

BLOOD SUGAR (GLUCOSE) BALANCE

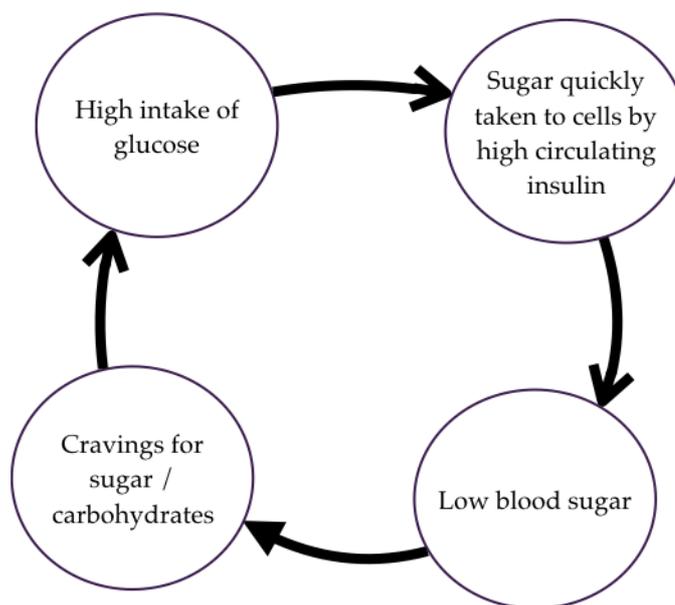
Low blood sugar is known as hypoglycaemia. The brain uses 50% of energy/fuel derived from food mainly in the form of glucose, and the brain uses more energy when we overtax the brain. Therefore, a lack of fuel, disrupts the brain's function. The process of keeping the organs supplied with energy is known as blood sugar balance.

Most carbohydrates in food are digested and absorbed into the bloodstream as a simple sugar called glucose. Carbohydrates are found in fruit, vegetables, and grains. When we consume foods that contain glucose (such as fruit, vegetables, beans, grains, sugary snacks), glucose is absorbed into the bloodstream, where it's carried throughout the body by the hormone insulin into cells for energy. Insulin helps cells absorb the amount of glucose they need for energy. Insulin is made by the pancreas in response to how much glucose we consume. Any extra glucose is sent to the liver or various muscle tissues to be stored as glycogen for later use when blood sugar levels fall low. Extra glucose, not needed for energy is also stored in fat cells (adipose tissue). This is why we gain weight, as we are taking in more energy/fuel/glucose than the cells require.

When we eat carbohydrates in their natural, unprocessed form, they are broken down and absorbed slowly, producing a gradual increase in blood sugar which our bodies are designed to handle. Think of a whole sugar cane as opposed to a spoonful of white sugar. A grain of wheat compared to white flour. A whole apple instead of apple juice. The refined processed forms of food raise blood sugar levels too quickly.

Many foods these days have been refined and processed so much, with all the fibre and many of the nutrients taken out, that they become like rocket fuel, very quickly raising blood glucose levels. This repeated high intake of glucose creates high circulating insulin, which is so effective at taking the huge influx of glucose to where it needs to go, blood sugar actually becomes too low. Wheat increases insulin more than pure sugar. This triggers emergency tactics by the body, triggering the stress hormone adrenaline from the adrenal glands, which directs emergency sugar to be converted back from their stored form. If this process is not quick enough, there is not enough glucose in the blood to supply the organs, and symptoms appear such as headaches, brain fog, fatigue, cold or shaking hands etc.

This scenario can very often follow – puts strain on liver, pancreas, adrenals



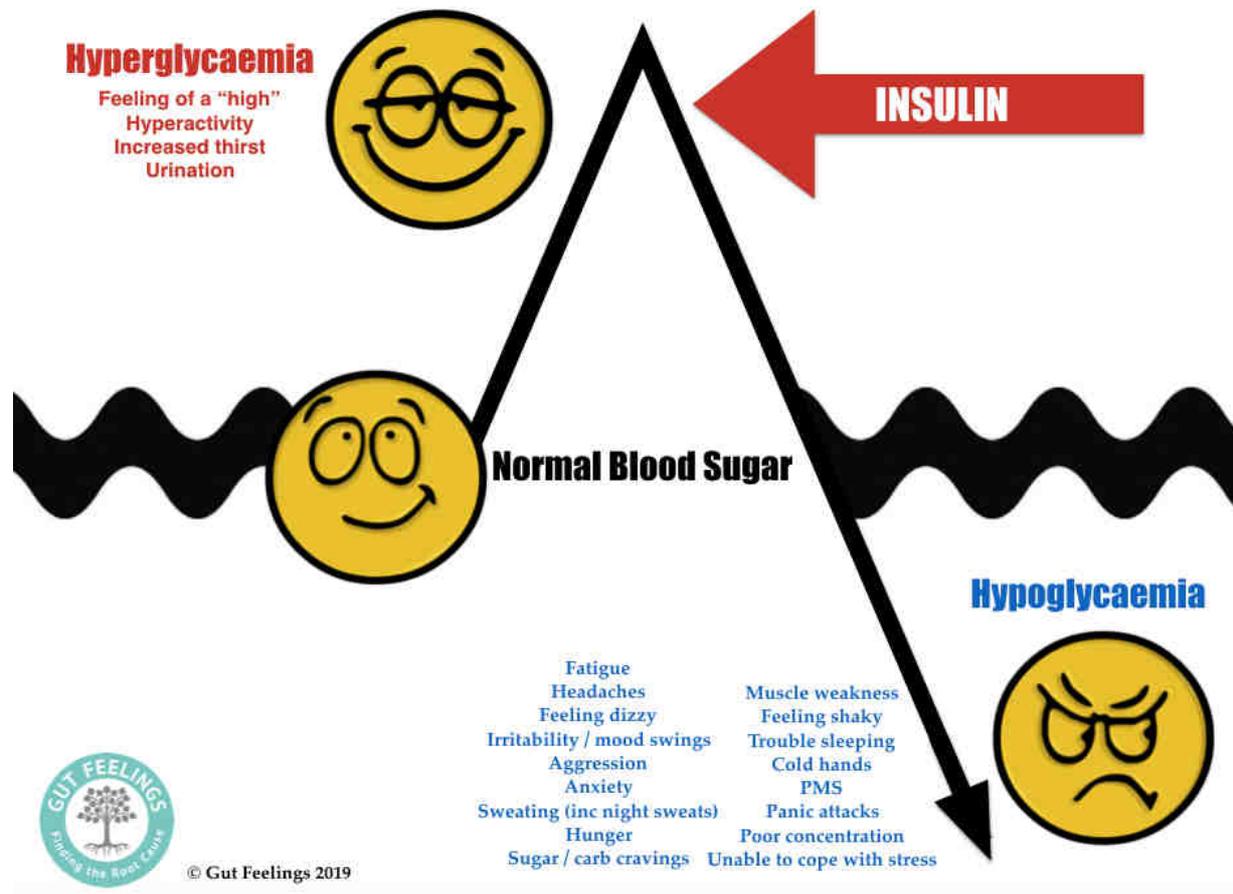
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Caffeine and alcohol are stimulants (and diuretics) which trigger adrenaline. So even if you do not have sugar in your tea or coffee, the adrenal effect from the caffeine itself will cause blood sugar levels to rise sharply, this is why you feel good after caffeine.

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Reduce sugar, simple carbohydrates and stimulants GRADUALLY to allow the body to adjust and to avoid withdrawal symptoms such as headache and fatigue.



An optimum steady supply of blood sugar, instead of highs and lows, is essential for normal brain health.

How to balance blood sugar levels: -

- Start the day with protein, such as eggs. Protein slows the rise of glucose into the bloodstream, and sets your blood sugar balance up for the day
- Reduce and eliminate refined carbohydrates (white flour, sugars, honey, breads, cakes, pastries, biscuits, fruit juice, white rice,)
- Eat more complex carbohydrates and fibre – whole grains (short grain brown rice, oats, quinoa), flaxseeds, nuts, seeds, whole vegetables, and fruits. Fibre slows the rise of glucose and makes you feel full.
- Have protein and good fats with every meal and snack to slow the rise of glucose. (Good fats: oily fish e.g., salmon, mackerel, herring, flaxseed, chia seeds, hemp seeds, walnuts, green leafy vegetables)
- Do not skip meals, as blood sugar can drop too low
- Eat regular meals and snacks to start with (oatcakes or carrot/cucumber sticks with hummus, goat's cheese, nut butters, slices of apple or pear with nut butters – where appropriate from your list of foods in the plan).
- Have a healthy snack before bed to keep blood sugar levels stable through the night – a reason for waking in the night can be due to low blood sugar, when adrenaline is triggered to produce emergency stored sugar. Adrenaline can also increase urination.
- Eat something within half an hour of waking

Insulin also helps regulate ovarian function. The ovaries respond to excess insulin by producing androgens (testosterone), which can lead to anovulation.

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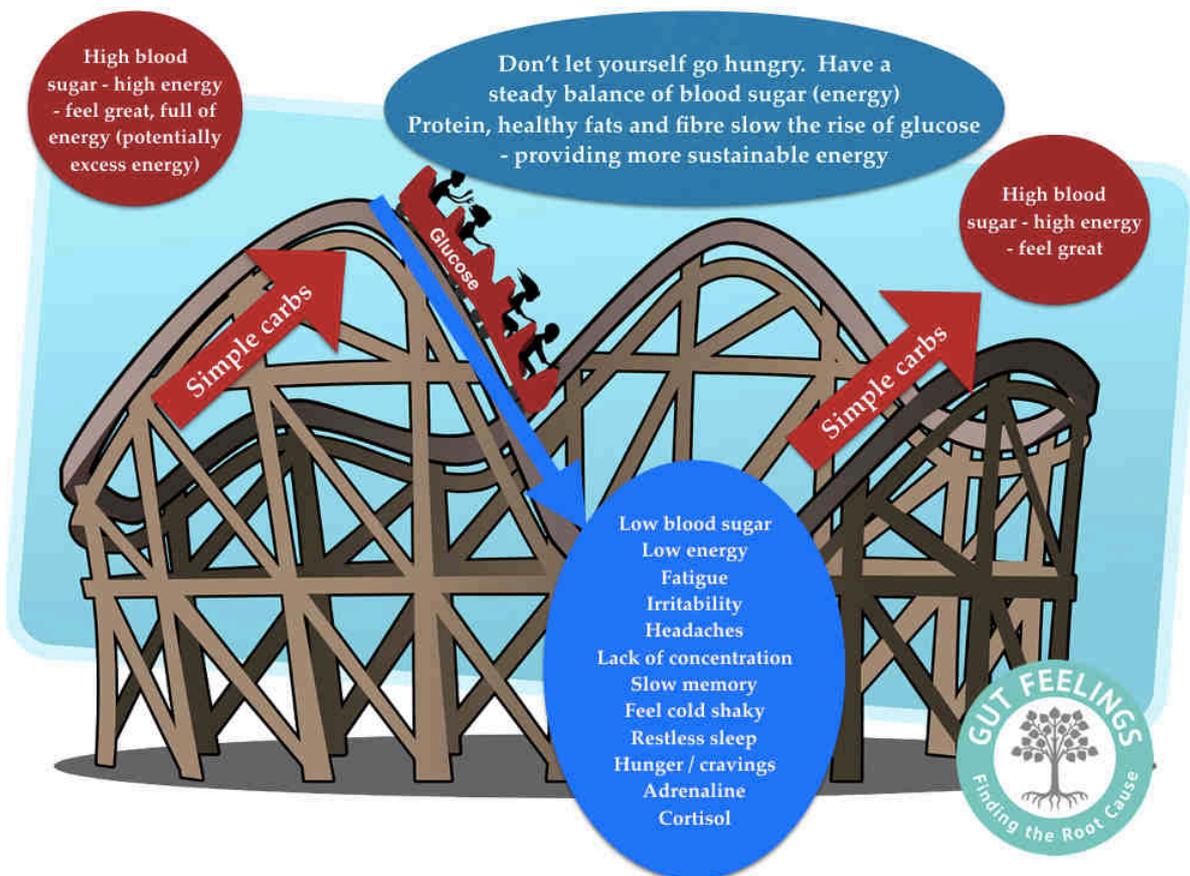
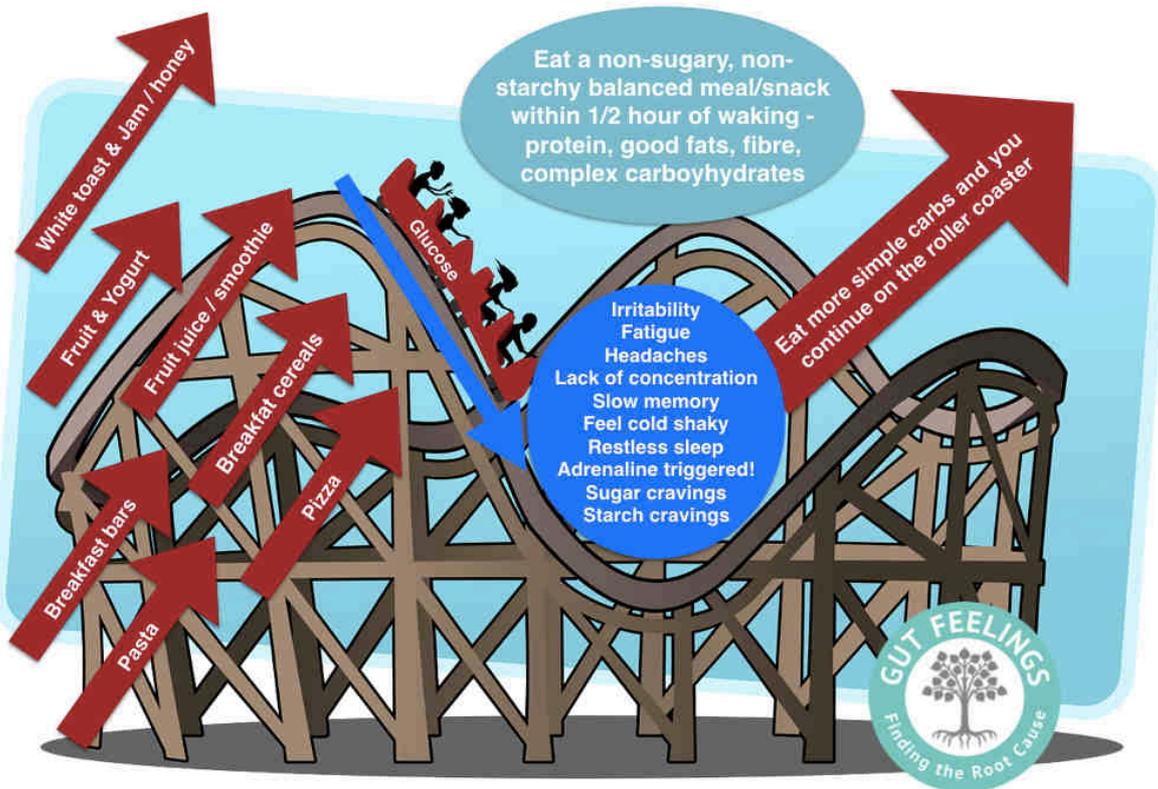
Symptoms of Hypoglycaemia (low blood sugar)

Fatigue
Irritability
Forgetfulness
Nightmares
Heart Disease
Muscular Stiffness
Blurred Vision
Lack of sex drive
Angina
Cold Extremities
Excessive Smoking
Depression
Allergies
Tinnitus
Nausea
Craving for caffeine

Suicidal Tendencies
Excessive sweating
Unable to lose weight
Indigestion
Migraines
Food Cravings
Hyperactivity
Fainting
Unable to face food first thing in the morning
Asthma
Neuralgia
Palpitations
Craving for alcohol

Panic feelings
Stomach cramps
Convulsions
Stomach Ulcers
Weight Gain
Overweight
P.M.T
Numbness
Joint Pain
Epilepsy
Vertigo
Phobias
Blackouts
Agoraphobia

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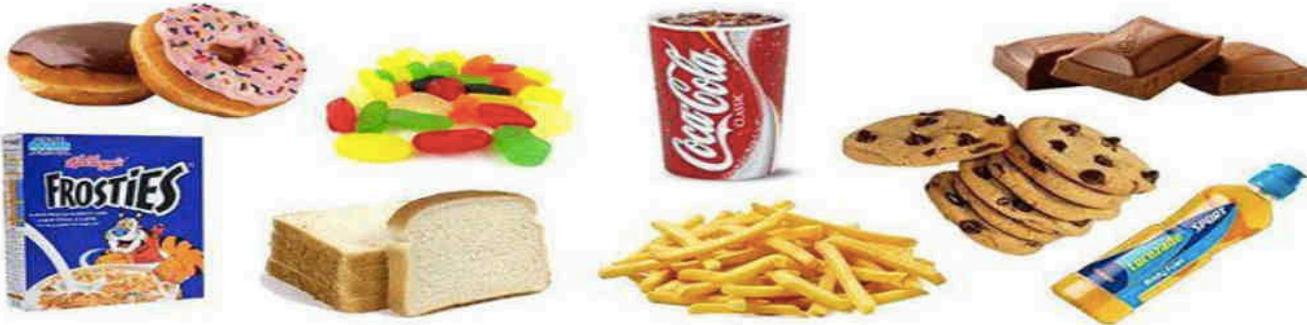
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Carbohydrates

✓ **COMPLEX CARBS**

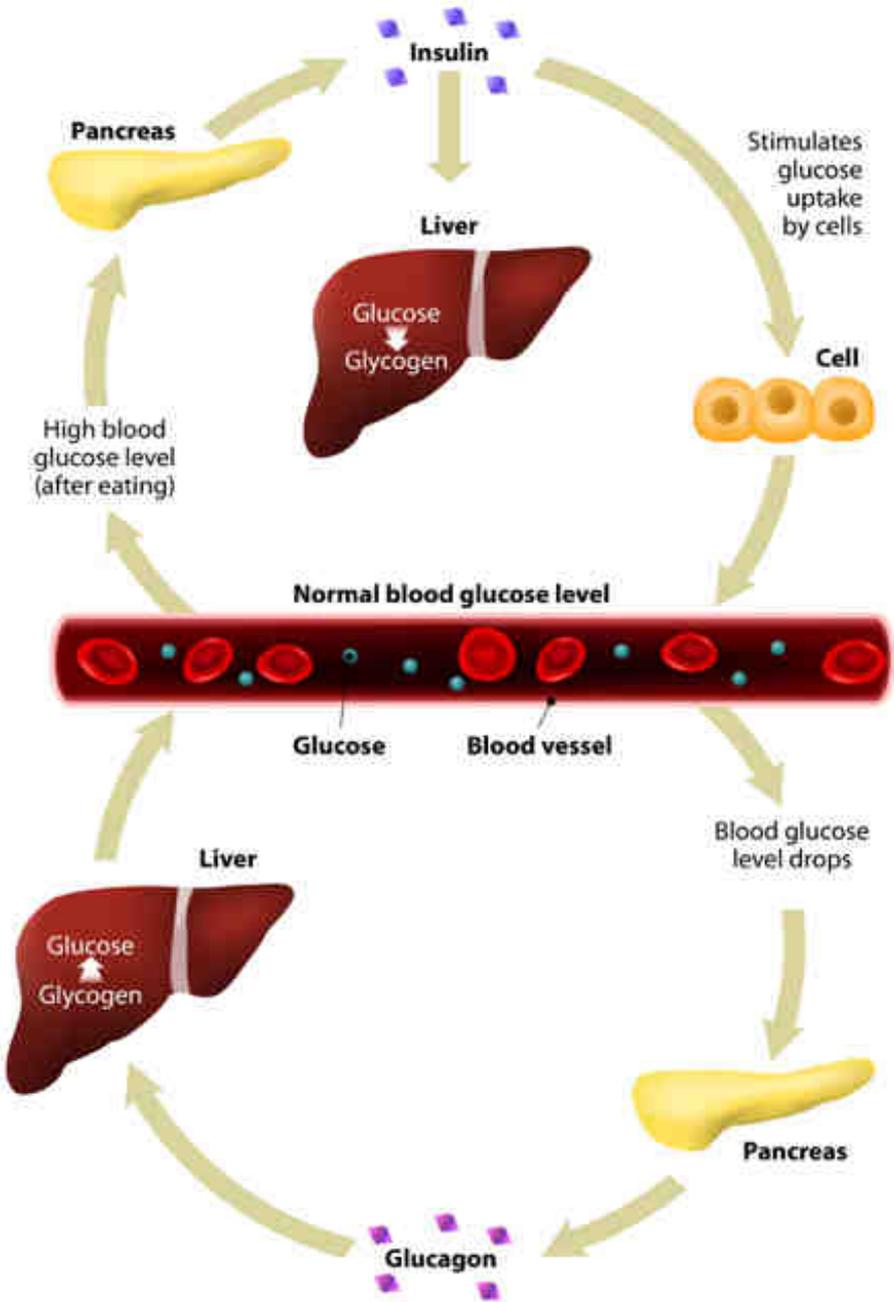


✗ **SIMPLE CARBS**



BLOOD SUGAR (GLUCOSE) BALANCE

INSULIN AND GLUCAGON regulate blood glucose levels



Recommended books

Low blood sugar by Martin Budd
That Sugar Book by Damon Gameau