

HOW TO SUPPORT YOUR BLOOD SUGAR

Regulating your blood sugar is a key feature of your programme.

What is blood sugar?

Carbohydrates can be split into two groups: complex carbohydrates (whole grains, vegetables, beans and lentils), and refined carbohydrates (white bread, sweets, cakes, breakfast cereals, and biscuits). When carbohydrates are eaten they are digested and broken down into glucose. Glucose is one of the simplest chemical forms of sugar and it is in this form that it enters the bloodstream. Glucose is transported around the body by the blood and taken into cells to be converted into energy. Blood sugar refers to the amount of glucose (sugar) present in the blood at a particular time. Blood glucose levels are regulated by two hormones. When levels are rising, *insulin* (also known as the fat storage hormone) is released to help bring it down, and when blood sugar levels drop, *glucagon* is released to push it back up.

What causes low blood sugar?

Carbohydrates are digested at different rates; complex carbohydrates known as 'slow release' energy foods are digested and absorbed into the blood at a slow steady rate. Refined carbohydrates however are rapidly digested releasing a sudden surge of glucose into the bloodstream. A rapid rise in blood sugar level can cause too much insulin to be produced as the body over-reacts. This surge of insulin quickly removes the glucose resulting in a sudden drop of blood sugar levels. The effect of this sudden swing from high to low can cause a range of symptoms associated with low blood sugar, including cravings for more carbohydrates. It's very common that individuals will feel the need to reach for refined carbohydrates to provide a quick sugar hit to combat the uncomfortable feelings of low blood sugar, a perpetuating cycle! Keeping your blood sugar balanced is essential for maintaining stable energy levels and weight.

Symptoms

Hunger – sugar cravings	Feeling drowsy
Light headedness	Confusion
Anxiety, depression, weakness	Insomnia
Blurry vision	Irritability and mood swings
Weight gain esp. around the middle	Fatigue
Can contribute to gastrointestinal discomfort	Worsening of PMT symptoms

WAYS TO BALANCE YOUR BLOOD SUGAR

Apple cider vinegar has an amazingly positive impact on health and significantly lowers glucose levels by slowing the arrival of glucose into the bloodstream whilst also increasing the speed at which our muscles use it for energy. Try adding a tablespoon of Raw Apple Cider vinegar to a tall glass of water and drink either no less than 20 minutes before, during, or no less than 20 minutes after eating a glucose spiking meal whether it be a starchy jacket potato or risotto, or a sugary slice of cake. *Whilst ACV has many health benefits, it is not so good for tooth enamel therefore always drink it through a straw or thoroughly rinse your mouth with plain water immediately after drinking it.* ACV can be an acquired taste, if you struggle at first, you can try adding just a teaspoon to water

initially and gradually increase to a tablespoon. Even a teaspoonful will have benefit. (See below some recipes for alternative was of drinking ACV).

Always eat breakfast, preferably protein based and always before 8 am, even if you don't feel like eating you should have at least a few mouthfuls of food. Have an early lunch preferably before or as close to midday as possible, and your evening meal should be between 5-6pm. Eat three to four meals per day and snacks (make sure you have a healthy snack between 2-3pm) in between until your blood sugar is more stable and then you can drop back to three meals and skip snacks.

Include protein with all meals and snacks e.g. nuts, seeds, fish, eggs, poultry, quinoa, buckwheat, bee pollen, amaranth, barley grass, wheat grass or spirulina drinks. Protein slows down the release of glucose into the bloodstream. Do not have a carbohydrate only meal i.e. just pasta or baked potato with no protein as an accompaniment.

Include fibre e.g. whole grains (if appropriate) and vegetables to assist the slow release of glucose into the bloodstream. When eating your meals eat most of the vegetables on your plate first, then eat a few mouthfuls of fats and protein foods followed by the carbohydrate food. Eating your meals in this order is **very** important in helping to reduce glucose (and therefore insulin) spikes. It is not always possible to do this with meals where the ingredients are all mixed in together in which case try to pick out some of the vegetables to eat first if you can.

Avoid sugar and sugary foods e.g. cakes, biscuits, 'healthy' snack bars that often are high in dates and sometimes contain glucose syrup or similar, and sugary breakfast cereals. Eating cereals for breakfast is a habit for many because it is quick and easy, however, they are processed carbohydrates (sugar), that are often coated in more sugar. Consuming breakfast cereals means starting your day on a glucose roller coaster.

Dilute fruit juices (fruit juices are sugar) and eat dried fruit in small quantities and with a mix of nuts and seeds.

If you tend to wake up in the middle of the night due to hunger, eat a small complex carbohydrate snack with protein or a fat just before bed. (For example, oatcakes with houmous, nut or seed butter, cream cheese, cottage cheese).

Avoid stress as much as possible – practice stress reducing techniques e.g. meditation, massage, energy medicine exercises, soothing music, relaxing bath. Stress is a major factor in unstable blood sugars.

If your meal does not contain vegetables, eat a couple of mouthfuls of protein from the meal first as this slows down the release of sugar.

Include cinnamon with your porridge or muesli, and vinegar/lemon juice with your salads and dressings, both help to balance blood sugar levels. Try having a vinaigrette instead of a mayonnaise based dressing. Cinnamon or liquorice teas are also helpful.

Drink a cup of warm water first thing in the morning (before any other drink) as this has been shown to balance blood sugar levels.

Ensure that you are adequately hydrated, and consume cold pressed raw oils such as flax seed oil (not to cook with but to drizzle over your hot or cold meals).

Exercise! It improves energy, insulin balance, and helps maintain steady blood sugar levels.

It has been proven that a gentle walk after a meal drastically reduces blood sugar spikes because the muscles burn up some of the excess glucose. If however you are experiencing severe energy issues (e.g. chronic fatigue, M.E.) then standard exercise is not always advisable initially, I can provide you with alternative exercises.

You will naturally flatten your glucose curves if you cut back on processed foods but for the occasions when you do buy them you need to read and understand labels. Don't be fooled by the large print that advertises as 'healthy', 'fat free' or 'no sugar added'. You need to look on the ingredients list and if sugar is in the top 5 ingredients on that list it means the product contains an extremely large proportion of sugar, even if the product doesn't actually taste sweet. Often there will be more than one source of sugar listed. Here are



some alternative names for sugar, they will all cause a blood sugar spike so look out for these: agave nectar/syrup, barley malt, beet sugar, brown rice syrup, brown sugar, cane juice, evaporated cane juice, cane sugar, caramel, coconut sugar, icing sugar, corn syrup, crushed fruit, date sugar, dextrin, dextrose, fructose, fruit juice, fruit juice concentrate, fruit puree concentrate, galactose, glucose, glucose syrup, golden syrup grape sugar, high fructose corn syrup (HFCS), honey, malt syrup, maltodextrin, maltose, maple syrup, muscovado sugar, panela sugar, pressed fruit, rice syrup, sucanat, sucrose. Often terms like 'fruit juice', 'fruit juice concentrate' or 'pressed fruit' appears on yogurt containers, 'healthy' snack bars and cereal boxes, you should keep in mind that when fruit is denatured and processed, the healthy fibre content is extracted so it becomes pure sugar, it is best to eat an apple or peach instead.

Eat no more than 2-3 pieces of fresh fruit daily because many contain fructose (another form of sugar). The best options to keep your glucose levels steady are berries, citrus fruits, tart apples and under ripe pears because they contain the most fibre and the least sugar. The worst options, because they have the highest amounts of sugar are mangoes, pineapples, and other tropical fruits.

If you need a little sweetness, the following sweeteners are healthy alternatives that don't affect glucose and insulin levels: Allulose, monk fruit, stevia (look for pure stevia extract because some other forms of it are mixed with glucose spiking additives, erythritol. Artificial sweeteners to avoid are: Aspartame, maltitol, sucralose, saccharin, Acesulfame-K, and according to Jessie Inchauspe who is an expert on blood sugar management, also xylitol.

Some breakfast and snack suggestions

Please note that you will need to observe your particular list of foods to avoid.

Breakfast

Treat your breakfast as your lunch and have a savoury meal. This will help curb hunger, reduce cravings, boost energy, and improve mental clarity for at least the next 12 hours.

Boiled/scrambled/poached eggs with wholemeal or gluten free toast

Omelette

Goat or sheep cheese on wholemeal or gluten free toast with baked beans

Sardines or salmon on a bed of wilted spinach or on wholemeal or gluten free toast

Buckwheat pancakes (replace wheat flour with buckwheat flour) served with stewed apple/fresh berries/natural yogurt/coconut cream. (You can make large batches to freeze for convenience).

Millet or oat porridge made with almond, coconut or goat/sheep milk, add a spoonful of coconut oil to the pan and serve with a dollop of full fat unsweetened Greek yogurt and a sprinkle of berries

Quinoa porridge with cinnamon

Natural unsweetened full fat yogurt with a teaspoon of flaxseed oil. 1 teaspoon of bee pollen (if not allergic), berries or other fresh fruit and nuts/seeds.

Muesli or gluten free muesli with unsweetened full fat yogurt, berries, nuts and seeds.

Soaking nuts, seeds or muesli overnight in a little water makes them tastier and easier to digest.

Smoothie drink (blended berries/vegetables in almond milk or coconut water/milk, with ground nuts and seeds, you can add a teaspoon of coconut oil to the mix, half an avocado, coconut cream, bee pollen, even a raw egg, or add in a teaspoon or two of flaxseed oil after you have blended the other ingredients). You can use a small electric coffee grinder for the nuts and seeds or Nutribullet or similar blender.



Snacks

Quinoa with vegetables with a dash of olive oil or walnut oil
Frittata (made with plenty of grated vegetables)
Flapjacks (made with a honey or blackstrap molasses, and some ground nuts and seeds).
Eat a small bowl of full fat unsweetened yogurt before starting on the flapjack.
Crudities (raw cucumber, carrot, cauliflower, celery) with hummus or guacamole
Guacamole, tahini, hummus, almond, pecan, walnut or cashew nut butter (from health shops or make yourself using a Nutribullet) with gluten free brown rice, corn or buckwheat crackers
Medjool dates stuffed with nut butter and chilled
Nuts, pine nuts or seeds (pumpkin, sesame, sunflower)
Feta cheese, avocado or olives with buckwheat, rice or lentil crackers.
Energy Bites that contain good fats and protein (see below)

Alternative ACV drinks

A cup of hot cinnamon tea and 1 tablespoon ACV
A glass of water, a pinch of Himalayan or sea salt, a pinch of cinnamon and 1 teaspoon ACV
A glass of water, pinch of Himalayan or sea salt, 1 teaspoon liquid aminos and 1 tablespoon ACV
A teapot of hot water, with a wedge of lemon, some ginger root. 1 tablespoon ACV, pinch of allulose, monk fruit, stevia or erythritol for sweetness
Sparkling water, ice, 1 teaspoon ACV
4 teaspoons sea buckthorn juice or a tablespoon of sea buckthorn powder, 300mls sparkling water, and 2 teaspoons ACV
300mls sparkling water, 1 tablespoon ACV, pinch Himalayan or sea salt, a squeeze of lemon or lime juice
Vegetables fermented in a jar of ACV

Recommended books for further reading and healthy recipes: 'Energy Bites' by Christine Bailey
'Glucose Revolution' by Jessie Inchausp