
Balancing Blood Sugar

What is blood sugar balance?

The level of sugar, or glucose, in the blood is carefully controlled by hormones in order to minimise highs and lows, and to provide the brain and the cells with a constant supply of energy. Glucose is the simplest form of sugar. All sugars and starches (carbohydrates) are digested and eventually broken down into glucose so the body can absorb and use it. Your body can only deal with **one to two teaspoons of glucose** in the blood at any one time. So, if, for example, you drank a bottle of Lucozade, the sugar in the blood would rise steeply. The body protects itself from too much sugar in the blood by releasing the hormone, **insulin**. Insulin's role is to pull excess glucose from the blood, which we then feel as a rapid drop. This can also happen when we skip meals. If your blood sugar suddenly drops it can lead to many physical and mental symptoms such as **dizziness, headaches, nausea, blurred vision, sweating, palpitations, cravings and irritability**.

What happens if you don't control your blood sugar levels?

If your diet is continually high in **refined carbohydrates** your pancreas has to work really hard to produce enough insulin. In the long-term the pancreas can become exhausted and won't produce enough insulin, leading to high levels of glucose in the blood. Ultimately this can lead to diabetes. Diabetes is often age related but it is unfortunately becoming more common in younger people due to poor diet. Diabetes has many other illnesses associated with it such as heart disease and complications with the eyes, kidneys, and nerves. Blood sugar problems can also be related to depression, fatigue and hormone problems such as PMS.

Problems can also occur if blood sugar levels become too high due to a process known as **glycosylation**. Glycosylation takes place when excess glucose molecules bind to protein molecules. This damages the proteins and can directly contribute to the ageing process, leading to **premature wrinkles**, and to serious health problems such as hardened arteries, as well as being a contributing factor for diabetes.

Poor blood sugar balance can also lead to the over-production of **cortisol**, a hormone which is produced by our adrenal glands. This can have a direct affect on the ageing process. If your blood glucose drops, your brain signals to your adrenal glands to release cortisol in order to raise your glucose levels. Stress also increases cortisol levels. If cortisol levels are continually raised through **poor diet and stress**, this can accelerate the ageing process. Although cortisol is critical for life, at high levels it can damage cells and contribute to ageing of the skin, as well as degenerative diseases such as heart disease, diabetes and cancer.

How can you keep your blood sugar balanced?

Avoid

- **Simple carbohydrates** These are what we call sweet, fluffy and white foods such as white rice, white bread and pasta. These foods are simple in structure, almost devoid of fibre, low in nutrients, and quickly broken down, providing a fast release of glucose into the blood. This is responsible for the 'high' that can sometime be experienced from eating sugary, sweet foods or refined carbohydrates but this energy is always short lived.
- **Sugars** (also labelled as dextrose, fructose, glucose and sucrose), honey, cakes, biscuits, and products with added sugar such as ketchup, baked beans, fruit juice drinks, fruit yoghurt and some cereals. Get into the habit of reading food labels.
- **Alcohol – keep to a minimum** - it can cause wild swings in blood sugar levels.
- **Stimulants** i.e. coffee, tea, cola, cigarettes, drugs. Caffeine stimulates adrenaline which encourages the release of stored glucose, causing a rapid rise in blood sugar. This can be experienced as a 'hit', followed by a crash as insulin kicks in to lower the levels.

Do

- **Eat complex carbohydrates** These are what we call thick and fibrous foods such as brown rice, oats, rye bread, beans and lentils. These foods have complex structures, are full of fibre, are high in nutrients, and take longer for the body to break down, providing a slow sustained release of energy (glucose). This avoids the sudden rise in blood sugar that simple carbohydrates can produce.
- **Eat little and often** as this helps to keep blood sugar levels stable.
- **Always eat breakfast** as blood sugar levels fall during the night. Even a small snack is helpful. Always have some protein with your breakfast.
- **Combine complex carbohydrates with some protein**, as this helps to provide a sustained energy release. E.g. fruit with nuts, seeds or yoghurt; oatcakes with hummus, avocado, cottage cheese, nut butters, egg, some chicken, turkey or fish.
- **Dilute fruit juices with water** – juicing removes the fibre of the fruit, therefore the body treats these as simple carbohydrates.
- **Eat naturally fibre-rich foods** These are more satisfying and slow the absorption of sugar from food. Avocados contain a seven-carbon sugar that depresses the production of insulin, which makes them an excellent choice for those with blood sugar problems.
- **Take regular exercise** - this is helpful in balancing blood sugar levels, managing weight and promoting cardiovascular health.