

Ultra-Processed Foods & *Your Heart*

What every patient with — or at risk of — heart disease should know about the food on their plate.



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Why this guide matters to you

If you have heart disease — or are working hard to prevent it — what you eat is one of the most powerful medicines available to you. There is now strong, consistent evidence that **ultra-processed foods (UPFs)**

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Most of my patients ask me about statins, stents and stress tests. But the question I wish more people would ask is: “What's actually in the food I'm eating every day?” Quietly, that question matters just as much.

— DR. RAVI ASSOMULL, CONSULTANT CARDIOLOGIST

The numbers you should know

+24%

HIGHER RISK OF
CARDIOVASCULAR EVENTS IN
PEOPLE WITH THE HIGHEST
UPF INTAKE

+50%

HIGHER RISK OF
CARDIOVASCULAR DEATH
LINKED TO HIGH UPF DIETS

57%

OF THE AVERAGE UK ADULT'S
DAILY CALORIES NOW COME
FROM UPFS

Sources: BMJ umbrella review (2024); NutriNet-Santé cohort; UK National Diet & Nutrition Survey.

What you'll get from this guide

A clear, plain-English explanation of what ultra-processed foods actually are, and how to spot them on a supermarket shelf — even when the packaging looks healthy.

Understanding of the four main ways UPFs harm your heart, blood vessels and metabolism — and how cutting back can begin to reverse the damage within weeks.

Practical, affordable food swaps you can make this week — including a 7-day starter plate plan that's gentle on your heart and your wallet.

Answers to the questions patients ask me most often, plus a simple shopping rulebook you can take with you to the supermarket.

★ HOW TO USE THIS BOOKLET

Read it once cover-to-cover, then keep the **Simple Swaps** and **Smart Shopping** pages on your fridge. You don't need to be perfect — small, steady changes add up to real, measurable heart benefits.

What exactly is an ultra-processed food?

Ultra-processed foods are **industrial formulations** — recipes assembled in factories using ingredients you wouldn't find in a domestic kitchen: protein isolates, modified starches, hydrogenated oils, artificial sweeteners, emulsifiers, colourings and flavourings designed to be irresistible.

The four levels of food processing (NOVA system)

← LESS PROCESSING — better for the heart

MORE PROCESSING — worse for the heart →

GROUP 1	GROUP 2	GROUP 3	GROUP 4
Whole & minimally processed	Culinary ingredients	Processed foods	Ultra-processed
fruit · veg · grains fish · plain dairy	olive oil · butter salt · sugar · honey	cheese · tinned fish fresh bread · cured meat	soft drinks · crisps ready meals · sweets

The 5-second test: is it ultra-processed?

Pick up any packet in your kitchen and ask yourself these three questions. If you answer **yes** to one or more, it's almost certainly a UPF.

- 1 Does the ingredient list contain **five or more items**, or names you don't recognise as food (*maltodextrin, mono- and diglycerides, soy protein isolate, high-fructose corn syrup, carrageenan*)?
- 2 Does it contain **artificial sweeteners, colours, flavours or emulsifiers**?
- 3 Could you make it in your **own kitchen from scratch**? If not — and it still lasts months on a shelf — that's a tell-tale sign of ultra-processing.

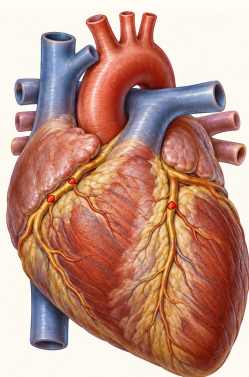
⚠ THE "HEALTH HALO" TRAP

Many UPFs are marketed as healthy: high-protein bars, plant-based burgers, low-fat yoghurts, breakfast cereals fortified with vitamins, "sugar-free" biscuits. The label may be green, but the product is still ultra-processed. **Always read the ingredient list — not the front of the box.**

03

How UPFs damage your heart & arteries

UPFs harm cardiovascular health through several overlapping mechanisms — not just one. Even when calories and macronutrients are matched, diets high in UPFs cause more weight gain, higher blood pressure, more inflammation and worse cholesterol than diets built on whole foods.



Inside the artery wall

The amber lines show your coronary arteries — the small blood vessels that feed your heart muscle. Over years, a UPF-heavy diet helps deposit fatty plaques (in red) along the artery walls, narrowing them and starving the heart of oxygen.

This is the process behind **angina, heart attacks and heart failure**. Slowing or reversing it is one of the most powerful things diet can do.

The four main ways UPFs hurt the heart



1. Higher blood pressure

UPFs are loaded with hidden salt — a single ready meal can contain more sodium than you should eat in a whole day. High salt drives up blood pressure, the single biggest cause of stroke.



2. Weight gain & insulin resistance

Engineered to be eaten quickly and over-eaten, UPFs add roughly 500 extra calories a day in controlled trials. The result: weight gain, type-2 diabetes, and a fatty liver — all toxic to arteries.



3. Chronic inflammation

Emulsifiers and additives appear to disrupt the gut lining and feed unhelpful bacteria. The result is low-grade inflammation that damages the inside of arteries and accelerates plaque build-up.



4. Worse cholesterol profile

UPFs are typically high in refined carbohydrates and industrial fats, which lower protective HDL cholesterol and raise small, dense LDL particles — the most dangerous kind for your arteries.

♥ THE GOOD NEWS

These changes are **reversible**. Studies show that swapping UPFs for whole foods can lower blood pressure within 2 weeks, improve cholesterol within 4–6 weeks, and meaningfully reduce cardiovascular risk within months.

04

Eat more of these. Eat less of those.

A heart-healthy plate isn't about cutting things out forever — it's about gently shifting the balance of what fills your plate most days. Aim to make the green column the foundation of your meals, and treat the red column as occasional rather than everyday.

EAT
FREELY

Heart-protective foods

- **Fruit** — berries, apples, citrus
- **Whole grains** — oats, brown rice
- **Oily fish** — salmon, sardines, mackerel
- **Plain** live yoghurt & kefir
- **Eggs** (in moderation)
- **Leafy greens & vegetables**
- **Beans, lentils, chickpeas**
- **Nuts & seeds** — almonds, walnuts
- **Olive oil & avocado**
- **Lean poultry** (in moderation)



EAT LESS

UPFs to limit

- Sugary & fizzy drinks
- Biscuits, cakes, pastries
- Microwave ready meals
- Sugary breakfast cereals
- "Diet" / "low-fat" products
- Crisps & salty snacks
- Sausages, bacon, salami
- Mass-produced white bread
- Fast food & takeaway
- Flavoured "protein" & "energy" bars



★ THE 80/20 RULE

Aim to have **80% of what you eat** come from the green column, with the other 20% as occasional treats. This is realistic, sustainable, and what most of my patients with healthy hearts actually do — they're not perfect, just consistent.

05

Simple swaps & smart shopping

You don't need to overhaul your kitchen overnight. Start with one or two of these one-for-one swaps. Each one nudges your blood pressure, cholesterol or weight in the right direction — and over a year, these little shifts add up to a measurably healthier heart.



Fizzy drinks
Swap out



Sparkling water + lemon
Swap in



Sugary cereal
Swap out



Plain oats + berries
Swap in



White sliced bread
Swap out



Genuine wholegrain
Swap in



Crisps
Swap out



Air-popped popcorn
Swap in



Bacon & sausages
Swap out



Tinned mackerel / sardines
Swap in



Flavoured low-fat yoghurt
Swap out



Plain yoghurt + fresh fruit
Swap in

Read the label like a cardiologist

The front of the box is marketing. The back of the box is the truth. When you turn it over, you're looking for two things: a **short list of ingredients you recognise as food**, and a **traffic-light panel without too much red**.

EXAMPLE – A typical UPF "healthy" granola bar

Oats, **glucose syrup**, **palm oil**, sugar, **soy protein isolate**, raisins, honey, **humectant (glycerol)**, **emulsifier (sunflower lecithin)**, **flavourings**, salt, **antioxidant (mixed tocopherols)**, **colour (caramel E150c)**.

Highlighted items are tell-tale UPF signals — you wouldn't keep any of these in your kitchen cupboard.

06

Your 7-day heart-healthy plate

A simple, affordable week of meals built almost entirely from minimally processed foods. Use this as a template — swap proteins or vegetables for what's in season, on offer, or in your fridge. Most of these meals take under 20 minutes.

DAY	BREAKFAST	LUNCH	DINNER
Monday	Porridge oats with banana, walnuts & cinnamon	Lentil & vegetable soup with wholegrain bread	Grilled salmon, roast new potatoes & broccoli
Tuesday	Plain yoghurt, berries, mixed seeds & honey	Tinned tuna salad with chickpeas, olives & tomato	Chicken & vegetable stir-fry with brown rice
Wednesday	Two boiled eggs, wholegrain toast & sliced avocado	Hummus, oatcakes, carrot sticks & an apple	Bean chilli with brown rice & a green salad
Thursday	Overnight oats with milk, chia seeds & raspberries	Wholegrain wrap with grilled chicken, salad & tahini	Baked white fish, lemon, couscous & roasted veg
Friday	Scrambled eggs, sautéed spinach & tomatoes	Leftover roast veg with feta, lentils & olive oil	Homemade tomato pasta with sardines & rocket
Saturday	Greek yoghurt, oats, mixed berries & nut butter	Big mixed salad with butter beans, tuna & egg	Lean lamb tagine with chickpeas & bulgur wheat
Sunday	Mushroom & tomato omelette with rye bread	Lentil dahl with brown rice & spinach	Roast chicken, sweet potato wedges & greens

For families & tight budgets

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Frozen is your friend. Frozen veg, fruit and oily fish are just as nutritious as fresh — often cheaper, and they don't go off in the fridge drawer.
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Batch-cook once, eat three times. A pot of chilli, dahl or vegetable curry on Sunday becomes Monday's lunch and Wednesday's dinner.
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Tinned beans, lentils and tomatoes are cheap, last forever, and form the backbone of dozens of heart-healthy meals.
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"Assembly meals" beat cooking from scratch on tired nights. A wholegrain wrap + tinned beans + bagged salad + olive oil is a complete dinner in 4 minutes.

What patients ask me most

Q. Do all additives make a food unhealthy?

Not always. The overall nutritional quality matters most. The bigger problem is that UPFs tend to be *simultaneously* high in salt, sugar and unhealthy fat — and engineered to make you over-eat. A short ingredient list is almost always a good sign.

Q. How much UPF is "okay"?

There's no exact safe threshold, but cardiovascular risk rises sharply once UPFs make up more than about a fifth of your daily calories. A reasonable target is **two small UPF servings a day or fewer**, with the rest of the plate built from whole foods.

Q. Are plant-based meat alternatives healthy?

It varies. Many are technically UPFs — high in salt, oil and additives. Whole-food plant proteins (beans, lentils, tofu, edamame, chickpeas) are a much better choice for the heart most of the time.

Q. I'm on a statin — does diet still matter?

Yes — enormously. Statins lower cholesterol, but they don't replace the blood-pressure, weight, inflammation and blood-sugar benefits that come from a whole-foods diet. The two work together; neither is a substitute for the other.

Q. What about salt? I've cut it out and my blood pressure hasn't budged.

Most of the salt we eat (around 75%) is *already in* processed foods — bread, sauces, ready meals, cheese, processed meats. You can't out-season your way around that. The single most effective way to lower salt intake is to eat fewer UPFs.

⚠️ A WORD ON ALCOHOL & CAFFEINE

Alcohol raises blood pressure and triglycerides — current guidance is no more than 14 units a week, spread over several days, with several alcohol-free days. Coffee in moderation (2–3 cups) is generally safe for the heart, but be wary of **sweetened coffee shop drinks** — many are ultra-processed dessert in disguise.

08

Five things to take away

If you remember nothing else from this booklet, remember these five ideas. Pin them to your fridge. Share them with the person who shops and cooks for the household. They are, in essence, the whole booklet — distilled.

1

UPFs are a major, modifiable cardiovascular risk factor

Up there with smoking, blood pressure and cholesterol — and entirely within your control.

2

Read the back of the packet, not the front

Short ingredient list, recognisable food words. If you wouldn't cook with it, it probably isn't food.

3

Build your plate from the green column

Vegetables, fruit, whole grains, beans, oily fish, nuts, olive oil, plain dairy. Most days. Most meals.

4

Aim for 80%, not 100%

Perfection isn't required. Consistency over weeks and months is what changes your arteries.

5

Your heart is listening — starting today

Blood pressure can fall within 2 weeks. Cholesterol within 6. Cardiovascular risk continues falling for years. There is no "too late".

⚠ IMPORTANT — PLEASE READ

This booklet is general health information and is not a substitute for personalised medical advice. Decisions about your medication, diet and treatment should be made together with your GP, cardiologist or a registered dietitian — especially if you are on blood-thinners, blood-pressure tablets, diabetes treatment or have kidney disease. If you experience chest pain, breathlessness, palpitations or sudden weakness, seek medical help immediately.

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