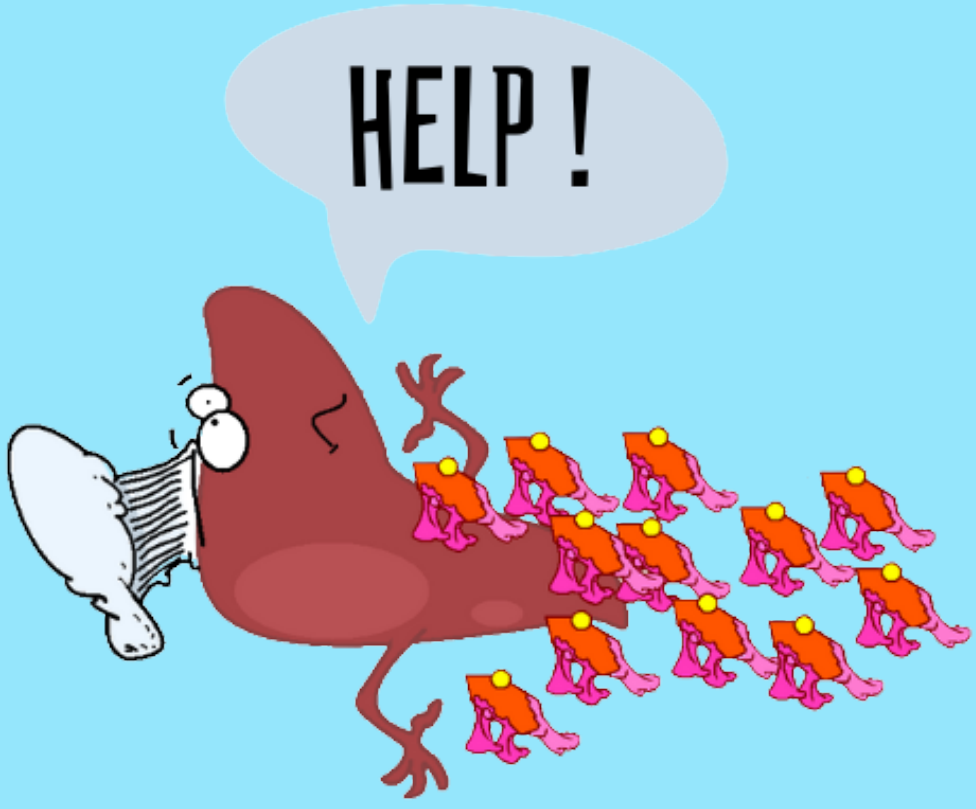
10 ½ WAYS TO STILL EAT CARBS

EVEN IF YOU ARE METABOLICALLY CHALLENGED

THE CARB PASS

SCIENCE BASED STRATEGIES THAT
WILL HELP YOU MINIMIZE SUGAR SPIKES



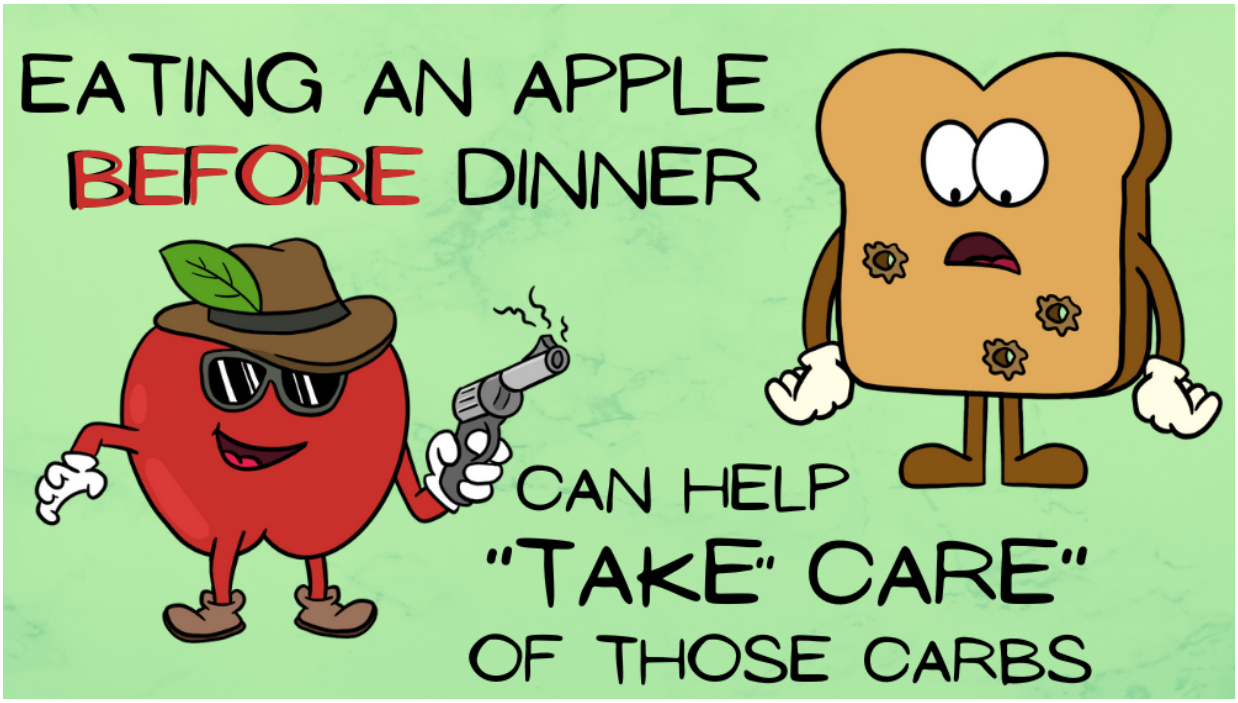
INTRO

Minimizing the size and duration of the post meal sugar spike, will help you to create BETTER BODY CHEMISTRY and BETTER HEALTH. Now, the biggest driver of the "spike" is the amount of carbohydrate eaten, which is why CUTTING CARBS is advised. But the amount that "counts' is the amount that reaches the systemic circulation and this can be influenced by YOU.

The structure of the carb, how effectively it is digested, processed and distributed, as well as how quickly the sugar is absorbed, impact the dynamic. In this resource, I'll introduce you to strategies you can use, to slow down sugar arrivals and maximize deliveries, so you minimize sugar spikes. I'll both explain the principle and dive deep into the biology, empowering you to keep carbs on your dinner plate, even if you're metabolically challenged.

ENJOY AN APPLE ENTREE

This slows the rate of glucose absorption in the small intestine.



Apples are poisonous ! Don't panic, the poison (phlorizin) protects the fruit from fungal attacks, it doesn't hurt you directly. But it does slow sugar uptake, because it jams up the glucose transporter (SGLT1) that moves glucose from your intestine into your circulation. The jam doesn't incapacitate the transporter, it still works, but it slows the entrance of glucose into your system. That delay can make a big difference if you're struggling to get enough insulin circulating, to put away the groceries. I suggest you make it a habit to carry an apple with you, for eating EMERGENCIES. In such a scenario, take a few bites of your "emergency" apple, wait 5 minutes and then take a few bites of the high carb snack. Your sugar levels will NOT be normal, but the spike will be mitigated a little.

NB. Do not peel the apple..... the magic is in the peel.

EAT LEFTOVER PASTA

Heating and then cooling, changes the structural properties of the starch and this then slows the digestion process.

When starch granules arrive in hot water, they suck up the water like a sponge and begin to swell. This allows some of the sugar chains to drift out of the starch granules, where your enzymes easily pull the individual sugar molecules off. The rapid release of these sugar molecules will spike your sugar levels. But, if you leave the starch to cool, the protruding sugar chains tangle up. This tangled mass of sugar, is hard to process. Your enzymes struggle to find the beginning and the end and this slows their progress. They end up not being fast enough to digest all the starch, before it moves into the colon. The delay in processing the starch, makes the starch a slow carb, protecting you from the sugar hit, that typically goes with pasta.

NOTE : This also works for rice.

PRACTICE EXERCISE SNACKING

LESS EXERCISE MORE OFTEN = MORE BENEFIT

Muscles are big sugar users - getting them moving cleans up

Under normal circumstances, the specialized gates that glucose uses to get inside cells, are stored inside the muscle fibers. When muscles are contracting, they initiate a cascade of chemical signals, which see calcium levels sky rocket inside the muscle fibers, this moves the gates to the muscle surface. By exercising, just before eating a carb heavy snack, you're able to get the gates up more EFFICIENTLY. And it is this efficiency that saves the day, because it means that any glucose being consumed, which makes it past the gate keepers in the digestive tract and into the circulation, it is able to IMMEDIATELY enter the muscle cells. There is no hanging around, until the pancreas/liver get their act together.

WINE AND DINE

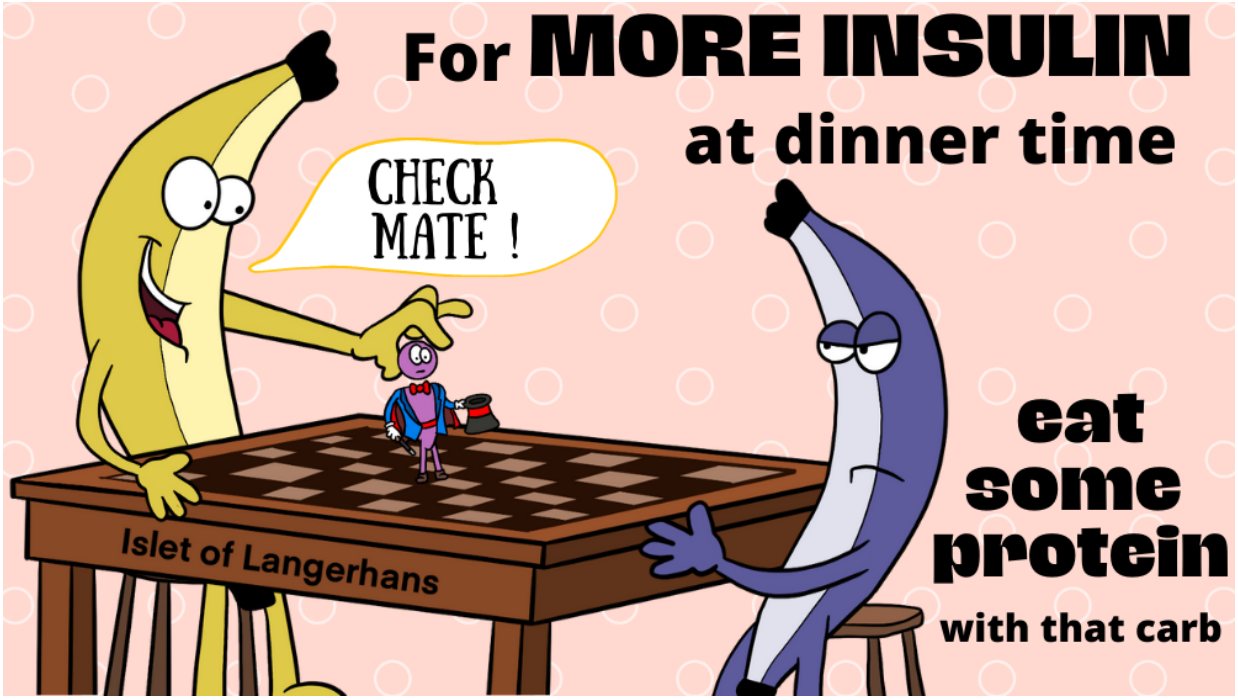
A glass of wine slows gastric emptying and with it glucose arrivals.

The “good” feelings you enjoy when consuming alcohol, come because it boosts the levels of dopamine, but they’re accompanied, by an increase in GABA. This neurotransmitter slows things down - this slowing includes the process of digestion. Digestion still happens, but at a more leisurely pace. The result, foods particularly carbs, don’t all arrive all at once – making the task of “processing”, a little easier on the liver and the pancreas. Helping to keep sugar and insulin levels in check. So, don’t be too afraid to enjoy a glass of wine, with good friends and good food.

NB. A glass of wine, not the whole bottle. Excess alcohol will make you MORE insulin resistant – think BEER BELLY. And if you are pregnant, you should avoid alcohol, even small amounts can impact baby’s development.

EAT PROTEIN-CARB COMBOS

Protein optimizes sugar processing through the incretin effect.



You want to aim to include some protein, everytime you eat. By including a little protein, you trigger the release of several gut hormones, most notably, you release two gut hormones, collectively known as incretins. These are chemicals that increase insulin secretion, by beta cells. The effect is NOT a direct one, it happens indirectly. The amino acids, that make up the protein, get your alpha cells “talking” to your beta cells and its this conversation that gets insulin released. A carb only meal/snack doesn't do this, because the alpha cells aren't triggered. In fact, a carb only meal, typically silences the alpha cells, and this lowers the amount of insulin produced.

NOTE : Protein also slows gastric emptying and makes you feel full, so a spoonful of protein, makes the glucose levels GO DOWN, in multiple ways.

ADD A DOLLOP OF BUTTER

FATS ARE HARD TO DIGEST AND THEN THEY WIGGLE

Free fatty acids nudge the pancreas to produce MORE insulin

Digesting dietary fat is a MISSION - it's a slow process, so it slows sugar arrivals. But, the benefits of dietary fats, don't STOP HERE.

Once the big fat globules have been teased apart, the resultant free fatty acids worm their way into the hearts and minds of the cells lining the gut and beta cells, stimulating insulin release.

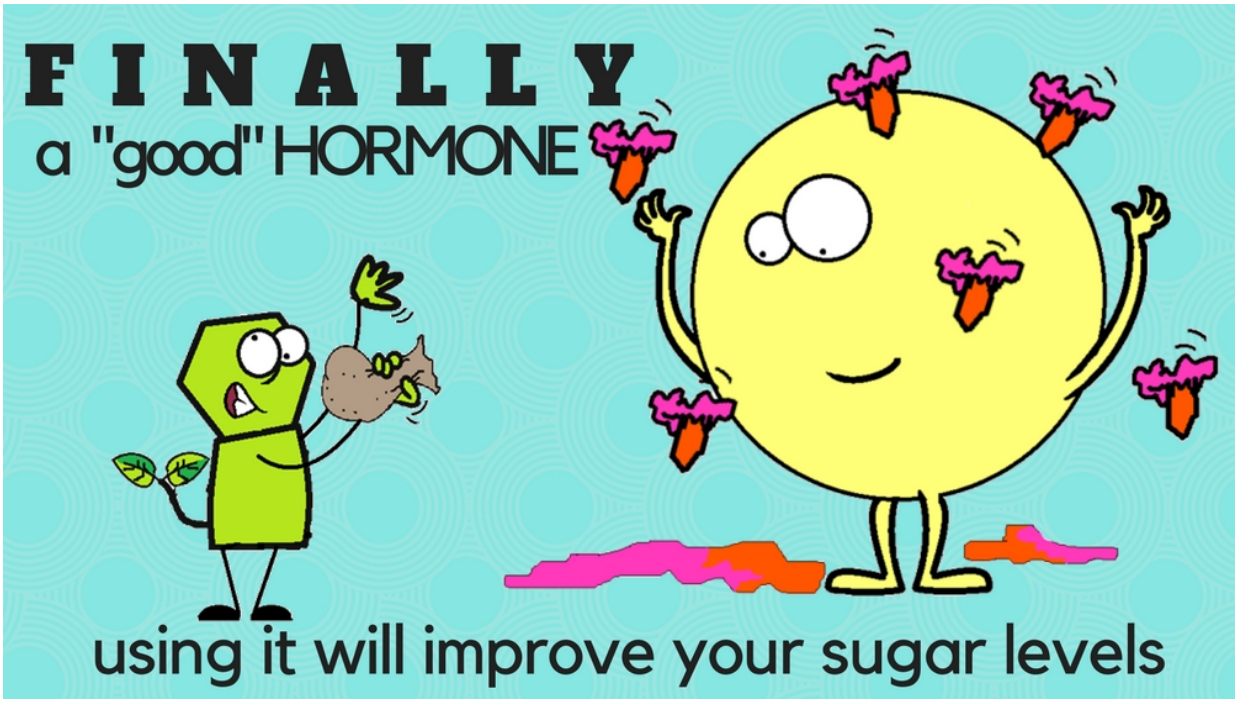
Both directly and indirectly.

A little fat will help minimize sugar spikes.

NOTE : All fats, good or bad and everything in between, will activate this signaling. But to create BETTER BODY CHEMISTRY I recommend you avoid refined fats, think margarine and soy oil. ***Here is why.***

USE PLANT HORMONES

Abscisic acid, a common plant hormone, increases glucose uptake.



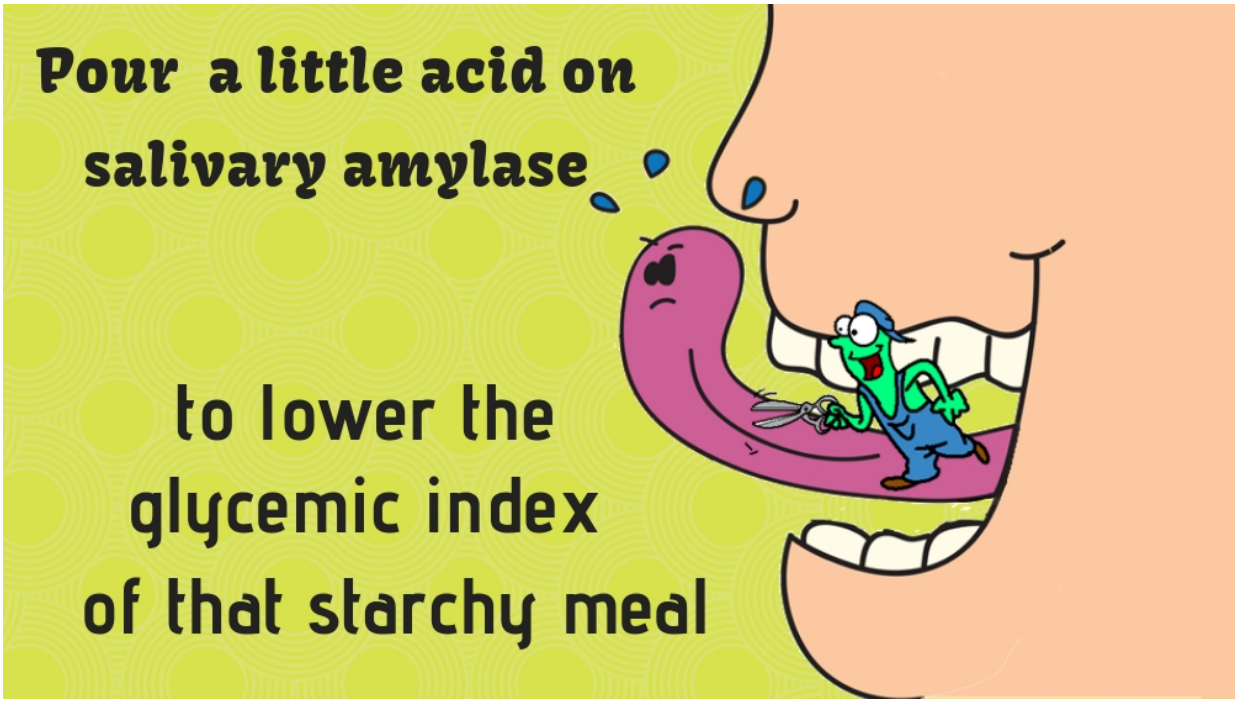
Abscisic acid is an important plant hormone that regulates numerous aspects of plant growth, development, and stress responses. We humans also produce it. It is released by beta cells in tiny amounts and it helps with sugar deliveries, particularly deliveries to fat cells. All plant tissues will have some. The highest concentrations are found in the roots and shoots and it plays a role in fruit ripening. When you eat plants, you will be "getting" some,. not much, but studies suggest, it is enough to improve your sugar deliveries. So steal some abscisic acid from an avocado, orange or fig.

NOTE : It's found IN WHOLE PLANTS, plant based ultra processed foods such as veggie burgers..... will not have it.

TINGLE YOUR TONGUE

BY DELIBERATELY MAKING YOUR DINNER MORE ACID

This delays the digestion of the carb in the stomach.

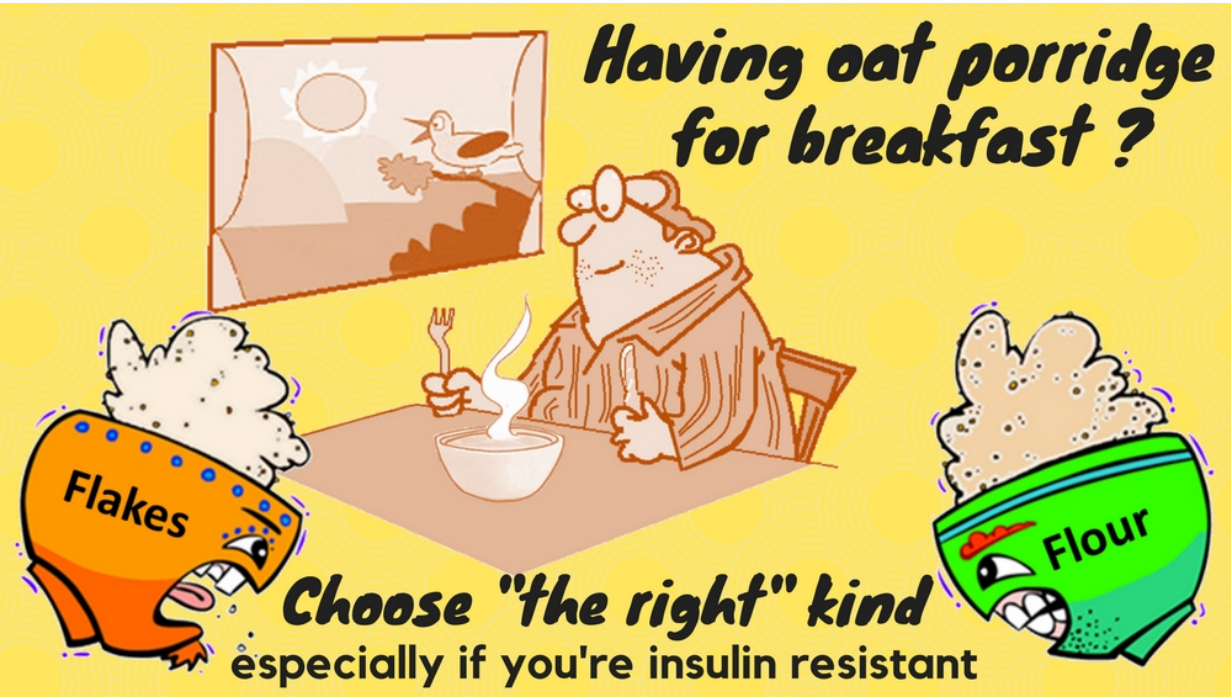


Starchy foods, require salivary amylase enzyme, to be digested. Although the name, of this enzyme suggests it works, in your mouth, it doesn't - it works in your stomach, provided the pH is above 3.5. Now when you eat, the pH of your stomach drops, but the drop is not INSTANTANESOUS, to get to such a low pH, requires the stomach's acid pumps, to be pumping protons, full steam, for approximately 90 minutes. If you speed up the drop in pH, by consuming something acidic, right at the start of the meal, you speed up the decommissioning of salivary amylase. The slower starch digestion, means less glucose is released and the flow of sugar into the circulation is delayed.

OATS SHOULDN'T BE EASY

FOOD PROCESSING CHANGES THE SIZE OF THE FOOD PARTICLES

Food structure matters. Less refined is better.

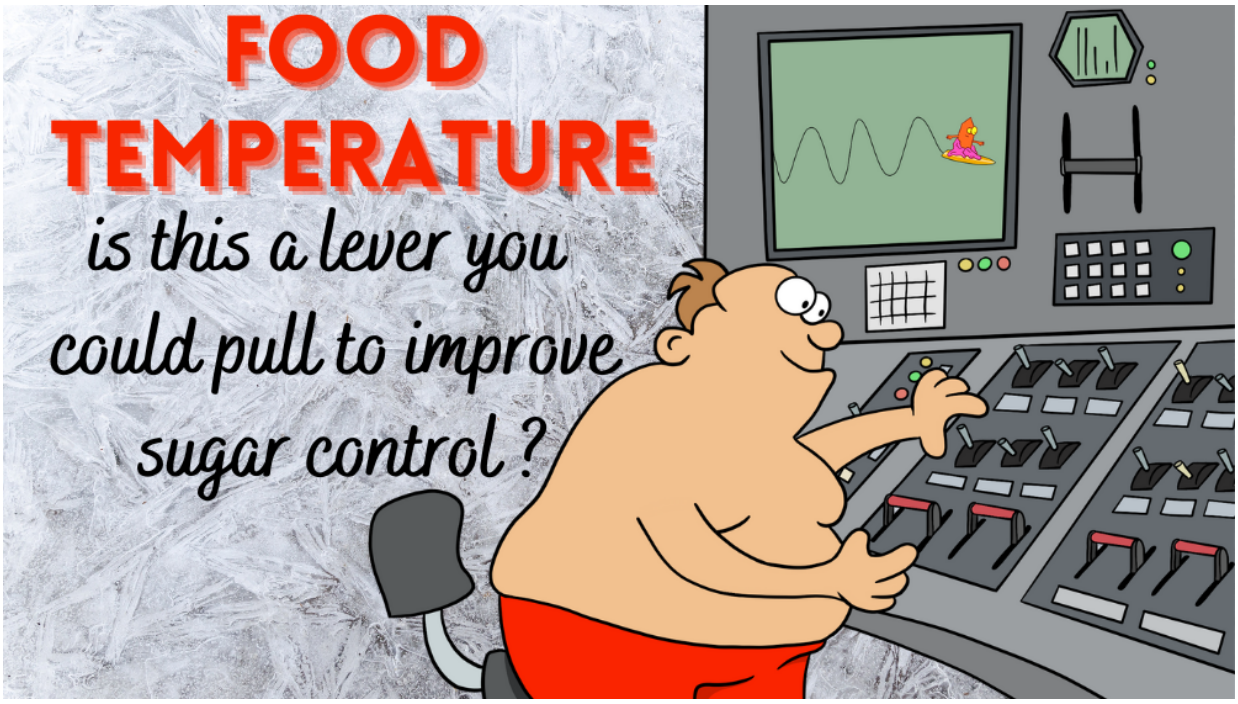


Traditional oat porridge was made with flaked oats, but modern versions are more finely milled i.e. they are oat flour. This means they are easier to prepare. *Think 1 minute in the microwave*. But this changes how they behave in the gut. "Big stuff" is going to take a tiny bit longer to break down, which means it exits the stomach at a slower pace, allowing your body time to process it and thus avoid sugar spikes.

NOTE : This principle also applies to flour. If you're cooking up a storm, opt for stone milled flour, the particles will be bigger.

HOT OR COLD
IT DOESN'T MATTER

Cold food will be absorbed more slowly, but it turns out, the difference is SO SMALL..... it really doesn't matter.



Your choice to eat dinner HOT or COLD is dependent on lots of thing – odds are, you've never factored in glycemic control. Should you ?

Well it turns out, cold food is a tiny bit easier to handle.

The operative word is TINY.

It really isn't enough to make a difference.

If you like it hot. Do hot. If you like it cold. Do cold. This is not a lever that will make any difference to your glycemic control.

MAINTAIN YOUR PIPES

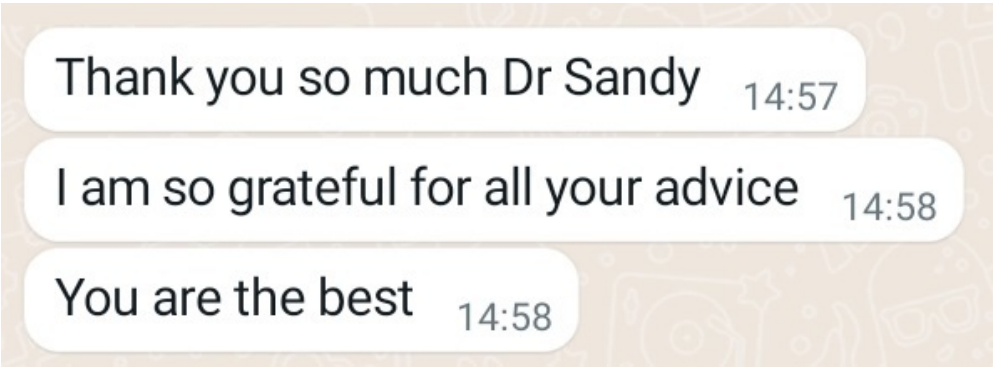
For glucose to be delivered, you need good infrastructure.

The infrastructure that is most important is the tiny blood vessels that crisscross your muscles. This blood vessel infrastructure, depends on creating signals that spark sustainable blood vessel creation and maintenance, in a process known as angiogenesis. The trigger for angiogenesis is a **temporary** oxygen shortage, the technical term for this is hypoxia. The classic way to do this is through exercise - the kind of exercise that involves squeezing, stretching and holding. But, there are other ways to do this, such as playing at a high altitude and blood vessel torture. The last one is one of my favourite “hacks” – it’s perfect if you are a couch potato. **Click here** to learn more.

NB. This is a long term strategy.

NEXT STEPS IN YOUR HEALTH JOURNEY

You consider yourself a “healthy eater” or at least you’re getting there. But there are a few things you’re struggling with. Really, what you are looking for is some direction, insight, and clarification on some nagging questions (that no amount of Googling has answered). You’ve got questions. I’ve got answers. You choose a health topic and we’ll spend 60-minutes exploring your questions and concerns. By the end of the session, you’ll have science based clear action plan you can immediately implement to move you forward towards your health goals.



Fatima

BOOK A ONE ON ONE HEALTH CONVERSATION