

# SUGARS



## Natural sugars

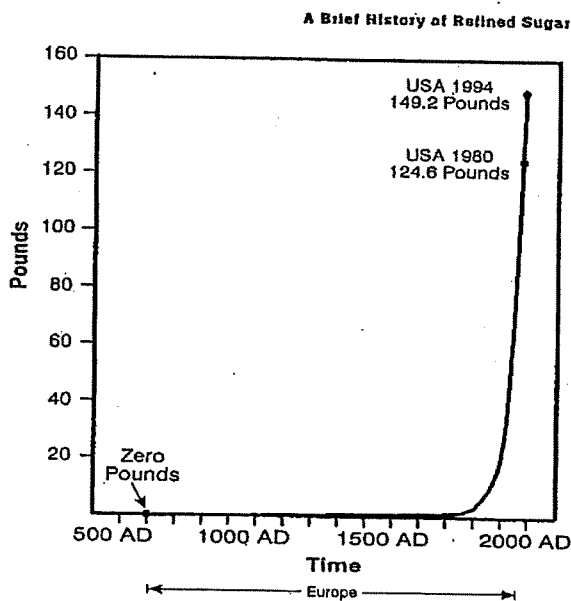
Simple sugars can be found in their natural state within the cells of plants such as fruits (fructose) or in milk (lactose), and these are known as "intrinsic" sugars, which means the sugar is locked inside the cells. Other than in milk, sugars eaten in this way are accompanied by good quantities of fibre, further helping to ensure that digestion is more gradual. These sugars also contain many other vital nutrients, such as vitamins, and minerals.

## Unnatural sugars

Unfortunately the bulk of our sugar intake comes from sugars that are not contained in cells, and are known as (extrinsic). These are found in table sugar, soft drinks, sweets, cakes and biscuits and any number of processed and manufactured foods, which have added sugar.

These sugars can be broken down much more swiftly, and have potentially damaging effects for health. Foods that are high in these sugars are known as "empty" calories, in that they provide carbohydrate in the form of sugar, but very little or nothing else. Sugar is unnatural and has only been artificially introduced into our diets very recently.

## A brief history of refined sugar



The dramatic rise in sugar consumption over the last 100 years demonstrates how unnatural sugar is in terms of a staple food for mankind. If you consider that our evolution took place over one million years, then the flat line running to the left of the graph would run backwards for a further two and a half meters. This gives an idea of how recently sugar introduction has been in terms of our overall evolution, and why this is giving us such problems.

## Consumption

In Britain on average we buy almost a pound of packet sugar per person per week. And we eat twice as much as that when you count all the sugars added to processed foods such as sweets, soft drinks, biscuits and cakes.

## There are many problems with eating too much sugar:

- Tooth decay, especially if sugary snacks and drinks are consumed regularly
- Sugar promotes obesity. Adding sugar to foods makes it easier for us to eat too much, partly because our taste buds have been trained to crave sugary foods, and also because sweet foods are usually low in fibre and so aren't as satisfying or filling
- Over consumption of sugar can lead to, insulin resistance, diabetes, raised blood pressure and cardiovascular disease.

### **Looking out for sugar**

Did you know that a mars bar contains 8 teaspoons of sugar? A can of coke 10. Some breakfast cereals are up to 45% sugar. Sugar is added to almost all processed foods. Low fat foods often contain large amounts of sugar.

If you are looking on a food label....a food that contains more than 10g of sugar per 100g is considered to be high in sugar.

### **What are the benefits of slow sugar absorption?**

When sugar enters the digestive system it is very easy for our bodies to absorb this straight into the blood. This is great news for athletes, or people who require a quick burst of energy, but for people with normal energy expenditure levels this is particularly bad news.

Once blood sugar levels rise, our bodies produce insulin in order to get the sugar out of the blood stream (where high levels can be damaging) and into our cells for use as energy. This causes an insulin spike, which swiftly takes the sugar to the cells, or when not needed converts any excess into glycogen (muscles and liver for fuel) or triglycerides (fat deposits).

The more sugar that is consumed, the more insulin is produced, and the quicker this process takes place. Often insulin levels rise so swiftly that too much sugar is removed from our bloodstream and we become hypoglycaemic, leaving us tired, irritable and craving more sugar. This is the classic mid afternoon carbo crave and leads us to eat more sugary foods that set up the same cycle.

This is the damaging pattern of undulating blood sugar levels. Furthermore, over time this regular flood of insulin can result in our cells becoming insulin resistant, which can often be the first stage in the development of type 2 diabetes.

### **Change your palette**

The taste for concentrated sweet foods is often acquired in childhood. Moreover, it may have been accompanied by the reward factor, and becomes an emotional comforter, thus laying the way for future problems.

We can train our palates to move away from such sweet foods, and this is exactly what we have to do in order to move away from a high sugar diet. However the only way to do this is to avoid sugary foods, and select healthier slow energy releasing foods such as fruit instead of sweet snacks.

### **Artificial sweeteners**

Sweeteners are not a good idea, as they will only act to fuel a sweet tooth. Furthermore, in large quantities they have been shown to have a harmful effect on health. Avoid them if you can.

Have a look at your food diary and see if you can identify where these unnatural (extrinsic) sugars may be sneaking into your food and drinks. For example do you have sugar with your tea or coffee, how many fizzy drinks would you typically consume in a week? Have you looked at the packet of your breakfast cereals to see how much sugar they contain? Do you reply heavily on processed foods? What types of foods do you tend to snack on? When you have identified where this added sugar is coming from can you think of any suitable strategies to help you reduce the amount you consume?