



Weight Loss Support Group using a moderate low-carb diet





Today's session

Part 1: Why a low carb diet is good for weight loss

- What is a low-carb diet ?
- Why a low carb diet is effective for weight loss
 - How blood glucose levels impact on weight
 - How insulin levels impact on weight

Part 2: Our weight loss programme and first steps

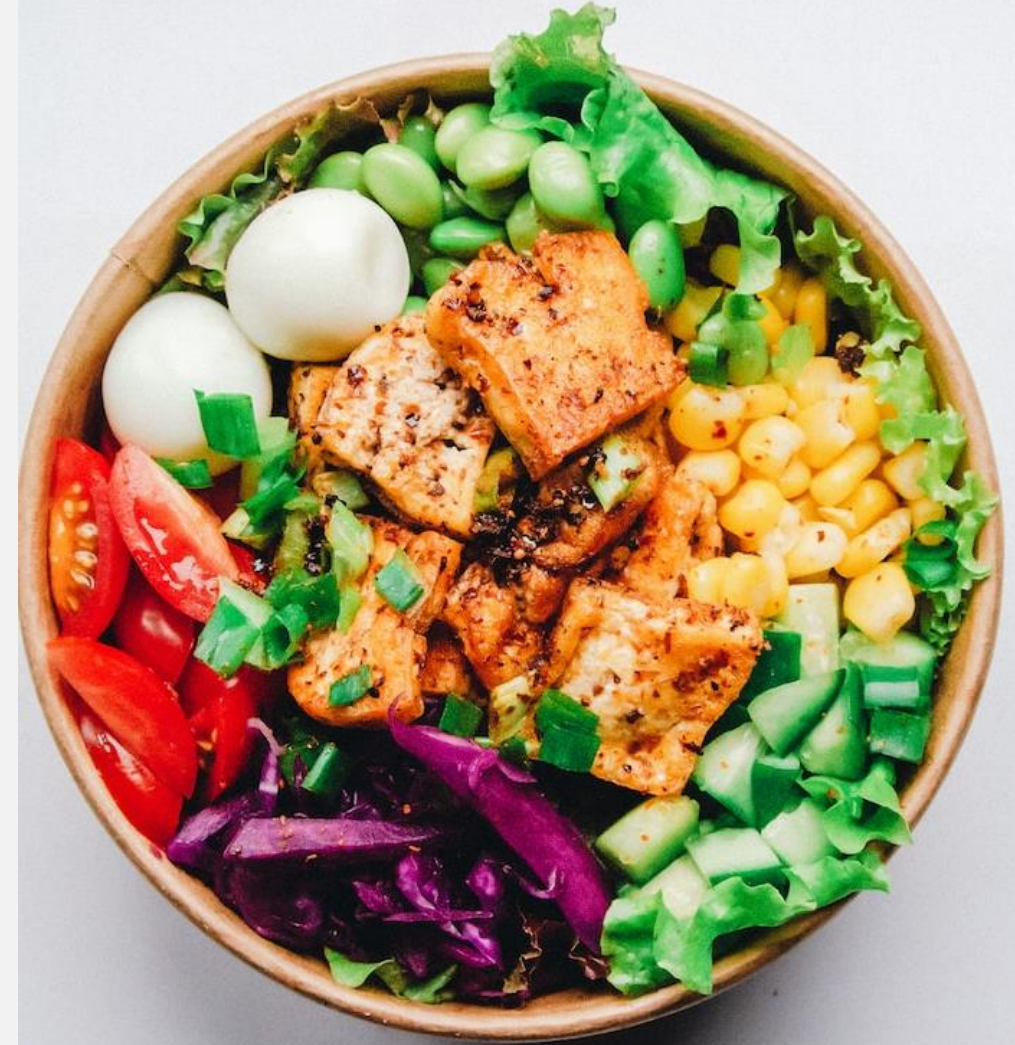
- How we will run this programme - a step-by-step approach to transitioning to a low-carb diet
- Step one – stabilising blood glucose
- Discussion and thoughts

What is a low-carb diet?

- A diet with a far lower proportion of carbohydrates than a standard diet and is defined as under 130g carbs/day
 - 50 – 130g = moderate low carb diet
 - < 50g = very low carb diet

What we will be doing in this group

- We will focus on supporting you to reduce your carbohydrate intake to within the moderate low-carb category
- **This will be a gradual transition – taking one step at a time starting with stabilising blood glucose**



The basics

A sustainable low carb diet



1. Avoid starchy carbohydrates



1. Avoid sugar and starchy carbohydrates – but eat plenty of non-starchy vegetables!



2. Eat plenty of protein



3. Use natural fats

Eat these – natural fats



Avoid these – industrialised fats



4. Cook from scratch, avoid ultra-processed “food”

These



Not These



The green list – eat plenty of these!

- **Meat:** beef, lamb, pork, chicken, duck, venison, offal (liver)
- **Fish:** salmon, trout, mackerel, sardines, tuna, all white fish, prawns and other seafood, tinned fish
- **Tofu/ tempeh**
- **Eggs:** 3-4 per day is fine
- **Dairy:** Butter, cream, plain, unsweetened yoghurt, cottage cheese
- **Seeds:** flax, chia, pumpkin, sunflower, sesame
- **Other:** Coconut milk/cream, herbs, spices, lemon/lime juice

- **Non-starchy vegetables:** green leafy veg, tomatoes, peppers, mushrooms, aubergines, courgettes, avocados, brussels sprouts, cauliflower, broccoli, salad veg, etc.
- **Berries-** strawberries, raspberries, blackberries, blueberries
- **Natural fats:** butter, lard, coconut oil, olive oil, ghee or avocado oil
- **Sauces:** based on cream, yoghurt or tomato, home-made pesto & mayonnaise
- **Fermented foods** — kimchi, sauerkraut, kefir, kombucha
- **Drinks:** water, tea, coffee, bone broth

The Amber list – eat in moderation

- **Nuts:** choose lower carb e.g pecans, brazil nuts, macadamia, almonds walnuts (avoid higher-carb cashews or pistachios)
- **Nut butters** (unsweetened)
- **Cheese**
- **Double cream**
- **Full fat milk**
- **Beans & lentils:** kidney beans, lentils,
- **Starchy vegetables:** Peas, sweetcorn, carrots, butternut squash, onions, swede & celeriac

- **Fruit:** limit to 1-2 small portions per day of non-berry fruit. E.g Apples, apricots and plums
- **Flour:** almond, coconut
- **Dark Chocolate**
- **Drinks:** Red/white wine, vodka, brandy
- **Other:** Spirulina powder (24% carbs but a good source of complete protein for vegans/vegetarians)

The Red List – minimise these!

■ Grains & cereals:

- bread,
- pasta,
- rice,
- flour,
- pastries/pies,
- cakes& biscuits,
- breakfast cereals,
- corn-based foods,
- all other grains, incl. oats, quinoa

■ Starchy vegetables:

- potatoes
- sweet potatoes
- other root vegetables (unless on amber list), e.g. parsnips & artichokes

■ Other foods

- sugar & confectionery
- dried fruit
- sugary drinks, including diet versions
- fruit juice
- artificial sweeteners
- low-fat dairy & flavoured yoghurts
- honey, table sugar, agave nectar, syrups

- **Vegetable oils & margarine:** rapeseed, sunflower oil, corn oil, margarine

- **Drinks:** fruit juice, cordials, sports drinks, energy drinks, flavoured milks, lemonade, dessert wines, beer,

- **Tropical fruits** with highest sugar content: pineapple, melon, mango, banana, grapes

Health benefits of a low carb diet

Strong evidence shows a low carb diet is more effective than a low-fat diet for:

- **Weight loss**
- **Improving metabolic health:**
 - Reduces insulin resistance & risk of type 2 diabetes
 - Lowers blood pressure
 - Improves blood lipids
 - Improves risk factors for heart disease

Evidence shows a low-carb diet can also improve other health conditions e.g:

- Mental health conditions
- Neurodegenerative disease
- Fertility issues
- Some cancers



How does a low-carb diet make you feel?

- **More energy**– people report fewer energy slumps throughout the day as blood sugar is controlled better
- **Less bloating and abdominal discomfort**
- **Less hunger** – which really helps with weight loss
- Improvements in **mental wellbeing**



Why a low-carb diet is effective for weight loss

How blood glucose and insulin levels impact on weight



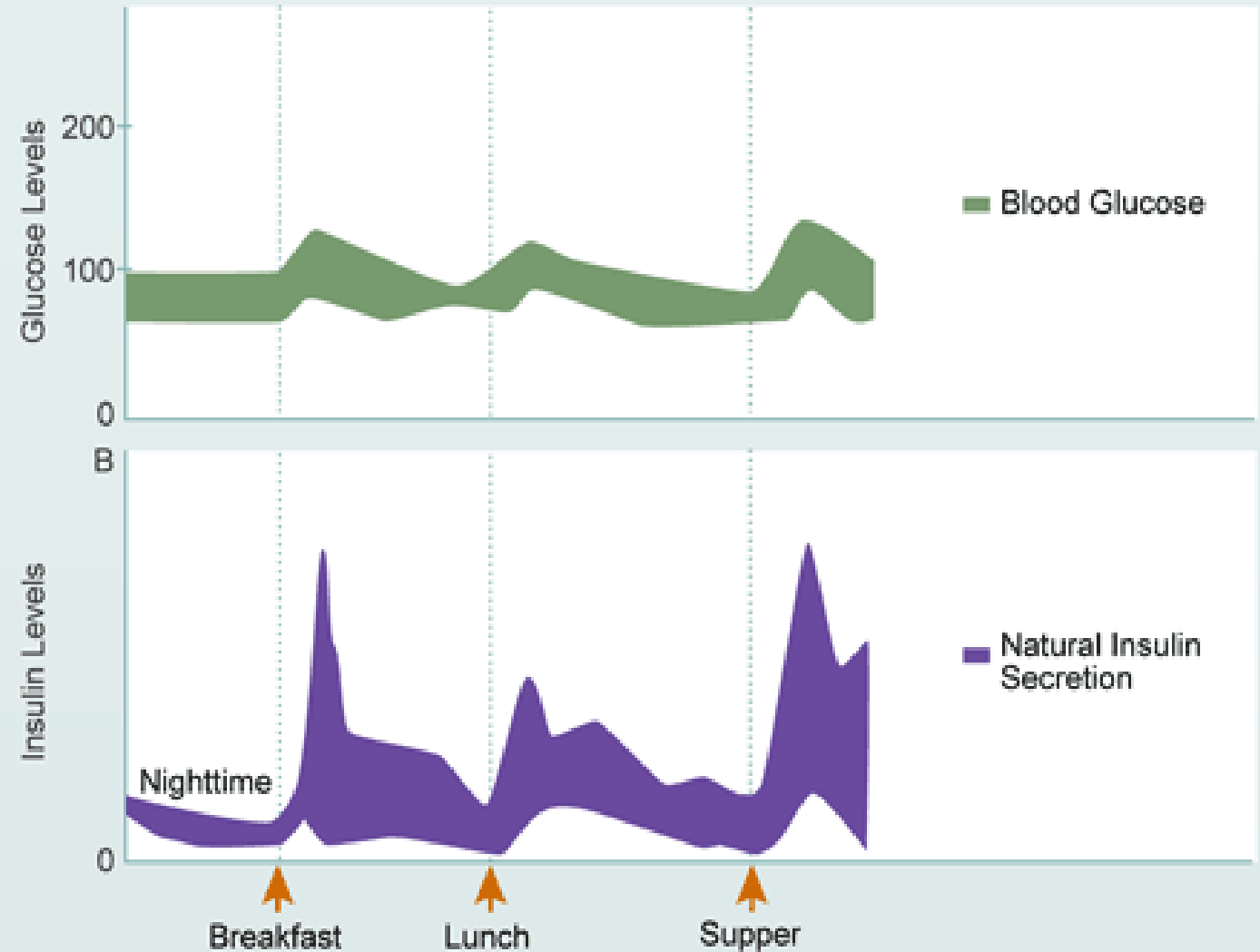
Blood glucose & insulin

- Humans have approx. 5 litres of blood containing 4 grams of sugar



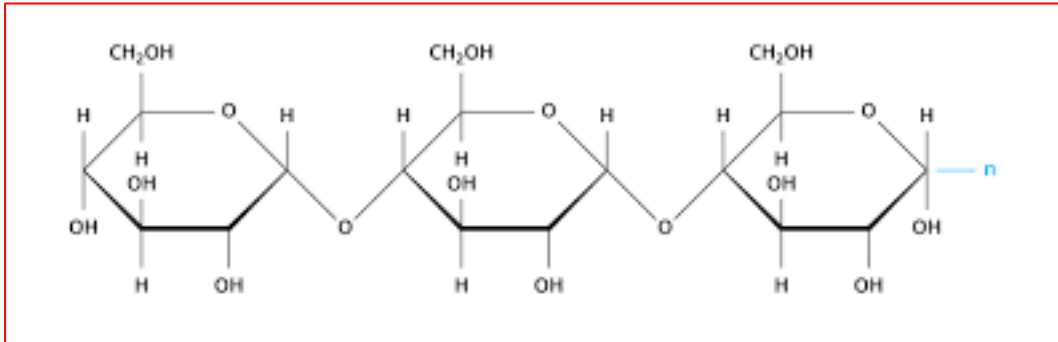
- When you eat, blood glucose levels rise, and your body needs to lower them
- **The pancreas releases the hormone insulin** to enable glucose to move from the blood into muscle, fat and liver cells where it is used for energy or stored as fat

Normal (Non-diabetic) Blood Glucose and Insulin Levels over 24 Hours



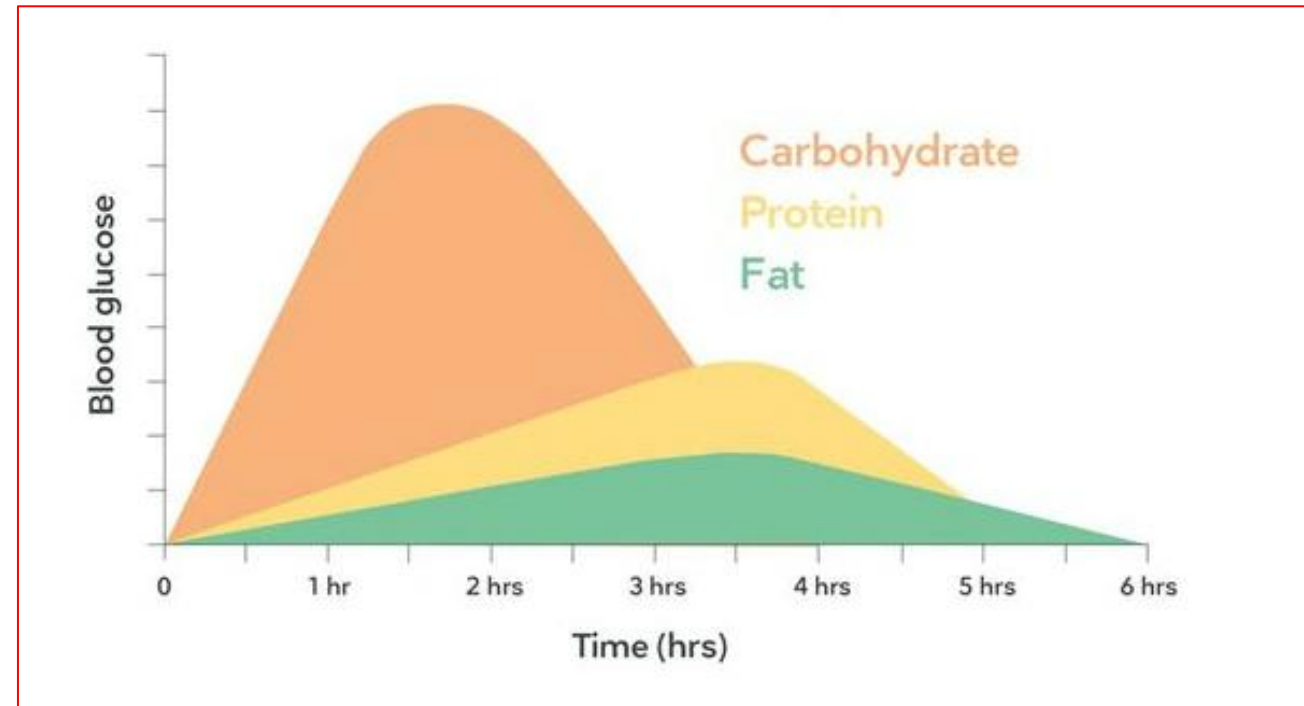
How different foods impact on blood glucose levels

Carbohydrates like bread, rice, pasta and potatoes are made of glucose molecules which are joined together



- When we eat carbohydrates, they are broken down into glucose molecules
- Carbohydrates and sugars raise blood glucose much more than fats and protein
- Refined carbs and sugars raise blood glucose more quickly and higher than complex carbohydrates and cause spikes in blood glucose levels

Effects of nutrients on blood glucose over time



Why blood glucose levels matter for weight

Blood sugar levels affect your energy, focus, weight, hormones, mental health, and risk of chronic disease

The glucose roller-coaster and weight

- When we eat starchy carbohydrates, especially refined starches and sugars, our blood glucose levels rise sharply.
- A sharp rise in blood glucose levels is often followed by a sharp drop in blood glucose
- These sharp fluctuations in blood glucose affect how we feel and can contribute to weight gain

When your blood glucose levels are:

- **Too high** - you can feel fatigued, mood issues, and memory problems
- **Too low** - you may feel shaky, hungry, anxious, dizzy, and even nauseous.

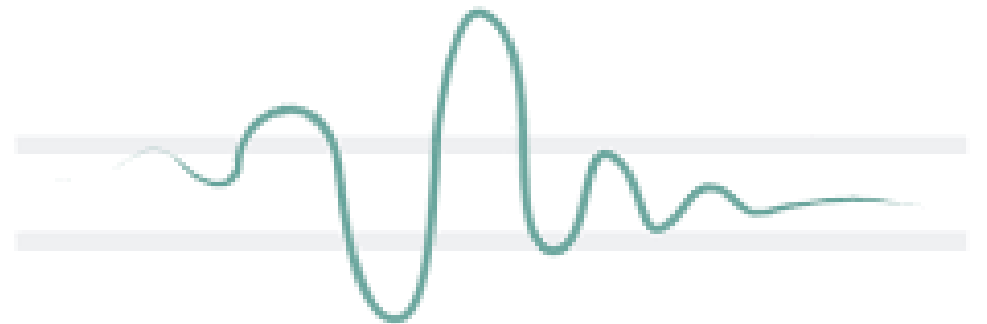
Unstable blood glucose levels lead to:

- Fatigue, decreased energy, and reduced alertness
- Worse memory and fact recall.
- Mood swings

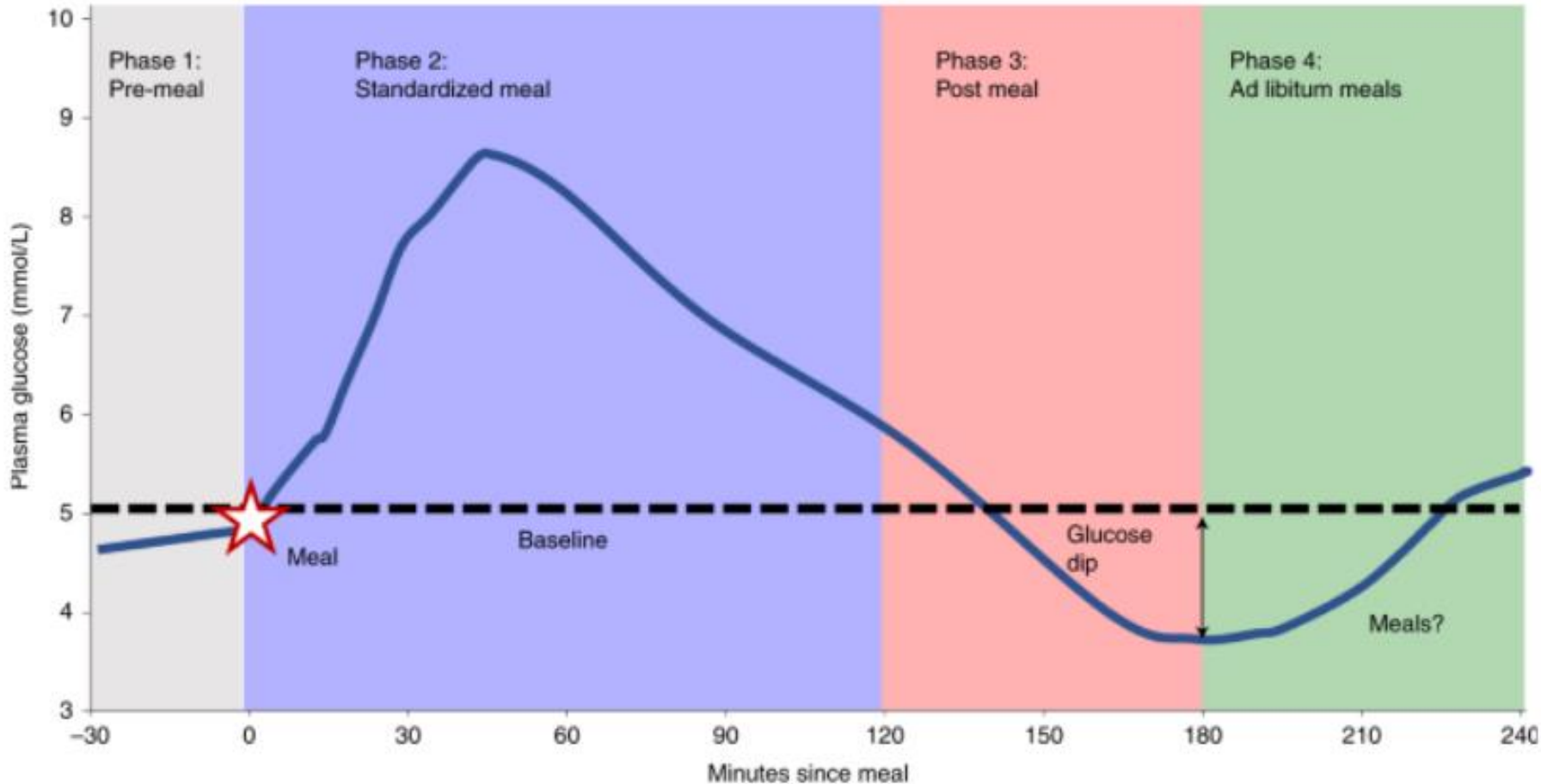
STABLE BLOOD SUGAR



UNSTABLE BLOOD SUGAR



Raised blood glucose promotes hunger



- Whilst blood glucose levels usually rise after eating, they rise more when foods are high in sugar and carbs.
- When glucose spikes a significant dip in blood glucose can follow, as shown in this graph.
- Research shows that **dips in blood glucose increase hunger, more food cravings and greater food intake at the next meal**

*Berry, S et al, 2020 Effect of Postprandial Glucose Dips on Hunger and Energy Intake in 1102 Subjects in US and UK: The PREDICT 1 Study, Current Developments in Nutrition, Volume 4, Issue Supplement_ Page 1611, https://doi.org/10.1093/cdn/nzaa063_009

Insulin and weight gain



INSULIN AND GLUCAGON IN WEIGHT MANAGEMENT

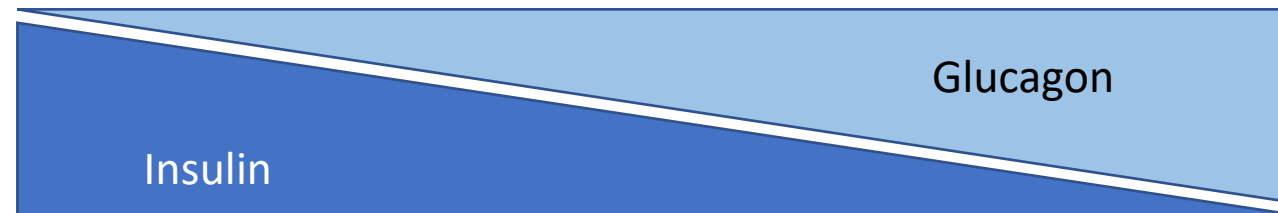
INSULIN

- **the fat storage hormone**
- Reduces blood sugar
- **Promotes fat storage**
- Inhibits fat burning



GLUCAGON

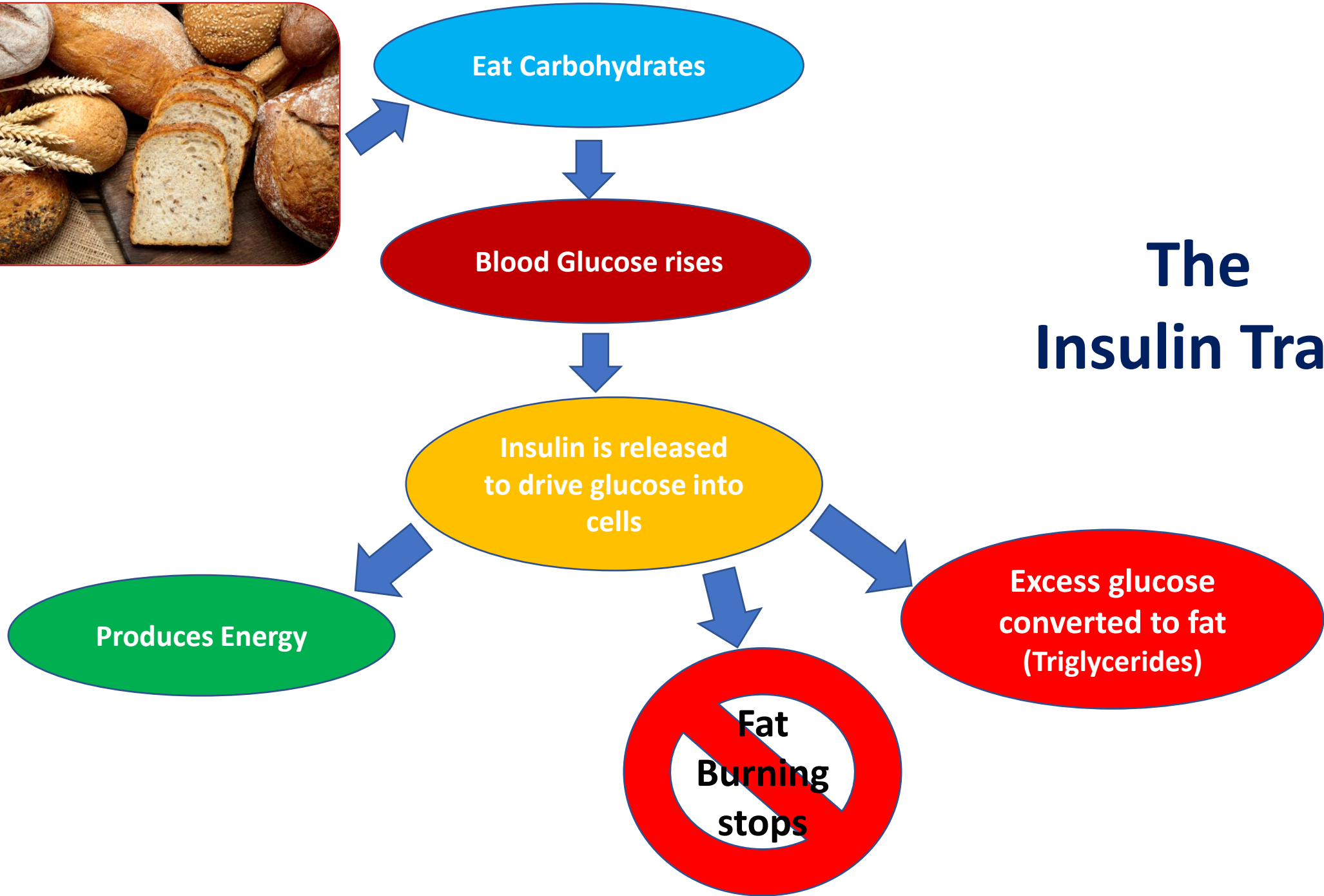
- **the weight loss hormone**
- Stabilises blood sugar
- **Supports fat burning – i.e using stored fat for fuel**
- Increases metabolic rate
- Suppresses appetite



NB. Insulin inhibits glucagon secretion



The Insulin Trap



Outline of the programme



Preparation and Planning

Understand what a low-carb diet involves:

- Watch our weight loss webinar of 7th November (webinar 24),
- Read the booklet we sent you,
- Listen to this session



Session 1: Focus on Reduction of Sugars and Refined Carbohydrates

- Sources of sugar and carbs in your diet
- What foods to change – carb substitutes
- Maintaining energy levels – snacking choices

Session 2: Focus on Protein and Fat Intake

- Increasing protein and fats in your meals
- Making good breakfast choices
- Maintaining hydration and electrolytes

Session 3: Balancing meals to prevent energy crashes

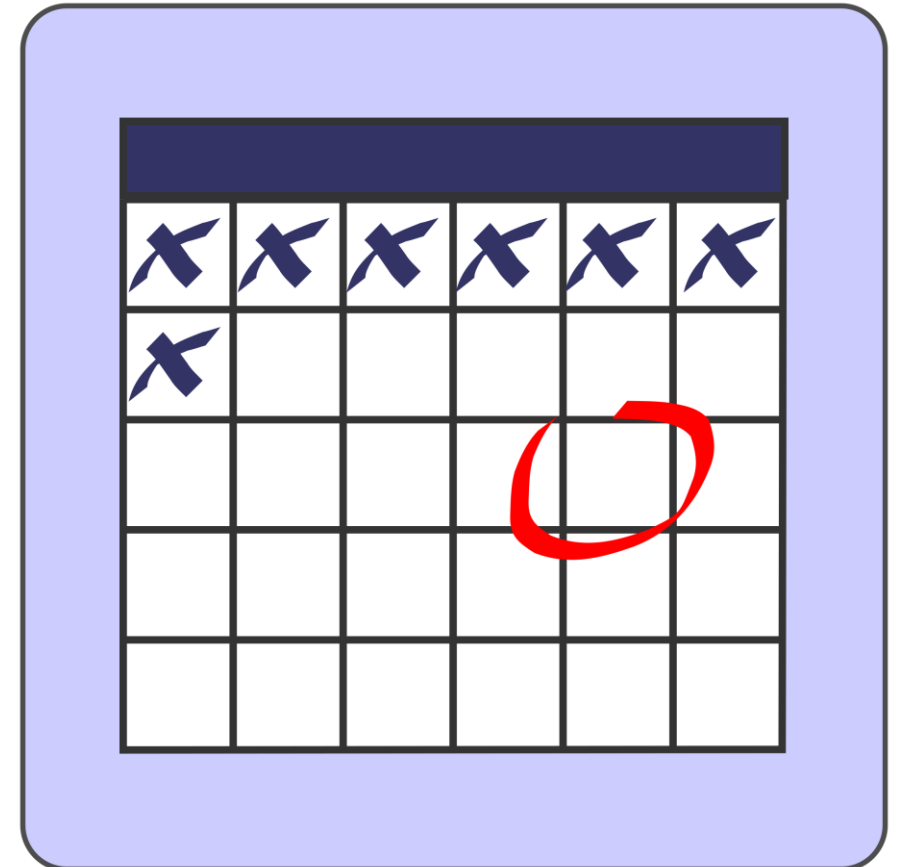
- Portion sizes,
- Balancing carbs/protein/fat on your plate
- Choosing quality carbs to prevent energy crashes

Session 4: Monitoring and adjusting

- Review your progress
- Tweaking your diet
- Monitoring your weight and waist

Session 5: Maintaining and sustaining the plan

- Barriers to success – how will you overcome them?



Important Tips:

- **Go Slow:** The slower you transition to a low-carb diet, the easier it will be on your body, especially when dealing with ME/CFS or Long COVID.
- **Monitor Symptoms:** Keep track of symptoms like fatigue, dizziness, or increased heart rate, and adjust your diet as needed.
- **Assess Your Current Diet:** Keep a **food diary** for a week to track your current carbohydrate intake. This will help you understand your baseline and make gradual changes without a drastic reduction.

This step-by-step approach allows your body to **gradually adjust** to using fat for fuel instead of carbs, helping to avoid energy crashes and making the transition sustainable.



Sugars and Starches in the diet

And how to avoid them

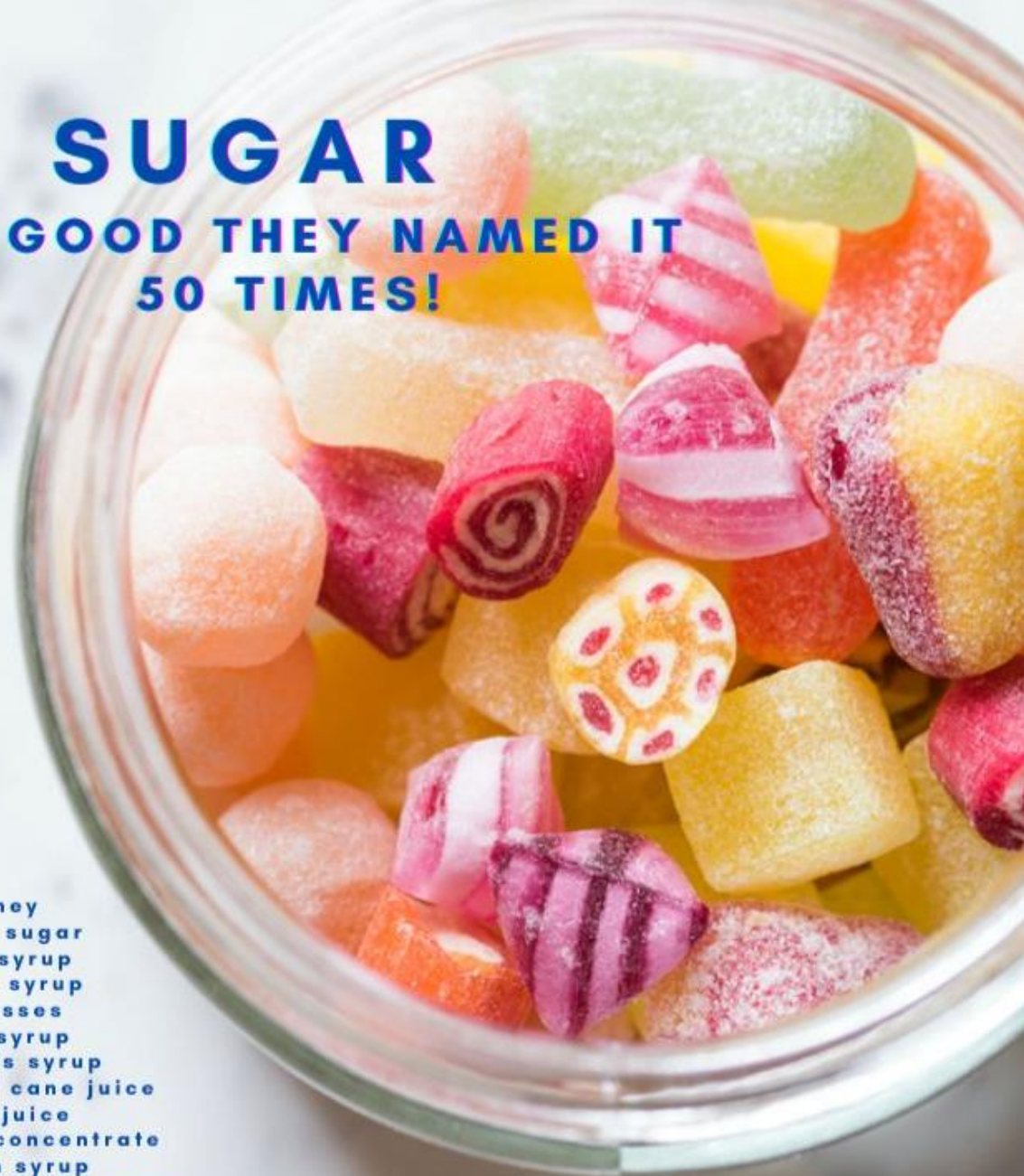
Dextrose
Fructose
Galactose
Glucose
Lactose
Maltose
Sucrose
Beet sugar
Brown sugar
Cane juice crystals
Cane sugar
Castor sugar
Coconut sugar
Confectioner's sugar
Corn syrup solids
Crystalline fructose
Date sugar
Demerara sugar
Dextrin
Diastatic malt
Ethyl maltol
Florida crystals
Golden sugar
Glucose syrup solids
Grape sugar
Icing sugar
Maltodextrin
Sorghum syrup
Treacle

Brown rice syrup
Buttered sugar
Muscovado sugar
Panela sugar
Raw sugar
Sugar (granulate)
Sucanat
Turbinado sugar
Yellow sugar
Agave Nectar/Syrup
Barley malt
Blackstrap molasses
Caramel
Carob syrup
Corn syrup

Honey
Invert sugar
Malt syrup
Maple syrup
Molasses
Rice syrup
Refiner's syrup
Evaporated cane juice
Fruit juice
Fruit juice concentrate
Golden syrup
High-Fructose Corn syrup

SUGAR

SO GOOD THEY NAMED IT
50 TIMES!

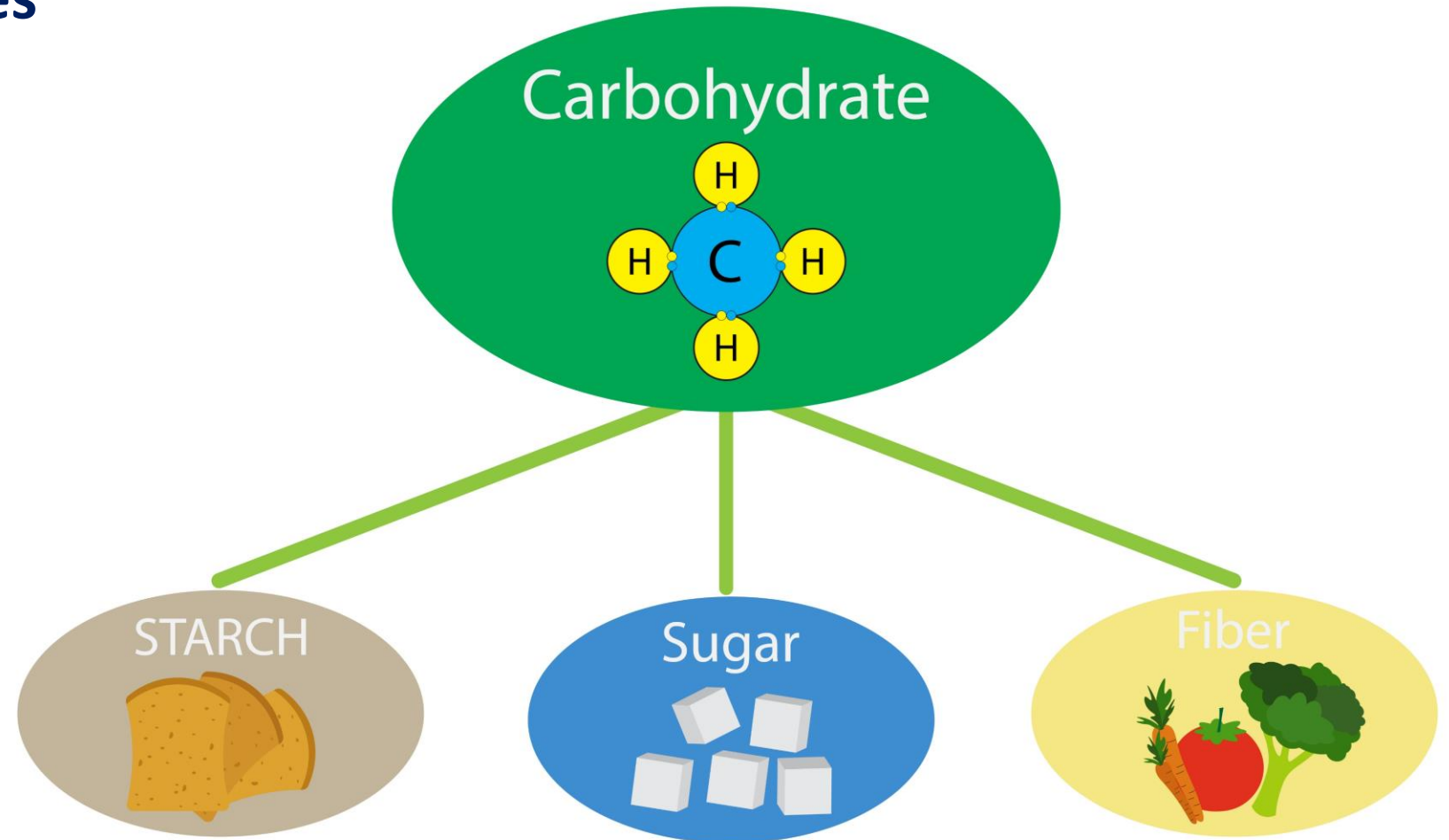


3 Types of carbohydrates

- **Starches**
- **Sugars**
- **Fibre**

**Virtually all
carbohydrates come
from plant foods**

**The exception is lactose from
milk**



Sugars

All sugars, honey and syrups are equally bad for increasing blood glucose levels



Sugar likes to hide!

It hides in

- Confectionary
- Cakes
- Biscuits
- Chocolate
- Bread
- Virtually all UPF!



Starches

Think of starches as
sugar molecules
holding hands

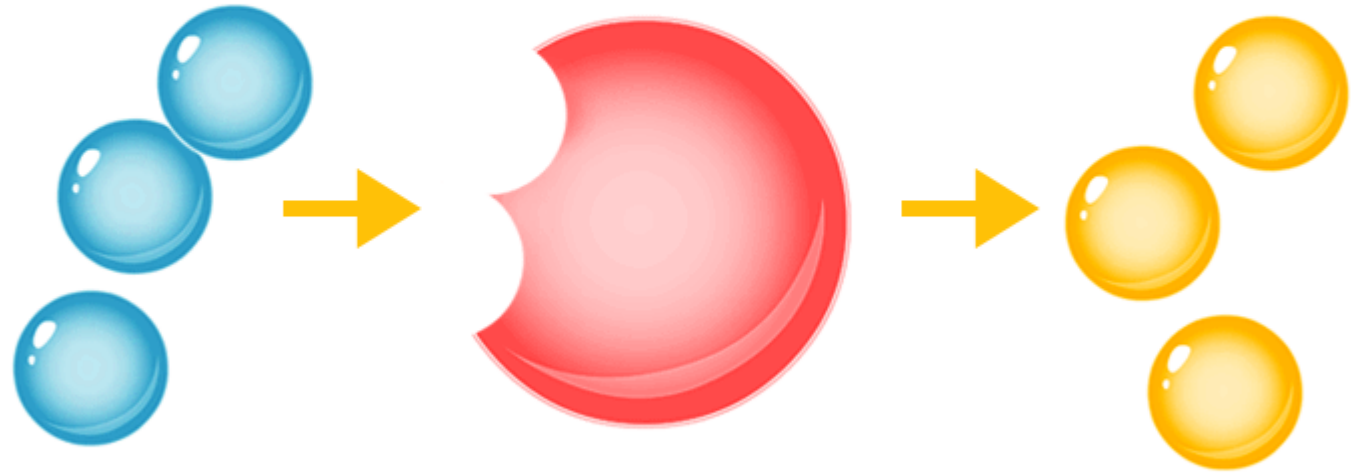


1. Starches start to break down into sugars in the mouth

2. The process continues in the intestines

3. You will absorb all starches as glucose

digestive enzyme in saliva that breaks starches down into sugars










amylase
Game Smartz flashcard

Exactly how much
sugar is hidden in
food?












The Glycaemic Index helps predict how these breakfasts might affect blood glucose, important information if you have type 2 diabetes

Cereal	Glycaemic Index	Serve size	How does each cereal affect blood glucose compared to 4g teaspoons of table sugar?
Coco Pops	77	30g	7.3 
Cornflakes	93	30g	8.4 
Mini Wheats	59	30g	4.4 
Shredded Wheat	67	30g	4.8 
Special K	54	30g	4.0 
Bran Flakes	74	30g	3.7 
Oat porridge	63	150ml	4.4 

As per calculations to be found in: It is the glycaemic response to, not the carbohydrate content of food that matters in diabetes and obesity:

The glycaemic index revisited | Unwin | Journal of Insulin Resistance 2016 @lowcarbGP

Using the Glycaemic Index to predict how fruit & veg affect blood glucose








Food Item	Glycaemic index	Serving Size g	How might each food affect blood glucose compared to one 4g teaspoon of table sugar 
Potato boiled	96	150	9.1 
Sweet corn	60	80	4.0 
Frozen peas,	51	80	1.3 
Cabbage	10	80	0.1 
Raisins	64	60	10.3 
Banana	62	120	5.7 
Apple	39	120	2.3 
Strawberry	40	120	1.4 

Also salad leaves, broccoli, courgette, cauliflower..,

As per calculations to be found in: It is the glycaemic response to, not the carbohydrate content of food that matters in diabetes and obesity:
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White, brown or green foods?



Food item	Glycaemic Load g/serve	Serve Size g	How does each food affect blood glucose compared with one 4g teaspoon of table sugar?
White rice	26	150	9.6 
Brown rice	20	150	7.3 
White bread	22	60	8 
Brown bread	16.2	60	6 
Spaghetti white	18	180	6.6 
Spaghetti brown	17	180	6.2 
Broccoli	0.3	250	0.1  ← Also salad leaves, courgette...

The brown bread and spaghetti are wholemeal. Rice and spaghetti boiled. 60g bread is two slices

D Unwin et al. It is the glycaemic response to, not the carbohydrate content of food that matters in diabetes and obesity: The glycaemic index revisited. Journal of Insulin Resistance 2016;1(1), a8.

Reducing Sugars and Refined Carbohydrates

Do this gradually!

Try:

- Halving your portion of rice/pasta/potatoes
- Changing your fizzy drinks for diet versions * or drinking sparkling water flavoured with lemon or lime, herbal or green tea
- Change your sugary breakfast cereal for berries and yoghurt or scrambled eggs
- Cut back on sugary snacks such as biscuits/cakes/crisps
- Replace starchy carbs with alternatives such as cauliflower rice, courgetti, celeriac chips, chia porridge
- Buy low-carb bread – this is a quick win!
- Eat healthier protein/fat-based snacks

***Check your sweeteners!**

- Stevia, erythritol, and monk fruit don't raise blood sugar or insulin levels
- Xylitol, sorbitol and malitol and can raise blood sugar slightly
- Aspartame and sucralose can raise insulin levels without raising blood sugar
- Erythritol, malitol and xylitol are sugar alcohols (high Fodmap) and may cause bloating and gas in IBS
- Saccharin, sucralose and aspartame can negatively affect the gut microbiome
- Heavy use of sweeteners is associated with metabolic syndrome through insulin resistance
- Sweeteners can induce food cravings

Choose which one of these options you want to start with - don't do all at once!

Useful carb swaps



Rice for cauliflower rice



Spaghetti for Courgetti



**Mashed potato for
Cauliflower, swede
or celeriac mash**



**Potato chips for
Celeriac chips**



More low-carb swaps



Lasagne sheets for Aubergine



Porridge for Chia pudding



Usual bread for Keto bread



wheat flour pancakes for Almond flour pancakes



Easy snack ideas

Nuts: pistachio and almonds have the most protein, avoid cashews (higher in carbs). No more than a small handful per day!

Cheese cubes

Hardboiled eggs

Olives

Slice of ham/beef

Apple or celery spread with peanut butter

Few spoonfuls of thick Greek yoghurt

Some berries

Cherry tomatoes





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