

DOES SUGAR MAKE US FAT?

It's that time of year when we are looking ahead to our summer holidays. We look for the perfect destination, book it, then think 'oops I'd better shed this winter padding before I jump into my swimsuit'. We often turn to weight loss companies, magazines and celebrities who claim to have the answer to our weight issues, announcing that we will be 'beach ready' in no time - just like that woman on Eastenders or Coronation Street etc. We stock our fridge with recommended diet meals, sodas, snacks and await the expected miracle - but do these products work, are they really healthy and why should we care?

Our nation is rapidly growing, not just in numbers but also girth. The expanding waistlines, buttocks and thighs of our countrymen, women and children is a major concern for public health and our economy. NHS statistics (reported in England in 2012) tell us that 62.8% of adults (16+) were overweight/obese with 26.1% being obese. 30.3% of children (aged 2-15 years) were overweight/obese with 16% being obese and every year since the 1960's those figures have been rising. We are on average 3 stone heavier than we were in the 60's!

Obesity is linked to major diseases (including death!) such as coronary and circulatory diseases, diabetes, strokes, some cancers, infections, depression, orthopaedic and soft tissue injuries and so much more. We are a nation addicted to sugar and research emphatically suggests that this is our problem!

What is sugar?

Sugar is the simplest form of carbohydrate, with 4 calories per gram. The vast majority of sugars provide no nutritional benefits, just energy. Simple sugars known as monosaccharides are single molecules whereas di-saccharides are 2 molecules compounds.

Types of Sugar

Sucrose (a di-saccharide) comprises of fructose and glucose molecules. It is found in all granulated sugars (white, brown, and all between) created from sugar beat and sugar cane, treacle, molasses, icing sugar, treacle, golden syrup, etc.

Glucose/dextrose is used by all of our body cells for energy and is found in fruit and vegetables and grains. It is necessary for energy and is beneficial unless too much is eaten or a health issue, such as Diabetes, is present. Unless a protein only or starvation diet is being followed it is highly unlikely that any one in the western world will not get enough glucose. Glucose and sucrose are found in most processed foods even cold meats, yoghurts, mayonnaise, sauces, cereals, ketchups, soups, diet meals, ready meals, actually almost everything the list is end less.

People often tell me they don't eat a lot of sugar but when we look at every meal/drink they consume, unless they make every thing from scratch including dressings, mayonnaise, sauces etc or their bread, breakfast cereal and so on. They can be eating much

more than they realise. Consider also that all starchy carbs such as bread, pasta, rice, grains and potatoes are converted to glucose or glycogen to be stored in our muscles or liver and any excess after our energy requirements is converted to and stored as fat!

Lactose, is a di-saccharide (one molecule of galactose and one of glucose) and is found in milk and milk products. Lactose seems to be a common allergen/sensitivity for some people. Obviously milk is a source of calcium.

Fructose is a monosaccharide and derives from fruit and vegetables. When extracted and processed it is far sweeter than other sugars. This makes it appealing to the food manufacturers, as less is required, it is cheap to produce and has a long shelf life. It is the main constituent of corn syrup, Agave syrup, granulated fruit sugars etc. Unlike glucose it can only be dealt with by the liver and given that it is in many pre packaged, diet foods and confectionery, it is easy to consume more than the liver can deal with. Excess fructose is toxic to the liver, possibly leading to fatty liver disease, and like all excess sugars it is converted to fat and stored around the visceral area (the most dangerous area to store fat. Excess fat around the vital organs is linked with diabetes and coronary heart disease. Dr Robert Lustig says "Fructose calories are far worse than other carbohydrates because the vast majority of it directly converts to fat, both in fatty tissues and your liver. As long as you keep eating fructose and grains you are programming your body to create and store fat" Dr Richard Johnson (University of Colorado) agrees saying that after decades of research "Fructose containing sugars cause obesity not by calories but by turning on your 'fat switch' (situated in the mitochondria) a powerful adaptation that causes cells to accumulate fat in anticipation of scarcity or hibernation".

That doesn't mean we should stop eating fruit or vegetables, they are a valuable part of a balanced diet as the fibre and nutrients within them actually assists the body deal with the toxicity of fructose and the insoluble fibre helps grab excess "bad" fats and drag them through the intestines for elimination. The amount of fructose in fruits is so small it is almost impossible to eat sufficient quantities to cause the body a problem. The difficulties arise when it is extracted processed and refined and turned in to granules, powder or syrups.

Soluble fibre (found in grains, fruit and vegetables) helps slow the speed of the sugars which are broken down into single glucose molecules small enough to be able to pass in to the blood stream ready to travel to wherever in the body they are needed. Stripping food of its fibre results in us becoming hungry again, sooner and eating more. The less refined a food is, the

slower the sugars from it are released, keeping insulin levels better regulated and hunger at bay.

So is sugar bad for us?

We all know it can cause tooth decay but did you know that it's addictive? It affects parts of the brain associated with pleasure, the same parts of the brain affected by illegal and controlled substances and alcohol. It gives us a high that insulin has to deal with - we are then left wanting more and, unless we have self-control, we usually give in to the desire! Of course "all things in moderation" is wise advice - eat too much of it and you will have problems and as I have explained not all sugars are created equal. Stay away from refined, processed sugars, found in cordials, fizzy pop, sports drinks, almost all pre-made food, syrups, confectionery, cakes, biscuits, cooked meats, sauces, pizzas - the list is huge! Look at the label: if it says glucose, sucrose, fructose, corn syrup agave syrup, dextrose leave it on the supermarket shelf.

Are there healthier sugars?

Remember too much of anything isn't good for you - these are your healthier options:-

Natural organic honey- Honey has the same amount of calories in it but is sweeter so we tend to eat less of it. Honey bees produce an enzyme and leave it in the honey which divides the sucrose in to glucose and fructose molecules making it easier for the body to use and slows the release of blood sugars making it kinder to our insulin system. Honey contains anti oxidants and anti-bacterial properties making it good for our immune system.

Organic maple syrup- (don't be fooled by Maple flavoured syrup) is additive-free and organic, its 3 times sweeter than sugar so you need less of it! And has manganese, zinc and anti oxidants. There is a great deal of research being undertaken regarding its therapeutic use, particularly for treating Type 2 Diabetes. I recommend warming honey and maple syrup when pouring it over desserts, pancakes or adding to drinks to make it runnier so you can use less.

Coconut sugar (aka palm sugar)

Comes from the nectar of the coconut flower, it is simply boiled, dried and granulated. It has the same calories as other sugars but also has iron, magnesium, zinc and a prebiotic called inulin.

So does sugar make us fat?

Yes too much does. It's addictive, making us eat more than we need. It messes with our taste buds, overwhelming all other tastes making even junk taste palatable. So when fat is removed, so is flavour and texture so manufacturers add sugar to diet foods to make them palatable. It's problematic for our hormones and our insulin system is stressed to breaking point. The hormone leptin tells us when we have eaten enough. Leptin levels are shown to be low in people who have a high sugar diet.

So should we switch to sugar alternatives?

HELL NO! They are even more scary - I'll tell you all about those in our next newsletter!

MONDAY All Hallows School (GU9 9HF)

6.30-7.30pm **Tighter Assets**
7.30-8.30pm **Aerobic Dance**

TUESDAY Wavell Campus (GU14 6BH)

6.30-7.30pm **Body Blitz**
7.30-8.30pm **Aerobic Hi Lo**

THURSDAY Wavell Campus (GU14 6BH)

6.15-7.25pm **Contemporary Stretch/ Healthy Abs 'n' Backs**
7.30-8.30pm **Dance Yer Butt Off!**

FRIDAY Wavell Campus (GU14 6BH)

Course and times vary throughout the year
• Ski Fit • Abtastic • Beach Body Boot Camp
• Big Balls and What to Do With Them
• Power Step • Powerhoop