



The Not So Sweet Reality of Sugar

Hi! I'm Kate Johnston...

A little about Kore Well-Being



Kate is a Naturopath, Clinical and Sports Nutritionist, Health Educator and Speaker with over 7 years experience in the health and wellness industry. She has immense passion for teaching people how to nurture and nourish their bodies on all levels. Throughout her years of clinical practice and study, Kate has come to realise just how much of an impact the food we eat has on our health and well-being – it can either be supportive and nourishing, or our absolute undoing. Even the smallest, simplest changes in someone's diet can help to move them towards optimal health – and it is Kate's mission to support and inspire people in this process.

Kate works with all areas of health and well-being, but her specific areas of passion are:

- Hormone health and preconception care
- Gut and digestive health
- Paediatric health and nutrition
- Sports nutrition and performance optimisation
- Weight loss and detoxification support
- Stress and mood disorders

Kate combines naturopathic philosophy with scientific knowledge and functional testing to provide a fully integrated, personalised and holistic approach to health and wellness. She is a health detective – and loves the challenge of unravelling health issues that previously couldn't be solved. If you're on board, Kate is on board and won't stop until you find answers. Fused with her love of food and cooking, she is able to educate and inspire you to create lasting change in your diet, lifestyle and general well-being in ways that are easy to implement and tailored to your specific needs.

What is Sugar?

Sounds like a simple question... but these days the answer is not so straight forward!

- **Added Sugars** – table sugar, honey, maple syrup, brown sugar, agave etc
- **Naturally occurring sugars** – fruit, grains, dairy products
- **Carbohydrate** – made up of sugar molecules
- The World Health Organisation Recommends NO MORE THAN 7tsp of sugar per day
- On average we are now consuming 284kg of sugar per year. This is a 2500% increase since 1900. 57% of this comes from processed foods. Teenagers alone are now estimated to be drinking the equivalent of 54 teaspoons of sugar a day. This comes from juice, soft drink, energy drinks and cordials.

Carbohydrate



Carbohydrates are not the devil! They are the body's preferred energy source – we need them to survive

Anything that grows out of the ground contains some level of carbohydrate

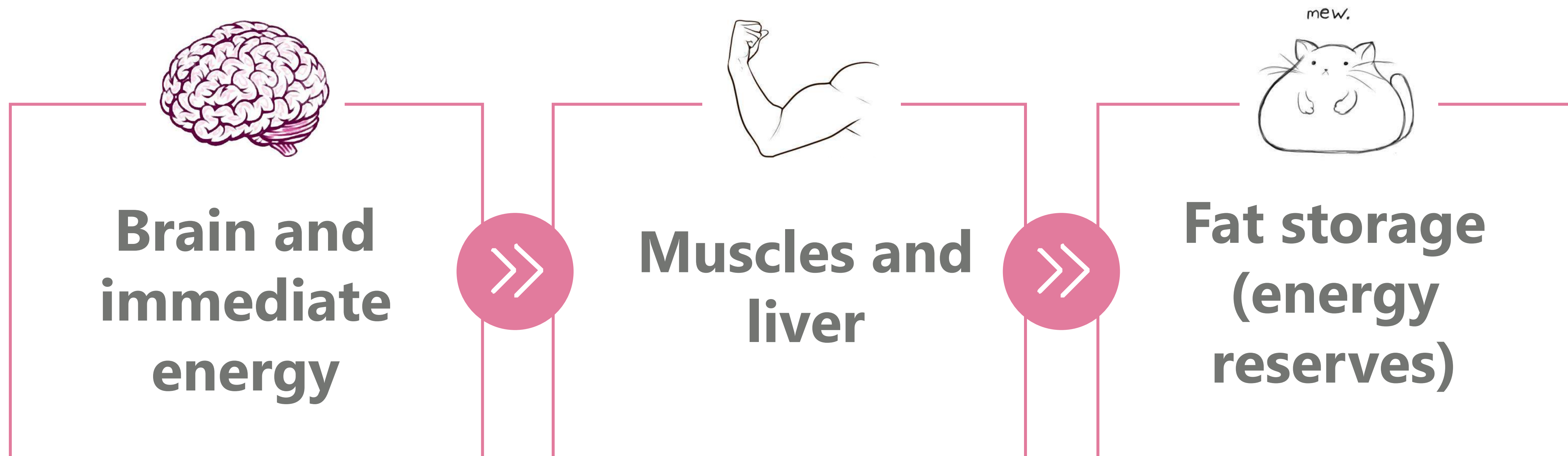
SIMPLE CARBOHYDRATES – 1 or 2 sugar molecules – faster to break down, more quickly absorbed/utilised by the body – glucose, fructose, lactose, sucrose

COMPLEX CARBOHYDRATES - more than 2 sugar molecules – slower to break down and release into the blood stream - Starch, inulin, cellulose, pectin

Preferred carbohydrate sources (depending on personal goals and requirements) – All fruits and vegetables, such as potato, sweet potato, carrot, banana, berries, honey, maple syrup, some grains – quinoa, buckwheat, rice (white or brown), oats etc

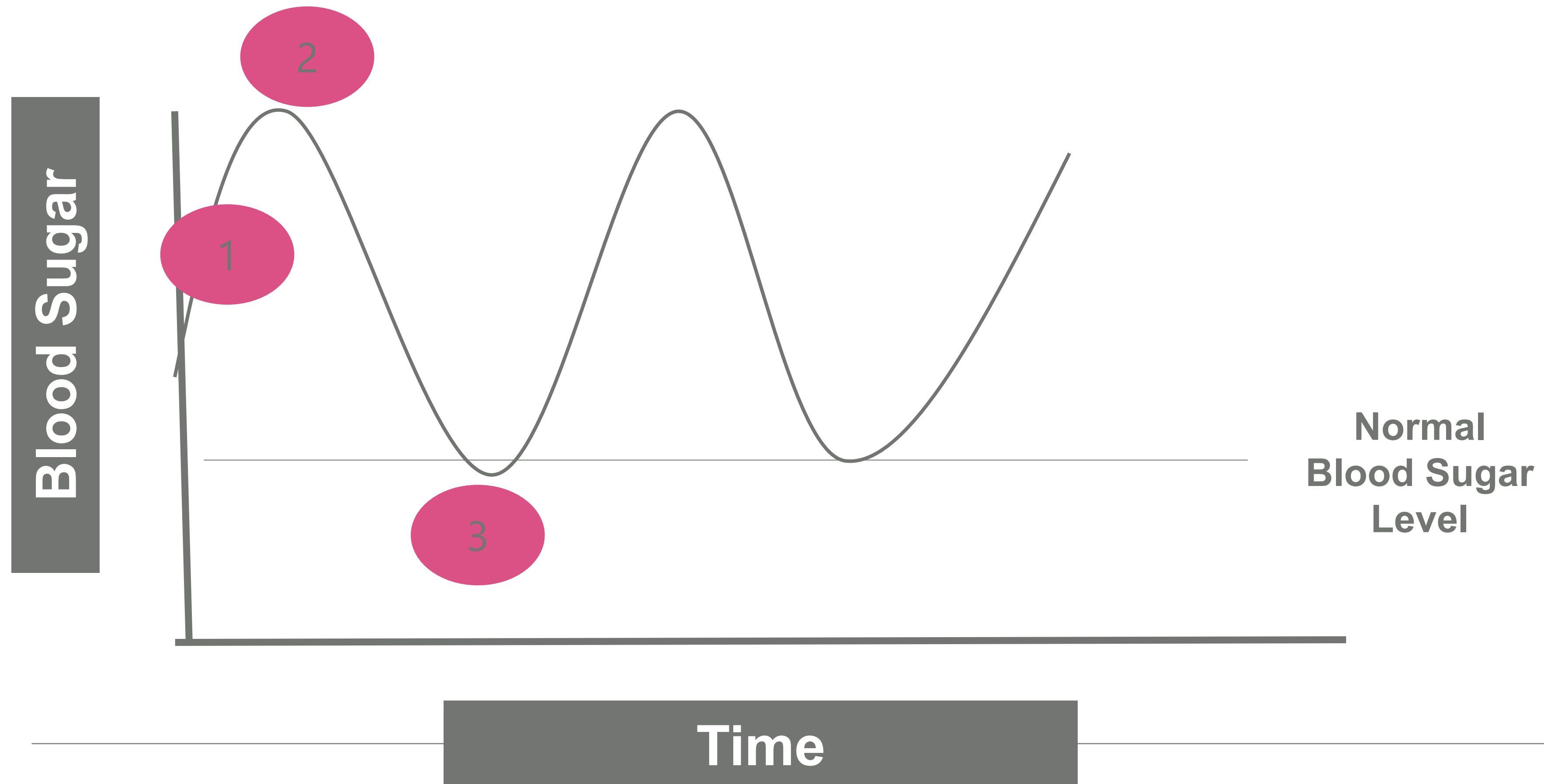
How Are Carbohydrates Metabolised?

- ✔ All carbohydrates are broken into simple sugars before they are absorbed by the body.
- ✔ Glycemic index - This is a way of ranking foods according to their effect on blood glucose levels.
- ✔ The GI of pure glucose is set at 100 and every other food is ranked according to its actual effect on blood glucose levels relative to glucose. GI is only calculated for those foods that contain a reasonable amount of carbohydrate.
- ✔ Glycemic LOAD is more important – protein, fat & fibre will lower the glycemic load of a meal and therefore slow the release of glucose into the blood stream



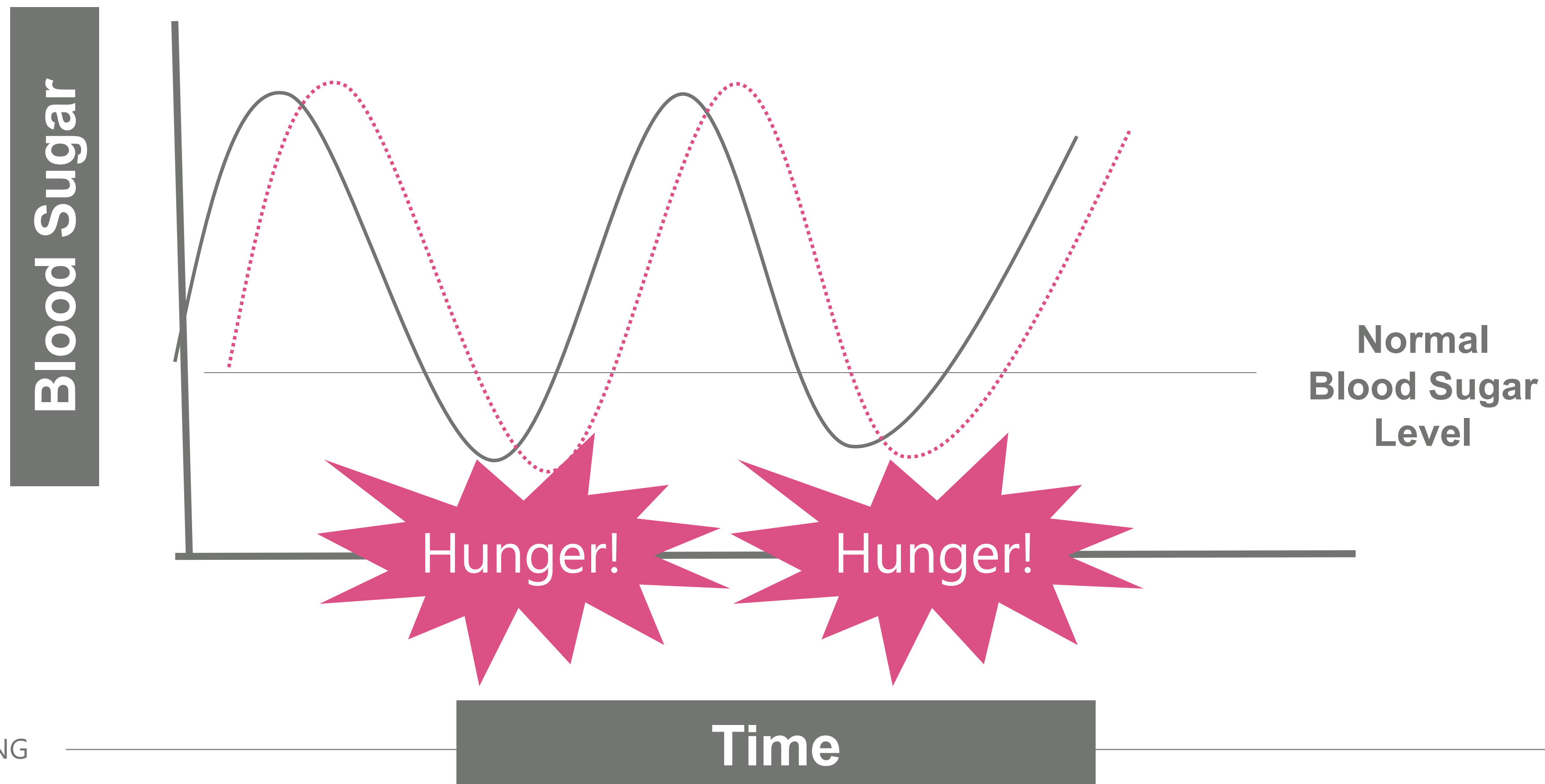
What it looks like when you eat **Sugar**

1. Your **blood sugar** (glucose) rises
2. Your **pancreas** releases the hormone **insulin**
3. Insulin brings your blood sugar down by transporting glucose to your cells for energy.



What it looks like when you eat **TOO MUCH Sugar**

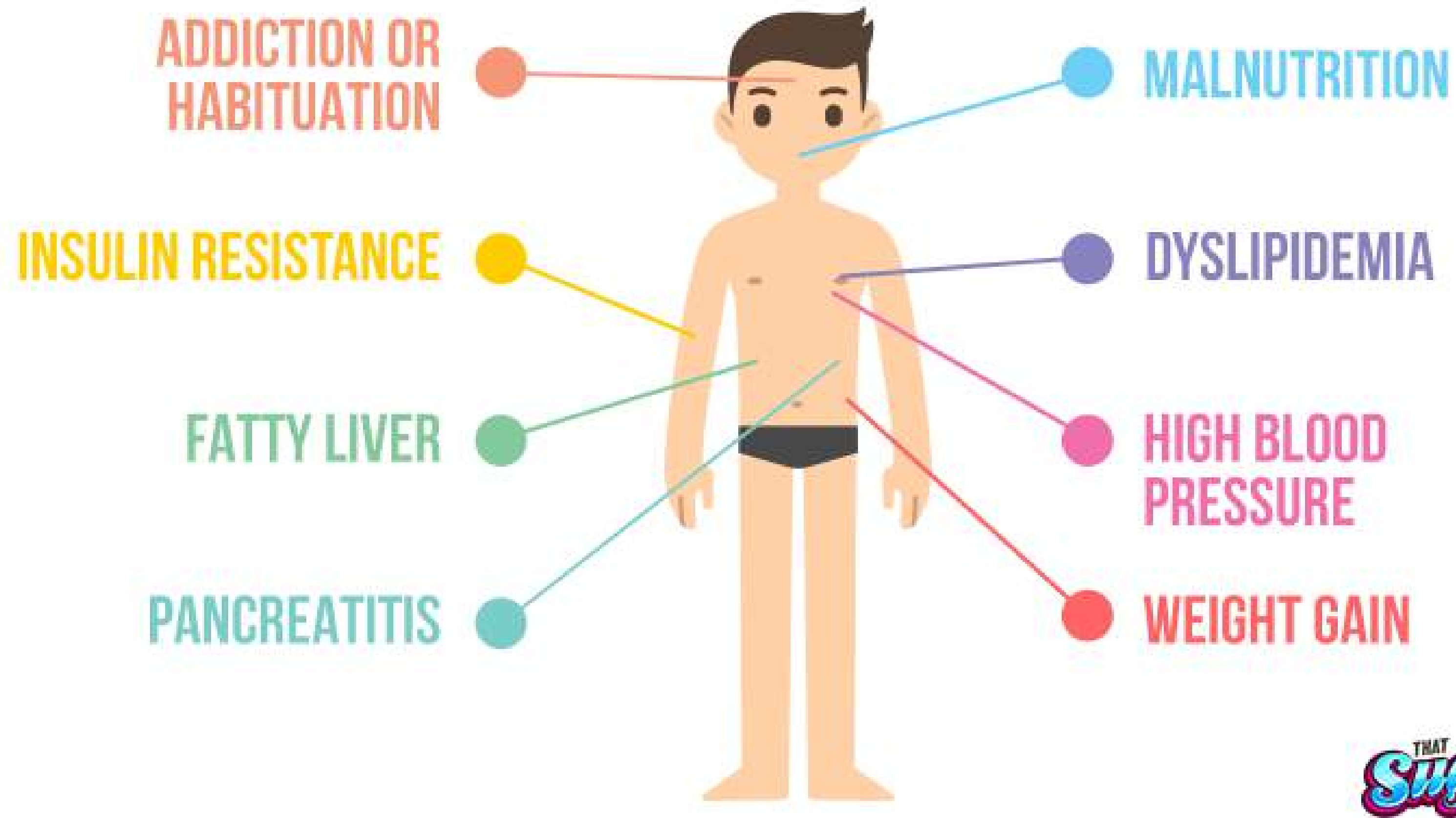
1. Your blood sugar has already peaked
2. Insulin carries away too much glucose too late
3. Your blood sugar dips too low...
4. You don't have energy, crave sweets, are hungry & cranky!



What is Sugar? Names to Look Out For...

Agave nectar*	Caramel*	Dextrose	Galactose	Lactose	Raw sugar*
Barbados sugar*	Carob syrup*	Diastatic malt	Glucose	Maltodextrin	Refiner's syrup*
Barley malt	Castor sugar*	Diatase	Glucose solids	Malt syrup	Rice syrup
Beet sugar*	Confectioner's sugar*	Ethyl maltol	Golden sugar*	Maltose	Sorbitol
Blackstrap molasses*	Corn syrup	Evaporated cane juice*	Golden syrup*	Mannitol	Sorghum syrup*
Brown rice syrup*	Corn syrup solids	Florida Crystals*	Grape sugar*	Maple syrup*	Sucrose*
Brown sugar*	Date sugar*	Free flowing brown sugars*	HFCS*	Molasses*	Sugar (granulated)*
Buttered syrup*	Dehydrated cane juice*	Fructose*	Honey*	Muscovado*	Treacle*
Cane juice crystals*	Demerara sugar*	Fruit juice*	Icing sugar*	Organic raw sugar*	Turbinado sugar*
Cane sugar*	Dextran	Fruit juice concentrate*	Invert sugar*	Panocha*	Yellow sugar*

Why is excessive FRUCTOSE So Unhealthy



HEALTH EFFECTS OF TOO MUCH FRUCTOSE THAT ARE THE SAME FROM TOO MUCH ALCOHOL

SOURCE: LUSTIG, R. H. J. AM. DIET. ASSOC. 110, 1307-1321 (2010)

Public Service Announcement!

**Mother Nature packaged
the fructose in fruit
with an abundance
of fibre, water and phytonutrients!
Fresh fruit is OK...
in moderation.**



Meanwhile ...
two hunger hormones
are performing an intricate dance
influencing your **appetite.**

Stimulates Appetite

Ghrelin
The
“**hunger**”
hormone

Leptin:
The
“**fullness**”
hormone

Suppresses appetite

Sugar Imbalances LEPTIN, GHRELIN & DOPAMINE

Your **appetite** does not go down
after you eat food containing sugar
even though your stomach is full!
You **crave** more, but are satisfied **less!**

The Progression:

Eat
Too much
sugar

Become
insulin
resistant

Become
leptin
resistant

Become
a sugar
addict!

Too much
insulin
released
too often

Brain doesn't
"hear" leptin
signal

Dopamine
not
properly
suppressed

Constantly
hungry
and craving
more sweet
foods!

So why can't we

just say no?!

Food can be
addictive.

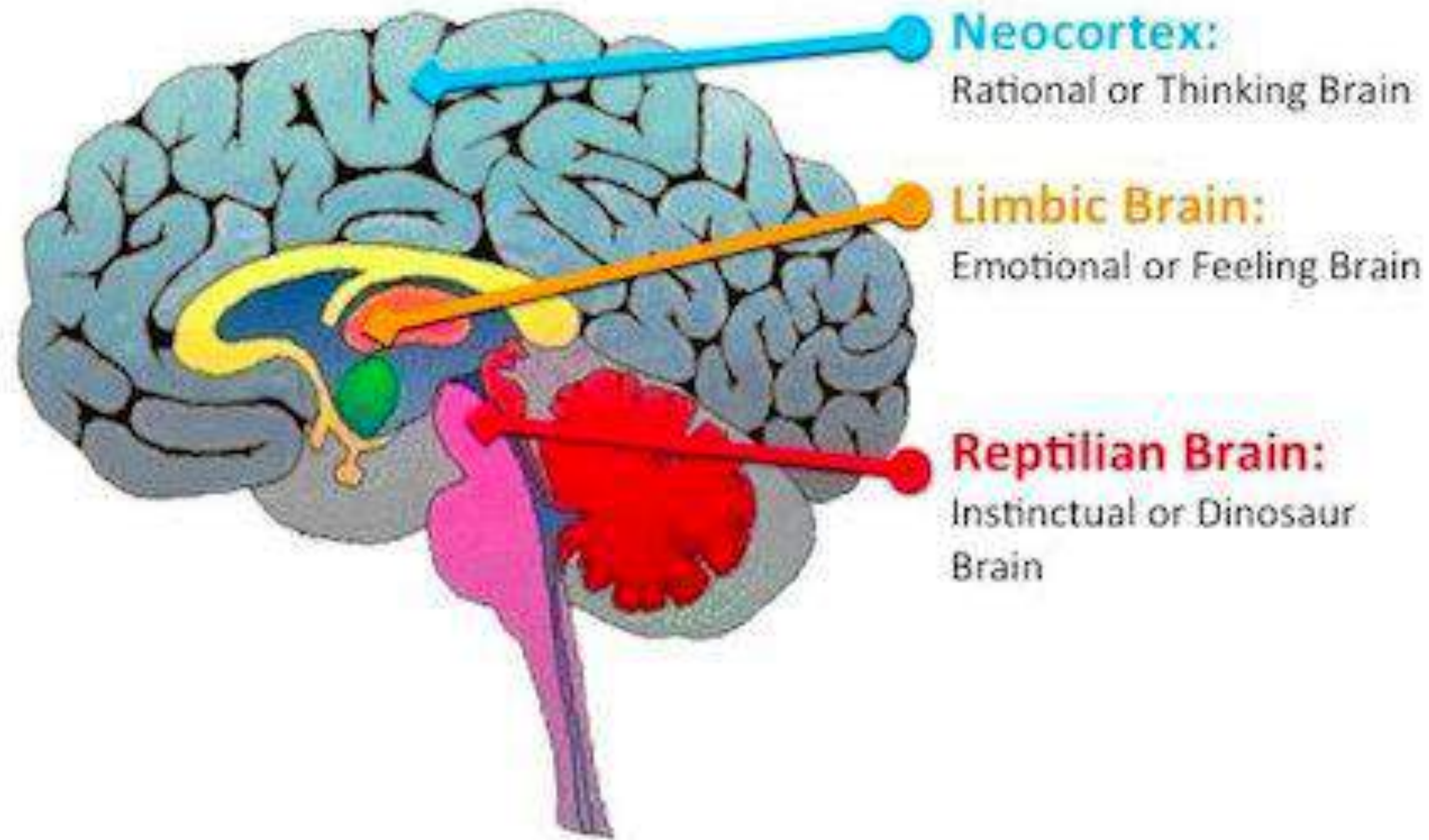
Sugar can be

VERY addictive.

In fact, some animal studies have found sugar to be
more addictive than **cocaine.**

**What about our
children?**

Why Your Child Can't Control Their Tantrum



Impact of Sugar on Mood

This goes for adults as well as children...

Increased Requirement of Magnesium

Sugar requires additional magnesium to metabolise it. Magnesium fuels and relaxes the nervous system as well as being a precursor for neurotransmitter production

Erratic Blood Sugar Control

Consumption of sugar → insulin release → hypoglycaemia → STRESS → triggers release of cortisol

Addiction and Cravings

Sugar stimulates the dopamine pathway/rewards system in our brain – this is the same as cocaine! Sugar has been found to be more highly addictive than cocaine. Neuroimaging of obese individuals has shown the same brain changes as those addicted to cocaine. Withdrawal of sugar induces some of the neurochemical and behavioural signs of opiate withdrawal.

Inflammation

Current research is considering that mood disorders such as depression and anxiety are largely driven by inflammation of the brain

Other Effects of Sugar on Children



Decreased immune function

Decreased memory and concentration

Malnutrition

Fussy Food Behaviours

... and many more!

Remember that frightening list of chemicals that made up **Strawberry Flavour?**

By eliminating processed sugars you also eliminate **food additives** which have their own array of **harmful health effects**



| Sugar is **Everywhere!**

Australian documentary “That Sugar Film” points out that if you removed all the items containing added sugar from a standard supermarket’s shelf, only about **20% of items would remain.**

But it isn’t just **“junk food”** that is the issue. Many foods considered **“healthy”** also contain a large amount of sugar.

These seemingly healthy foods included:

- 85.7% of breakfast cereals
- 73.8% of yoghurts
- 73.1% of sauces, condiments and spreads
- 47.7% of baby foods
- 99% of snack or granola bars.



How to Identify Sugar

The nutrition facts part of the label is a good place to start identifying the amount of sugar in a processed food.

FYI... 1 tsp sugar = approximately 4 grams. So you can divide the number of grams in a serving by 4 to determine how many teaspoons.

A good rule of thumb is to avoid all food with more than 10 grams of sugar per serving.

It's important to realise, however, that the amount shown includes natural sugars found in certain ingredients, such as grains, fruit and milk.

To identify **added** sugar it's important to look at the ingredient list



Nutrition Facts	
Serving Size 1/2 cup (120 mL)	
Servings Per Container 8	
Amount Per Serving	
Calories 50	Calories from Fat 20
% Daily Value*	
Total Fat 2.5g	4%
Saturated Fat 2g	10%
<i>Trans Fat</i> 0g	
Cholesterol 0mg	0%
Sodium 80mg	3%
Total Carbohydrate 7g	2%
Dietary Fiber 1g	4%
Sugars 6g	
Protein 0g	
Vitamin A 0%	• Vitamin C 0%
Calcium 0%	• Iron 0%

Identifying Sugar

Don't eat food with any type of sugar in the first four Ingredients.

Nutrition Information (AVERAGE)

servings per package - 11

average serving size - 40g (2/3 metric cup†)

	quantity per serving	% daily intake ▲ per serving	per serve with 1/2 cup skim milk	quantity per 100g
ENERGY	590 kJ	7%	780 kJ	1470 kJ
PROTEIN	3.4 g	7%	8.1 g	8.6 g
FAT, TOTAL	0.7 g	1.0%	0.8 g	1.7 g
- SATURATED	0.2 g	0.7%	0.3 g	0.4 g
CARBOHYDRATE	27.8 g	9%	34.3 g	69.5 g
- SUGARS ^	11.5 g	13%	18.0 g	28.7 g

Ingredients

Whole grain cereals (66%)(whole wheat, rolled oats), sultanas (17%), sugar, triticale (6%), apricot piece (3.5%)(concentrated apricot puree, concentrated apple puree, invert sugar, humectant [glycerol], sugar, wheat fibre, gelling agent [pectin], acidity regulator [296], natural flavour, colour [paprika, lutein]), barley malt extract, natural flavour, salt, honey, mineral (iron), vitamins (niacin, riboflavin, folate, thiamin).

CONTAINS GLUTEN CONTAINING CEREALS.

MAY CONTAIN TRACES OF PEANUTS AND/OR TREE NUTS.

Identifying Sugar

Ingredients are listed in descending order by weight. If you see sugar listed among the first few ingredients, the product is likely to be high in added sugar.

But beware: manufacturers can (and do!) list different sugars separately.

So sometimes even if sugar isn't listed in the top four ingredients, it may appear several different times under different names as shown in the list of ingredients for a popular breakfast cereal on this slide...

*Whole grain cereals (66%)(whole wheat, rolled oats), sultanas (17%), **sugar**, triticale (6%), apricot piece (3.5%)(**concentrated apricot puree, concentrated apple puree, invert sugar, humectant [glycerol], sugar**, wheat fibre, gelling agent [pectin], acidity regulator [296], natural flavour, colour [paprika, lutein]), **barley malt extract**, natural flavour, salt, **honey**, mineral (iron), vitamins (niacin, riboflavin, folate, thiamin).*



A Typical Day of Eating

Breakfast	Bowl of Just Right with fruit yoghurt and a glass of juice	50g
Recess	Muesli bar and a piece of fruit	16g
Lunch	Wholemeal bread sandwich with chicken, lettuce and mayonaise	9g
Afternoon Tea	Baker's Delight finger bun Chocolate milkshake Piece of fruit	54g
Dinner	Stir fried chicken and veggies with teriyaki sauce and white rice	12g
Dessert	Fruit yoghurt	22g
Total		163g

That's the equivalent of nearly **41 teaspoons of sugar!!!**

A Better Day of Eating

Breakfast	Bowl of oat porridge with fresh berries and almond butter	10g
Recess	Carrot and celery sticks with tub of hummus	5g
Lunch	Wholemeal bread sandwich with chicken, lettuce and avocado	5g
Afternoon Tea	Homemade nut and seed bar Piece of fruit	15g
Dinner	Stir fried chicken and veggies with tamari, ginger and white rice	5g
Dessert	Homemade chia pudding	5g
Total		45g

That's now only **11 teaspoons of sugar** most of which has come from fruit

So What Can

We Do?

Top Tips for Reducing Sugar

01

Just Eat Real Food

Be mindful of packaged and processed foods – avoid anything with a marketing claim and read the ingredients!

02

Avoid Sugary Drinks

Stick to water, herbal teas, black coffee, homemade smoothies and fresh juices on occasion

03

Increase Protein

Incorporate with each meal and snack to keep you feeling full – meat, fish, chicken, eggs, nuts, seeds, legumes

04

Select Low GI options

See table on following page...

05

Find substitutes

You may need to present an option to your children 10-18 times before they accept it.

06

Trick your taste buds

Use sweet tasting herbs and spices such as cinnamon, ginger, fennel, clove, nutmeg, as well as starchy root vegetables and wholegrains.

07

Sleep more

Research has found that less than 6-7 hours of sleep per night will change the way your body processes sugar as well as increase cravings.

08

Snack regularly

Nut and seed mix, apple slices with almond butter, carrot sticks with hummus, avocado and boiled egg on rice cake, chia seed pudding, homemade protein smoothie etc

Select Low GI options

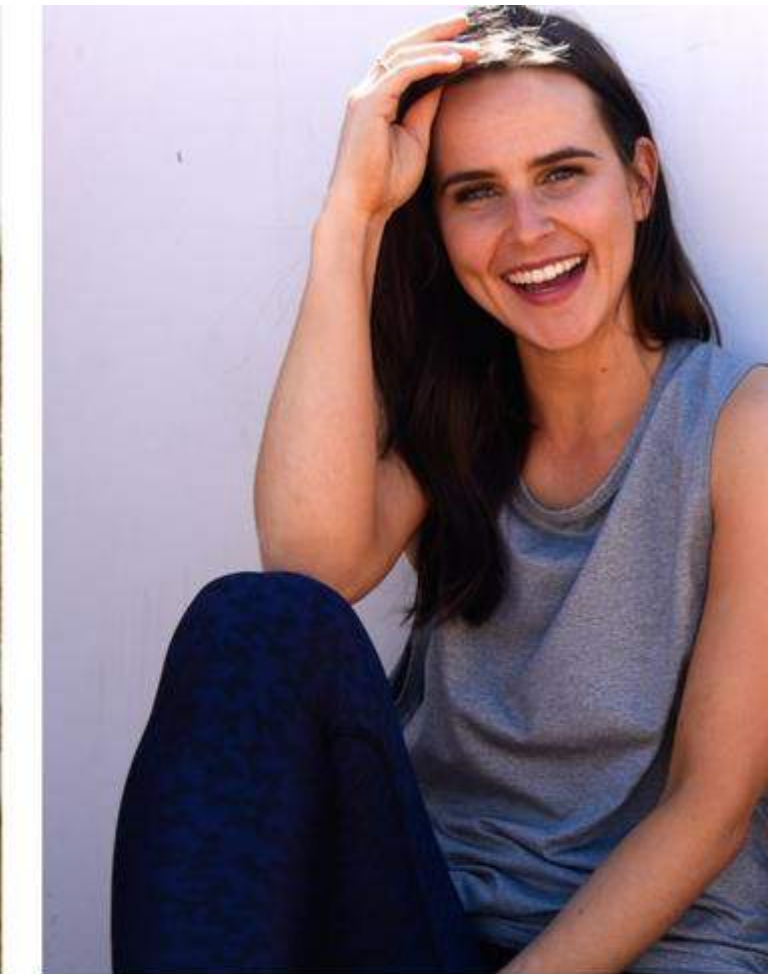
Low GI	Medium GI	High GI
Cereals		
All Bran, wholegrain muesli, rolled oats, porridge, oat bran, oat/rice bran	Special K, Just Right, Mini Wheats, Vitabrits, Nutrigrain, Sustain, Weetbix, Honey Smacks, shredded wheat	Cornflakes, Sultana Bran, Branflakes, Cocopops, Puffed Wheat, Rice Bubbles, Wheat bites, corn bran
Breads		
Burgen bread, multigrain bread, fruit bread, kibbled barley, 9 grain multigrain, sourdough, rye, wholemeal	Pita bread, croissant, crumpet, white bread, hamburger bun, light rye bread, sourdough, rye, wholemeal bread, pizza.	White bread, Bagels, waffles Dark Rye bread, French baguette, Gluten-free bread.
Grains and pasta		
Wholemeal pasta, noodles, egg fettucine, vermicelli, long grain white rice, pearl barley, buckwheat, bulgur, semolina, cracked wheat, popcorn.	Buckwheat, brown rice, Doongara, Basmati rice, taco shells, gnocchi, couscous, maize cornmeal	Quick rice, shortgrain rice, Instant cooked, tapioca, Corn chips, millet, rice pasta.
Legumes and nuts		
Soya beans, kidney beans, lentils, butter beans, chick peas, haricot beans, baked beans, nuts	Green gram dahl, green pea soup, split pea soup.	Broad beans, lima beans, pinto beans.
Vegetables		
Green peas, sweet corn, sweet potato, carrots, potato crisps, most vegetables	New potatoes, beetroot.	French fries, baked potatoes, parsnip
Fruit		
Cherries, plums, grapefruit, peaches, apples, pears, dried apricots, grapes, kiwi fruit, oranges	Mango, paw paw, sultanas, bananas, raisins, rockmelon, pineapple, fresh apricots	Watermelon, very ripe dates

Get Help.

Sugar, how to find it, how much to eat, and the health implications is such a large topic and unfortunately food manufacturers don't always have our best interests at heart.

If you, your patients, your family or friends are having trouble with their diet or health, then seek help – there is so much that can be done to prevent and reverse many common health conditions.

If you would like to work with me, I am available for face to face and Skype consultations – book online at www.korewellbeing.com.au/contact
Private health rebates available



NOW LOCATED AT...
tonika health
391 Riley Street
Surry Hills



Questions? Let's Connect!



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