in cells causes higher than normal insulin spikes and more fat storage

## The facts about carbohydrates

- Carbs are a family of molecules. They occur in 3 forms:
  1. **Sugars** are the simplest. They include glucose (good) and fructose (bad).
  2. **Starches** are more complex carbs. They include legumes, starchy veggies + grains.
  3. **Fibre** is a complex carb with 0 calories. They incl. fruits and veggies, seeds, nuts, beans.
- Carbs are the body's main source of energy.
- There are "good" carbs and there are "bad" carbs.
- Cutting out "good" carbs (such as fruits, vegetables, legumes and dairy) could put you at increased risk of nutritional deficiencies leading to serious health problems.
- Healthy sources of carbs are an important source of nutrients such as calcium, iron, B vitamins and probiotics.
- Fibre (the fleshy parts of fruits and veggies) helps reduce our insulin levels after a meal, therefore discouraging fat storage.
- High-fibre foods supply you with vitamins and minerals needed to keep your immune system at its best. It is a good source of antioxidants, which protect your body from damage by harmful free radicals and is also linked to a lower cancer rate.
- A lack of fibre in your diet can cause irregular digestion, elevated cholesterol levels and constipation.
- Refined carbs ("bad" carbs, such as sugar, white bread, packaged and processed foods) create an insulin spike that promotes fat storage.
- Refined sugars, like white or brown sugars and high-fructose corn syrup is very addictive.
- Fructose stimulates weight gain through its effects on your appetite and by blocking fat burning.

### In a nutshell – carbs to stay away from:

- Refined carbs (white bread, pastries, any packaged & processed foods)
- Refined sugar (white, brown, confectioners.....)
- High-fructose corn syrup (in most drinks, milkshakes, processed foods)
- Fruit juices
- Dried fruits

### In a nutshell – carbs to eat:

- Vegetables (especially low GI)
- Fruits (especially low GI)
- Legumes (beans, lentils)
- Whole grains

# More about sugar

## Avoid added sugar

Before sugar enters the bloodstream from the digestive tract, it is broken down into two simple sugars... glucose and fructose.

- **Glucose** is the energy of life. If we don't get it from the diet, our bodies produce it.
- **Fructose** is different. Our bodies do not produce it in any significant amount and there is no physiological need for it. It can only be metabolized by the liver in any significant amounts. This is not a problem if we eat a little bit (such as from fruit) or we just completed a marathon. In this case, the fructose will be turned into glycogen and stored in the liver until we need it. However, if the liver is full of glycogen (which is the case for the majority of people), eating a lot of fructose overloads the liver, forcing it to turn the fructose into fat. Keep in mind that all of this does NOT apply to fruit.

## How much sugar should we eat?

Today, the world daily average consumption of added sugar per person is 17 teaspoons, up 45 percent compared to 30 years ago. This is way too high.

The American Heart Association recommends that women eat no more than 6 teaspoons of added sugar a day (24 grams), men no more than 9 teaspoons (36 grams) and kids 4 teaspoons (16 grams).

## Sugar in drinks

Many people don't realize just how much sugar is in drinks. Recent studies show that type II diabetes and obesity are highly correlated with soft drinks. It is estimated that 43 percent of added sugars in our diets come from sweetened beverages – easy to comprehend given that one can of soft drink averages eight teaspoons of sugar.



## **Are diet drinks better for you?**

Diet soda is calorie-free, but it won't help you lose weight. Researchers from the University of Texas found that over the course of about a decade, diet soda drinkers had a 70 percent greater increase in waist circumference compared with non-drinkers. And get this: participants who slurped down two or more sodas a day experienced a 500 percent greater increase.

Put simply, diet sodas are a calorie-free version of regular soda, which we will define as carbonated water, flavoring, and sweetener. While regular soda - like Coke, Sprite etc. - are usually sweetened with corn syrup or sugar, diet sodas use a variety of artificial sweeteners, such as aspartame. Artificial sweeteners have more intense flavor than real sugar, so over time products like diet soda dull our senses to naturally sweet foods like fruit. These sugar replacements have been shown to have the same effect on your body as sugar. Artificial sweeteners trigger insulin, which sends your body into fat storage mode and leads to weight gain.

Drinking one diet soda a day is associated with a 36 percent increased risk of high blood pressure, raised cholesterol and higher risk for heart disease, stroke, diabetes and cancer.

So - no, diet drinks are not better for you. My tip - stick with water.