@X-PERT Health

Real food vs fake food

Real food vs fake food: the hidden impact of ultra-processing on your body and mind

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Learning Objectives

By the end of this session, participants will be able to:

1. Define ultra-processed foods and classify examples using a recognised framework (NOVA).
2. Differentiate processing effects on appetite, glycaemic control, and the gut–brain axis from those of minimally processed foods.
3. Summarise the strength of evidence linking UPF intake to cardiometabolic and mental health outcomes, noting key limitations.
4. Audit food labels to identify additive/processing markers (emulsifiers, refined starches, non-nutritive sweeteners, etc.).
5. Design realistic, budget-conscious meal and snack swaps that reduce UPF exposure without sacrificing convenience.

Made for profit, not nutrition

- ❑ Nutrient poor
- ❑ Hyperpalatable

NOVA classification of ultra-processed foods

1. Unprocessed or minimally processed foods

Definition	Examples	Photos
Unprocessed foods are obtained directly from plants or animals. There is no alteration following their removal from nature. Minimally processed foods are natural foods that have been submitted to cleaning, removal of inedible or unwanted parts, fractioning, grinding, drying, fermentation, pasteurization, cooling, freezing, or other processes that may subtract part of the food but that do not add oils, fats, sugar, salt, or other substances to the original food.	• Natural, packaged, cut, chilled, or frozen vegetables, fruits, potatoes, and other roots and tubers • Bulk or packaged grains such as brown, white, parboiled, and wholegrain rice, corn kernel, or wheat berry • Grains of wheat, oats, and other cereals • Dried or fresh pasta, couscous, and polenta made from water and the grits/flakes/flours described above • Lentils, chickpeas, beans, and other legumes • Nuts, peanuts, and other seeds without salt or sugar • Fresh and dried herbs and spices (e.g., oregano, pepper, thyme, and cinnamon) • Fresh, chilled, or frozen meat, poultry, fish and seafood, whole or in the form of steaks, fillets, and other cuts • Fresh or pasteurized milk; yoghurt without sugar	  

Nothing added or taken away!

Obesity Reviews. 2024;e13682. https://doi.org/10.1111/obr.13682

2. Processed culinary ingredients - extracted from natural foods using natural methods

Definition	Examples
Processed culinary ingredients are extracted from natural foods by pressing, grinding, crushing, pulverizing, and refining. They are found domestically and commercially to season and cook food.	• Oils made from seeds, nuts, and fruits, to include soybeans, corn, oil palm, sunflower, or olives • White, brown, and other types of sugar and molasses obtained from cane or beet • Honey and syrup from honeycombs and maple trees • Starches extracted from corn and other plants • Butter, lard, and coconut fat • Refined or coarse salt, mined, or from seawater

3. Processed foods – mixing Class 1 and Class 2

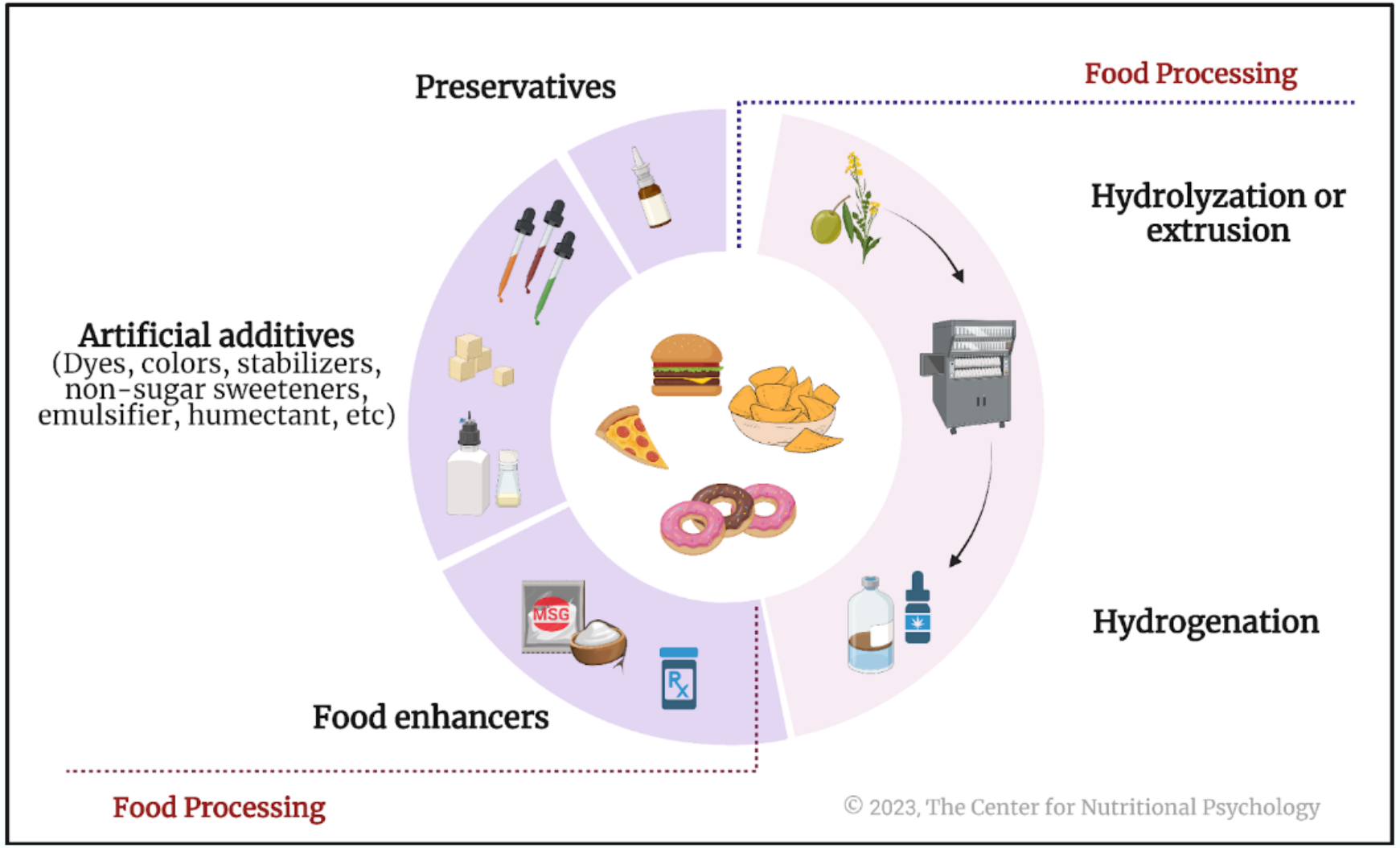
Processed foods are manufactured with the addition of salt, sugar, oil, or other NOVA group 2 substances to NOVA group 1 foods to enhance food preserve and taste. They are derived directly from foods and are recognized as versions of the original foods. Most processed foods have two or three ingredients.

- Canned or bottled legumes or vegetables preserved in salt (brine) or vinegar or by pickling
- Tomato extract, pastes, or concentrates (with salt and/or sugar)
- Fruits in sugar syrup (with or without added antioxidants)
- Salted or sugared nuts and seeds
- Bacon and beef jerky
- Canned fish such as tuna or sardines
- Freshly made cheeses
- Freshly made (unpackaged) breads made of wheat flour, yeast, water, and salt

4. Ultra-processed foods - industrial formulations, high yield, intense agriculture, cheap, hyperpalatable and long shelf-life.

Definition	Examples
Ultra-processed foods are industrial formulations made from by-products of high yield crops or intense animal agriculture. They are designed to be cheap, palatable, and have long shelf-lives. Manufacturing techniques include extrusion, molding, and pre-processing by frying.	• Fatty, sweet, savory, or salty packaged snacks including biscuits, ice cream, confectionaries such as chocolates and candies, and pastries such as sausage rolls • Sugar sweetened beverages and energy sports drinks and sweetened juices • Canned, packaged, dehydrated (powdered), and other "instant" soups, noodles, sauces, desserts, drink mixes, and seasonings • Sweetened and flavored yoghurts, including fruit yogurts • Margarines and spreads • Pre-prepared (packaged) meat, fish, and vegetables including burgers, hot dogs, and sausages • Pre-prepared poultry and fish "nuggets" and "sticks" • Packaged breads • Breakfast cereals and bars • Meal replacement shakes

Elements in Ultra-Processed Foods



Source: www.nutritional-psychology.org/women-consuming-lots-of-artificially-sweetened-beverages-might-have-a-higher-risk-of-depression-study-finds/

Group 1: unprocessed/minimally processed (intact foods)

Group 2: culinary ingredients (oils, sugar, salt)

Group 3: processed foods (simple recipes—e.g., cheese, whole-grain bread)

Group 4: ultra-processed foods (formulations with additives, engineered textures)

- Edge cases exist—use pragmatic judgement

Inspect the ingredients list….

Water, Potato (20%), Leek (10%), Glucose Syrup, Vegetable Oils (Palm, Sunflower), Palm Fat, Salt, Lactose (Milk), Yeast Extract (contains Barley), Milk Proteins, Flavour Enhancers (Monosodium Glutamate, Disodium 5'-Ribonucleotides), Emulsifier (Mono- and Diglycerides of Fatty Acids), Flavourings (contain Milk)

…….fewer than 5 and ones you recognise

You can’t outrun a bad diet!

All calories are not equal!

300 calories of satiety.

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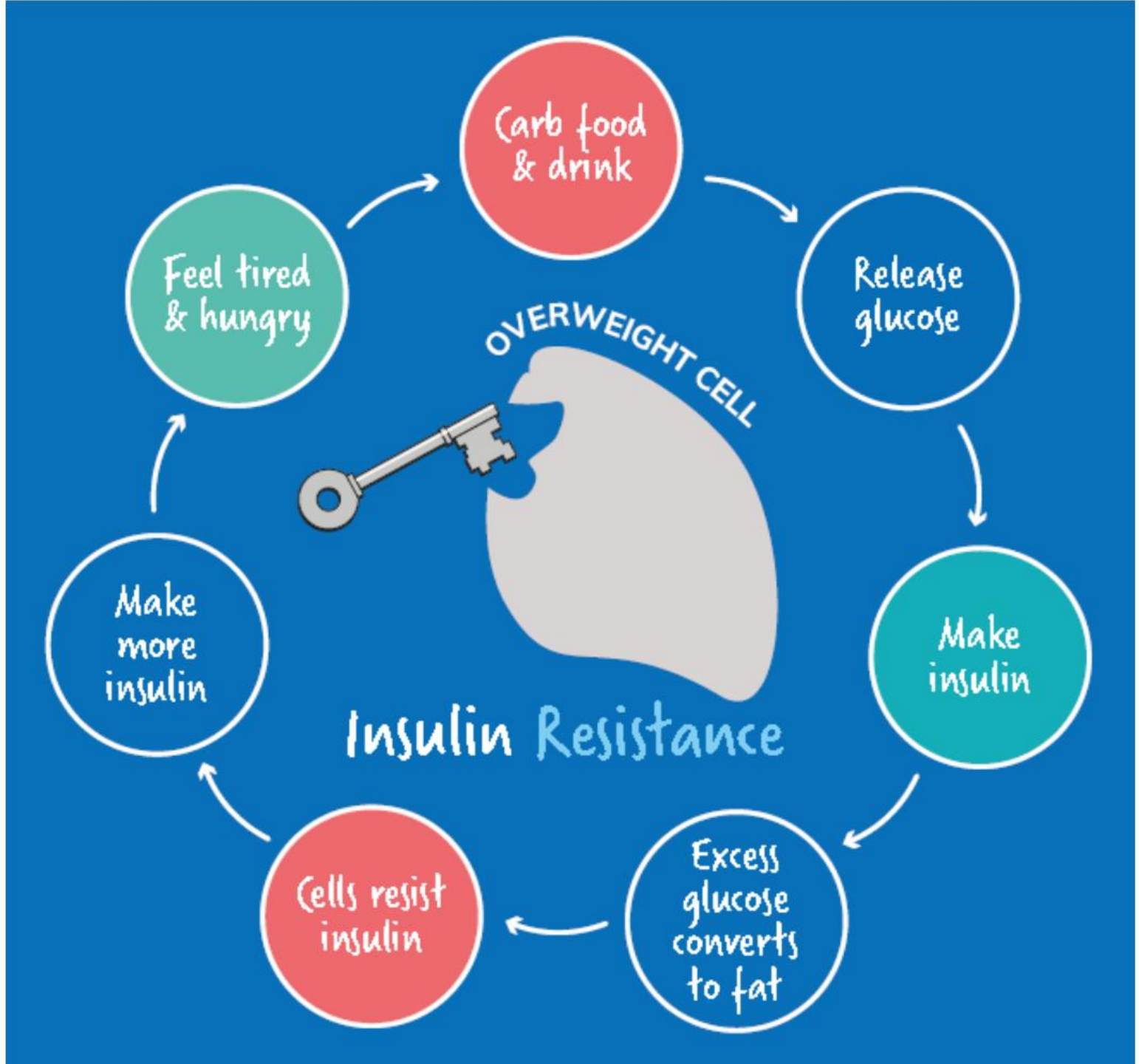
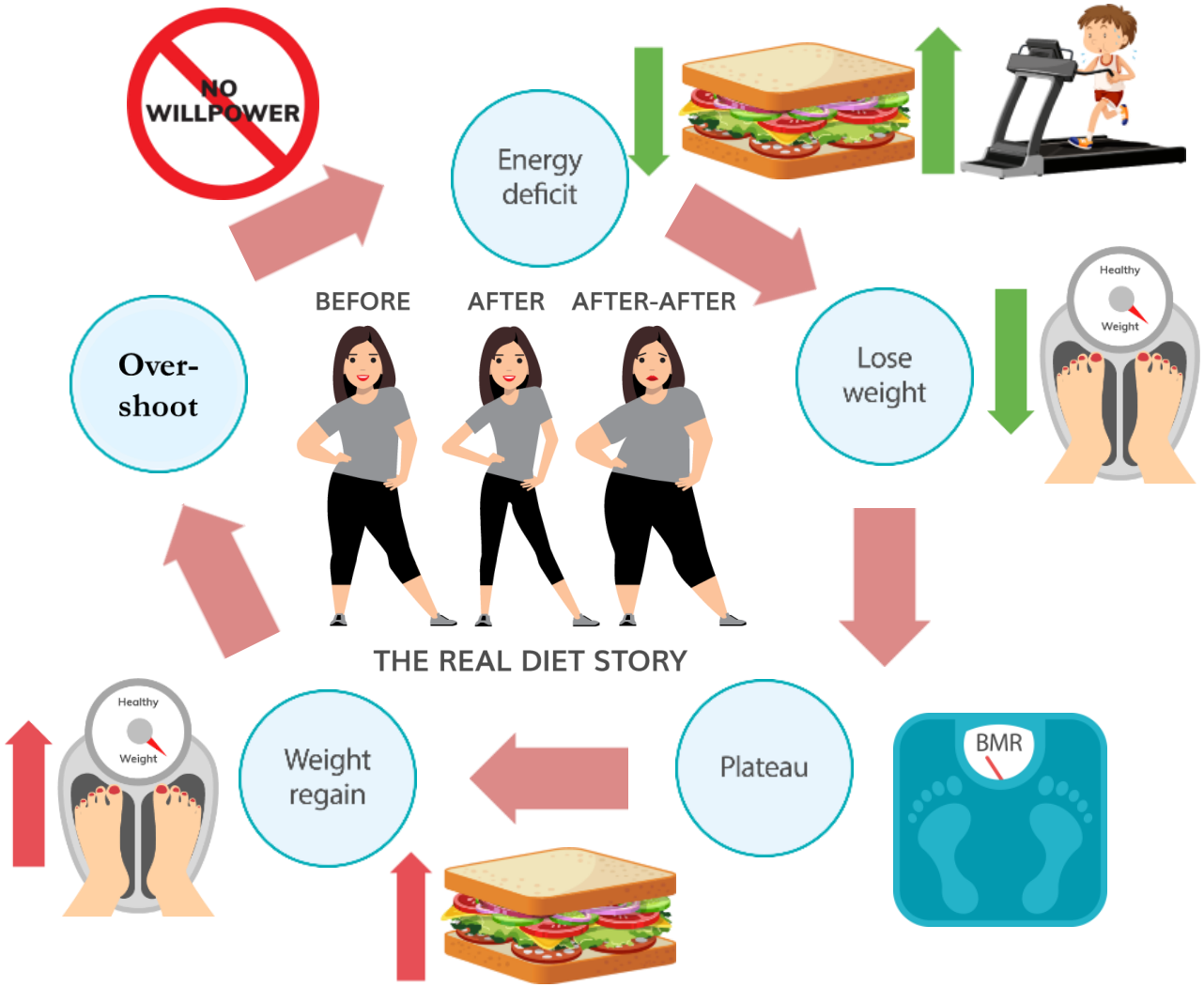
300 calories of hunger.

Eat what you like as long as you count calories?



If people create an energy deficit without considering what they are eating!



It isn't likely to lead to sustainable weight loss!

UPFs - health impact?

Higher consumption of UPFs linked to :

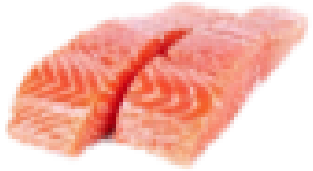
↑ energy intake[1]

↑ risk of poor health[2-5]

↑ mortality[6]

↑ risk of poor sleep[7]

↑ risk of food addiction[8]



↑ risk of depression[9]

1. Hall et al. Cell metabolism, 2020;30, 67-77.
2. Pagliai et al. British Journal of Nutrition. 2020;125(3), 308-18.
3. Lane et al. Obesity Reviews, 2021;22(3), e13146.
4. Monteiro and Cannon. BMJ. 2022;378, o1972.
5. Isaksen and Dankel. Clin Nutr, 2023;24 (6), 919-28.
6. Bonaccio et al. European Heart Journal, 2022;43(3), 213-24
7. Duquenne et al. . J Acad Nutr Diet. 2024;124(9):1109-1117
8. LaFata et al. Current Obesity Reports (2024) 13:214–223
9. Samuthpongtorn et al. JAMA Netw Open. 2023;6(9):e2334770.

Ultra-processed food and non-communicable diseases in the UK

- One of the highest rates of ultra-processed food (UPF) consumption globally, at 57.8% of total energy intake
- Strongly associated with increased risk of non-communicable diseases (NCDs):
  - Obesity: 90% increased risk
  - Type 2 diabetes: 44-51% increased risk
  - Cardiovascular disease: 17% increased risk
  - Cancer: 2-19% increased risk per 10% increase in UPF intake
  - Dementia: 26% increased risk per 10% increase in UPF intake

Mechanisms:

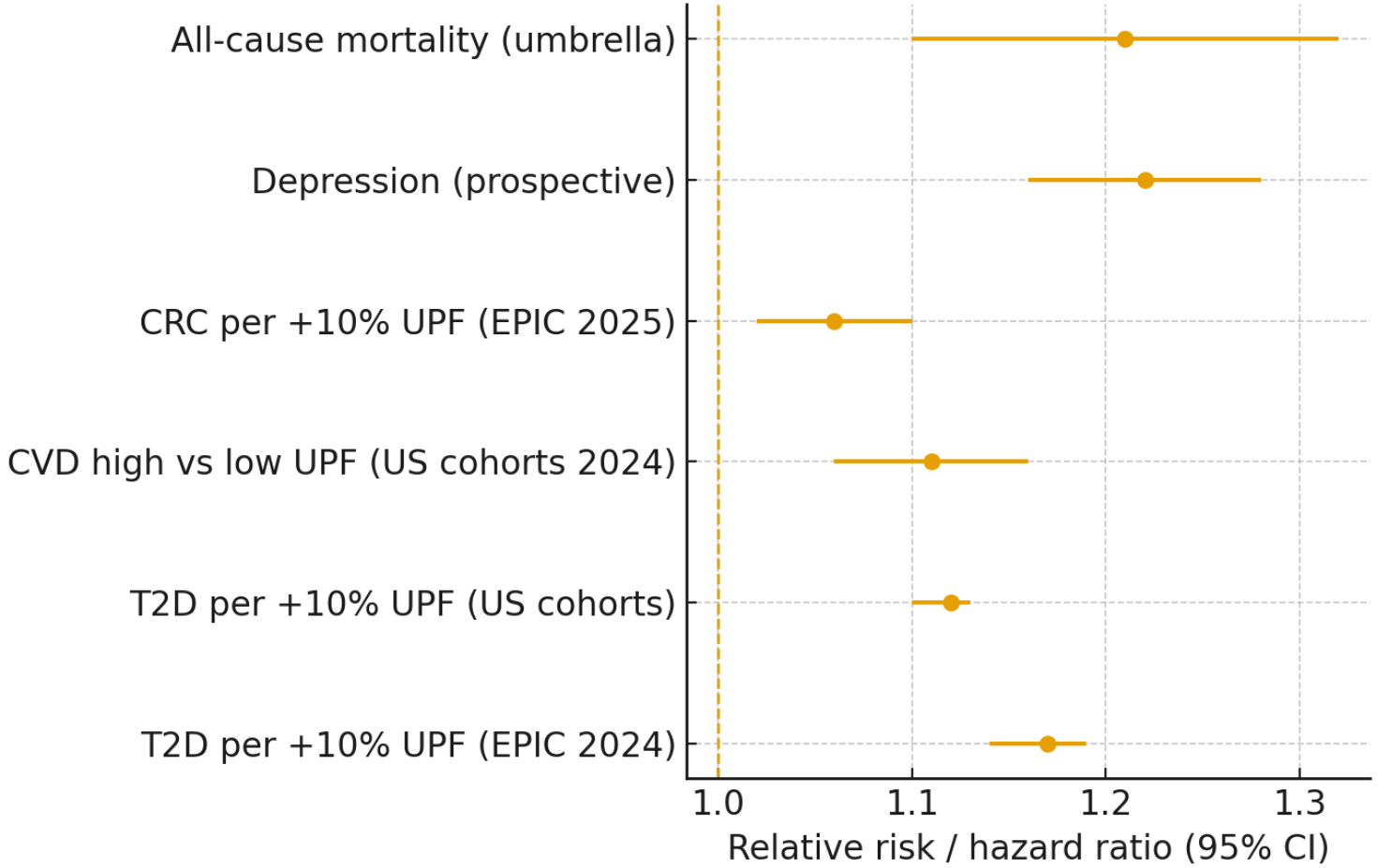
- high energy density – 34 vs 69 Kcal/min
- Poor nutritional quality (high in refined carbs/unhealthy fats, low in fibre/protein)
- Food additives and altered food matrix affecting gut microbiome
- Endocrine disrupting chemicals in packaging

Conclusion: Reducing UPF consumption is crucial for improving public health outcomes in the UK

Henney et al. Obesity Reviews. 2024;e13682. wileyonlinelibrary.com/journal/obr 1 of 15
https://doi.org/10.1111/obr.13682

Cohort & umbrella evidence - forest plot

Modest per-increment effects; consistent across studies



Illustrative pooled/large-cohort estimates – references end slide

Methods & limitations

1) "Diet measured by FFQs/recalls; mapping to NOVA has uncertainty"

- Most large studies estimate diet using **food-frequency questionnaires (FFQs)** or **24-hour recalls**. They're efficient but imperfect: people misremember, under-report snacks/drinks, or choose broad options ("breakfast cereal") that hide huge variation in processing.

Where error creeps in

- **Brand reformulations**: an item can switch from non-UPF to UPF (or vice-versa) between survey waves.
- **Mixed dishes**: "chicken sandwich" could be home-made (not UPF) or a packaged sandwich (often UPF).
- **Generic categories**: "cereal," "bread," "yogurt" can span NOVA 1–4 depending on ingredients.

Implication

- This **non-differential misclassification** usually biases associations **toward the null** (true effects look smaller). Still, it adds noise and uncertainty.

How good studies mitigate

- Use **multiple recalls** or validated FFQs; sometimes **calibrate** against detailed sub-samples.
- **Sensitivity analyses**: classify borderline items both ways; see if results hold.
- Report **subgroups by category** (e.g., beverages, processed meats) where classification is cleaner.

Methods & limitations

2) “Residual confounding likely in cohorts; associations ≠ causation”

Why it’s an issue

People eating lots of UPF may also differ in **sleep, stress, income, time to cook, smoking, physical activity**, etc. Even after adjusting for many variables, some **unmeasured or imprecisely measured** confounders remain.

What better papers try

Rich adjustment sets (sociodemographics, BMI, activity, smoking, energy intake).
Substitution models (e.g., replace 10% energy from UPF with minimally processed foods).

Takeaway

Cohort links are **consistent** across many settings, but they’re still observational. Treat estimates as **risk signals**, not proof of harm for any single product.

Methods & limitations

3) "Triangulate cohorts with RCTs and mechanisms"

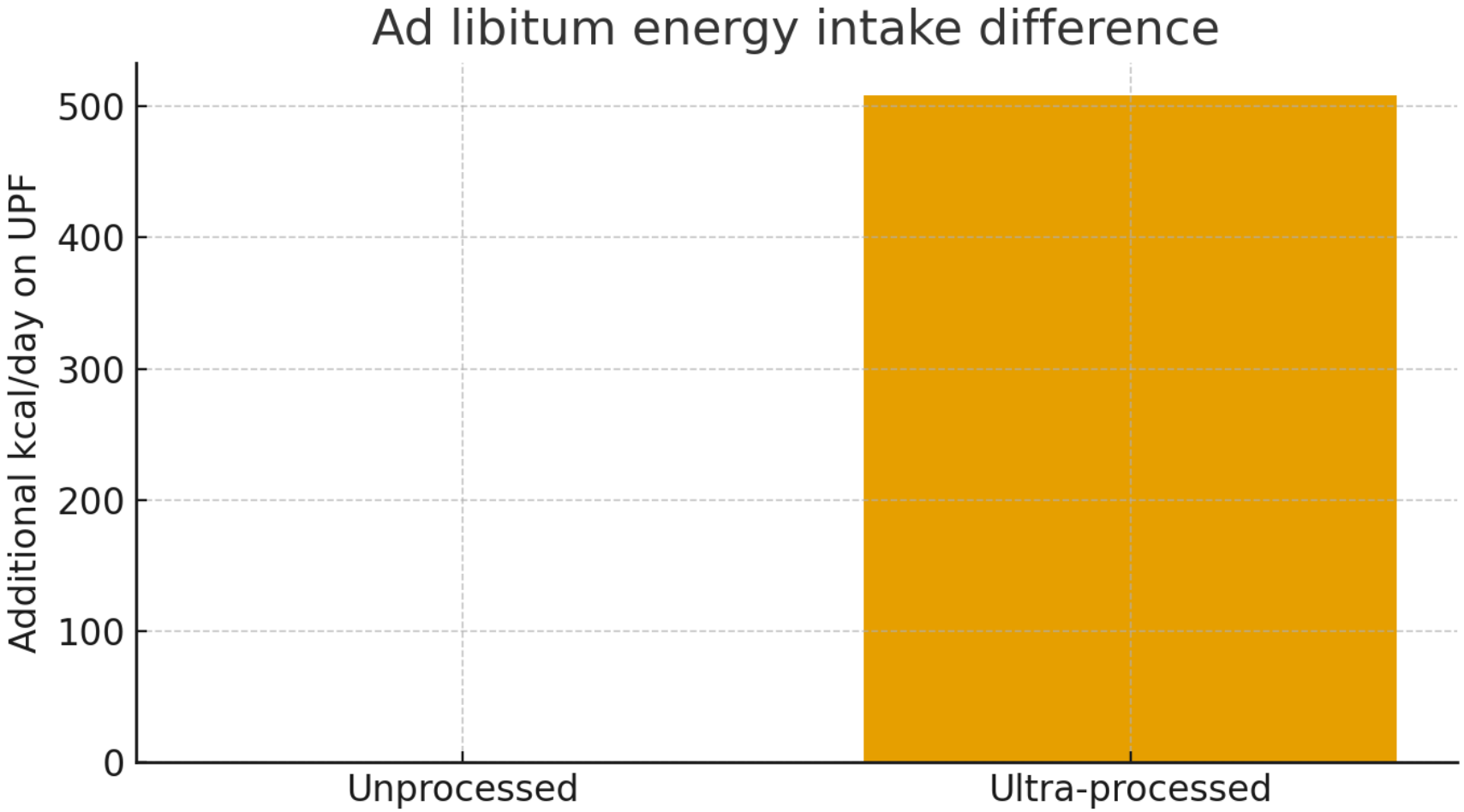
- **Why triangulation helps**
- No single method is perfect. **Cohorts** give long-term outcomes but risk confounding; **RCTs** give causality for short-term outcomes under tight control; **mechanistic studies** explain *how* effects might arise.

4) "Edge cases exist—target high-impact categories first"

- **Edge cases (not automatically UPF)**
- **Bread**: flour-water-salt-yeast = processed (NOVA 3), but **emulsifiers + enzymes + conditioners** push many retail loaves into UPF.
- **Yogurt/cheese**: plain versions (milk + cultures/rennet) are not UPF; **dessert yogurts** with flavourings/stabilisers usually are.
- **Breakfast cereals**: plain oats ≠ UPF; many extruded, flavoured, sweetened cereals are.
- **Plant-based "meats" & protein bars**: often UPF (protein isolates, flavour systems), but formulations vary.

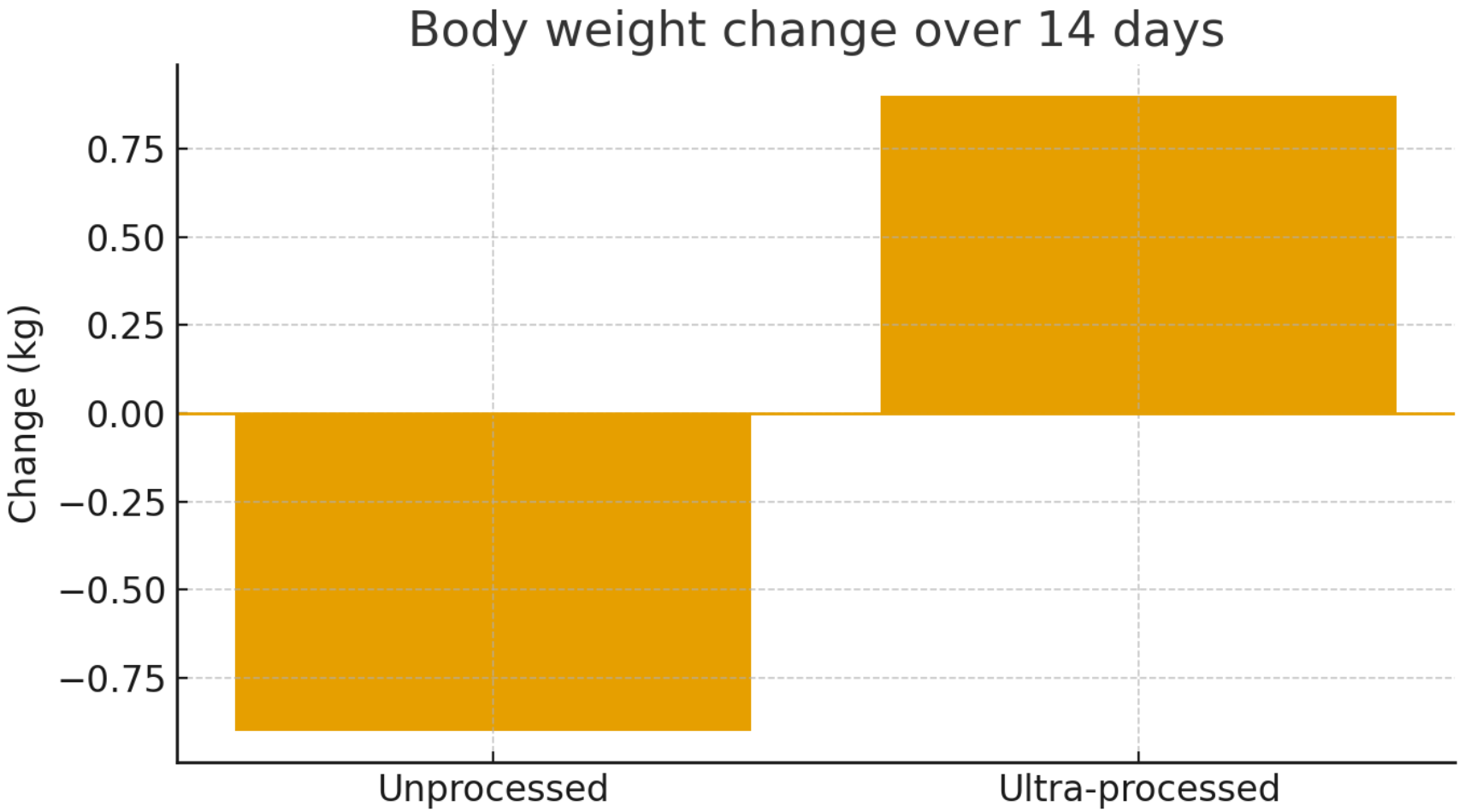
Randomised evidence: intake

UPF increases energy intake in controlled feeding

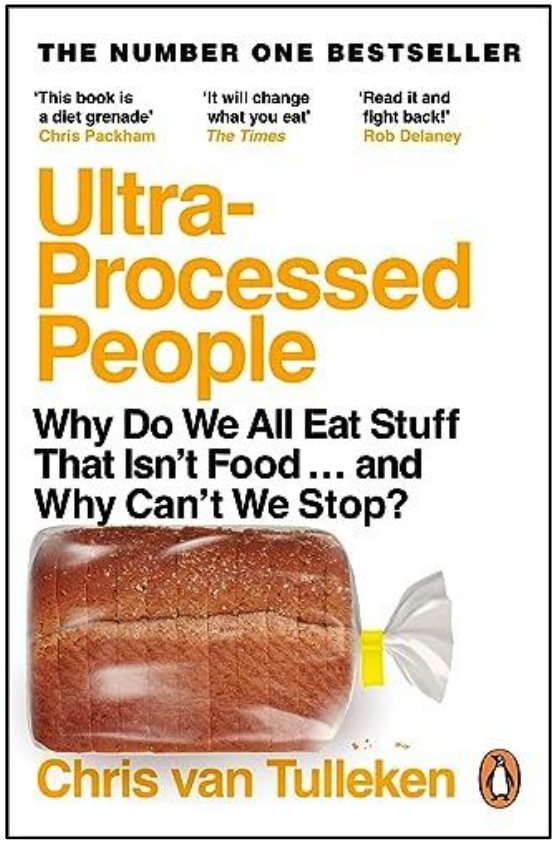


Hall et al., 2019: +508 kcal/day on UPF vs matched unprocessed.

Randomised evidence: short-term weight



Hall et al., 2019: +0.9 kg on UPF vs −0.9 kg on unprocessed (14 days).

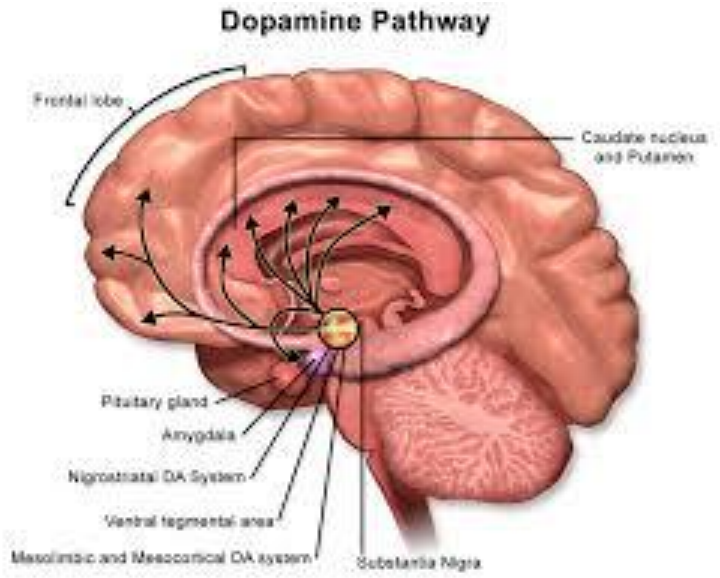


What are UPFs? Industrial formulations of ingredients not used in home kitchens (e.g., protein isolates, modified starches, emulsifiers, flavourings) designed for shelf-life and "craveability," not nourishment.

Why we eat them: Engineered hyper-palatability, low cost, convenience, pervasive marketing (esp. to children), and environments that default to UPF choices.

How they act on us: Faster eating + soft textures → higher intake; disrupted food matrix → sharper glycaemic swings; reward circuitry → habit reinforcement; possible microbiome/mucus effects (mechanistic/animal data).

Key message: UPFs are not just "calories"—they're designed to drive repeat purchase and over-consumption within food systems that make them the default.



"**Reward circuitry**" is the brain network that learns what's worth pursuing and helps drive motivation to get it again. It's centred on **dopamine pathways.**

How it works:

- **Cues → dopamine:** When you encounter a cue (smell, logo, notification) that predicts something rewarding, dopamine boosts **wanting** (motivation).

- **Prediction error:** If an outcome is better than expected, dopamine spikes and this updates the brain's prediction—this is how craving and habits are learned.
- **Habit shift:** With repetition, control shifts toward habit circuits, so behaviours become automatic and cue-driven — and stress, sleep loss, or constant cues can weaken control.
- With **hyper-palatable, fast-absorbing** products, strong cues + rapid reward teach the system to **want** them disproportionately, even when we don't particularly **like** them anymore—hence "I know I don't need it, but I still reach for it."

Label audit: quick UPF markers

- Long ingredient lists; unfamiliar additives
- Emulsifiers/thickeners/gums; flavours/colours
- Protein isolates/reconstituted meats vs whole cuts
- Soft/liquid textures
- If you wouldn’t cook with it, it’s likely UPF

Humans are the only animal smart enough to make fake food & dumb enough to eat it

Now the practical stuff

Identifying UPFs & healthy swaps

Snacks

Nutrition Facts

Servings Per Container About 5

Serving Size About 15 Crisps (28 g)

Amount Per Serving		
Calories		150
	Amount/Serving	% Daily Value*
Total Fat	9 g	12%
Saturated Fat	2.5 g	13%
Trans Fat	0 g	
Cholesterol	0 mg	0%
Sodium	150 mg	7%
Total Carbohydrate	16 g	6%
Dietary Fiber	<1 g	3%
Total Sugars	0 g	
Includes 0g Added Sugars	0 g	0%
Protein	1 g	

Ingredients

12 ingredients

dried potato, vegetable oils (sunflower, corn), rice flour, starch of wheat, corn flour, emulsifier (e471), maltodextrin, salt, yeast extract, yeast powder, colour (annatto)

Allergens: Gluten

NOVA 4

Ultra-processed foods

4 ultra-processing markers

- Additive: E471 - Mono- and diglycerides of fatty acids
- Ingredient: Colour
- Ingredient: Emulsifier
- Ingredient: Maltodextrin

Cost – £0.38 / 28g portion

Highlights

- 100% Great British Potatoes
- Some See Potatoes, We See Potential
- We use sustainably sourced British potatoes
- 100% quality ingredients
- Fresh taste guaranteed
- No added MSG or Artificial colours
- Suitable for Vegetarians

Ingredients

10 ingredients

Potatoes, Vegetable Oils (Sunflower, Rapeseed, in varying proportions), Salt, Antioxidants (Rosemary Extract, Ascorbic Acid, Tocopherol Rich Extract, Citric Acid).

Traces: Celery, Gluten, Milk, Mustard, Soybeans

Processed foods

- Category: Salty snacks
- Ingredient: Salt
- Ingredient: Starch
- Ingredient: Vegetable oil

Cost – £0.40 / 28g portion

Typical Values	Per 22g serving
Energy	439kJ
-	105kcal
Fat	4.6g
of which saturates	0.4g
Carbohydrate	13g
-of which sugars	0.2g
Fibre	1.0g
Protein	1.9g
Salt	0.42g

Ingredients

14 ingredients

Potato Starch, Vegetable Oil (Rapeseed, Sunflower Seed), Dehydrated Potato, Salt, Tomato Powder (0.4%), Kale Powder (0.4%), Stabiliser (Calcium Chloride), Spinach Powder (0.2%), Beetroot Powder, Turmeric

Processed foods

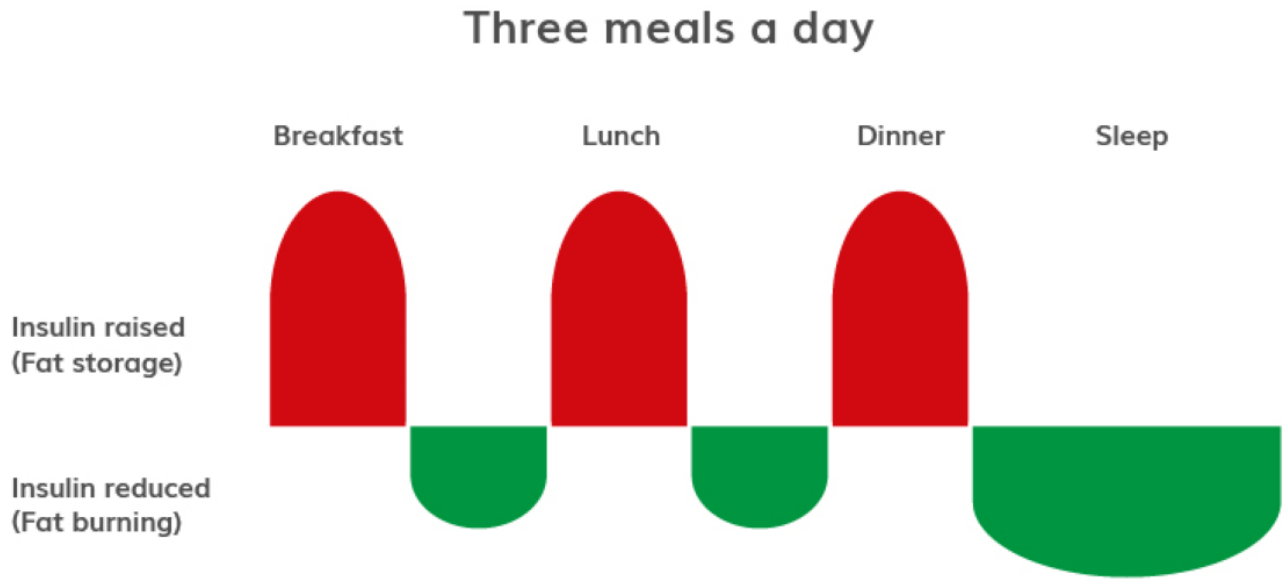
Elements that indicate the product is in the 3 - Processed foods group:

- Category: Salty snacks
- Ingredient: Salt
- Ingredient: Starch
- Ingredient: Vegetable oil

Cost – £0.57 / 28g portion

Cost - £0


Three meals a day with regular snacking
Breakfast
Snack
Lunch
Snack
Dinner
Sleep
Insulin raised
(Fat storage)
Insulin reduced
(Fat burning)


Three meals a day
Breakfast
Lunch
Dinner
Sleep
Insulin raised
(Fat storage)
Insulin reduced
(Fat burning)

Homemade

Kale Crisps

200g kale (thick stems removed)

2 tsp (10ml) olive oil

Seasoning (to taste); *e.g. salt, pepper, chilli flakes, Peri-Peri, or garlic granules*

Parmesan (to taste; optional)

4 servings	2g fibre
Per Serving:	3g fat
43 kcal	1g saturates
1g carbs	0.5g salt

1. Preheat the oven to 140°C.
2. Tear the kale into pieces, and toss together with the olive oil until it is coated.
3. Spread the kale out over 2 baking trays, making sure the leaves don't touch.
4. Add seasoning (this step can be done now, or after removing from the oven).
5. Cook for 10 minutes, then turn and cook for a further 15 minutes, or until crisp.
6. Sprinkle with parmesan (optional).

Cost – £0.15 / 28g portion

Alternative

Typical Values	Per 100g
Energy	2625kJ / 635kcal
Fat	55.8g
Saturates	4.4g
Carbohydrate	6.9g
Sugars	4.2g
Fibre	10.6g
Protein	21.1g
Salt	0.04g

Cost - £0.29 for 28g portion

Ready Meals

NUTRITION INFORMATION			
	Per 100g	Per 375g portion	% RI*
Energy	450kJ/107kcal	1687kJ/401kcal	20%
Fat	3.1g	12.0g	17%
of which saturates	1.7g	6.2g	31%
Carbohydrate	13.0g	50.0g	19%
of which sugars	2.1g	7.9g	9%
Fibre	0.9g	3.3g	
Protein	6.1g	23.0g	46%
Salt	0.42g	1.59g	27%

Contains 1 serving.
*Reference Intake of an average adult (8400kJ / 2000kcal).

Ingredients

43 ingredients

meat sauce (59%) (water, minced beef (17%), tomato, onions, tomato purée, modified maize starch, **wheat flour** (**wheat flour**, calcium carbonate, iron, niacin and thiamin), flavouring (starch, flavouring, colour (paprika extract), salt, white sugar, maltodextrin, sunflower oil, modified maize starch), salt, white sugar, garlic purée, yeast extract, basil, thyme, oregano, onion powder, black pepper), white sauce (23%) (water, **milk** , half cream (**milk**), modified maize starch), cooked pasta (15%) (durum wheat semolina, water), cheddar cheese (**milk**) (2,7%) (contains colour: annatto)

NOVA 4

Ultra-processed foods

6 ultra-processing markers

- Additive: E160b - Annatto
- Additive: E160c - Paprika extract
- Ingredient: Colour
- Ingredient: Flavouring
- Ingredient: Maltodextrin
- Ingredient: Modified starch

£1.75 per 375g pack

Typical Values	Each pack (400g)
Energy	2334kJ / 558kcal
Fat	26.5g
Saturates	12.9g
Carbohydrate	46.1g
Sugars	8.4g
Fibre	6.0g
Protein	30.6g
Salt	2.21g

36 ingredients

beef (23%), cooked egg pasta [durum wheat semolina, water, pasteurised eggl, tomato, whole milk, water, whipping cream (**milk**), tomato purée, cornflour, onion, red wine, mature cheddar cheese (**milk**), garlic purée, medium fat hard cheese (**milk**), carrot, **celery**, medium fat soft cheese (**milk**), **wheat flour** [**wheat flour**, calcium carbonate, iron, niacin, thiamin), salt, **butter** (**milk**), beef extract, yeast extract, oregano, marjoram, black pepper, bay, white pepper, made using beef from the u,k and ireland, allergy advice

NOVA 3 Processed foods

- Category: Meals
- Ingredient: Butter
- Ingredient: Salt
- Ingredient: Cheese

£3.30 per 400g pack

Beef Lasagne with Leek Pasta.

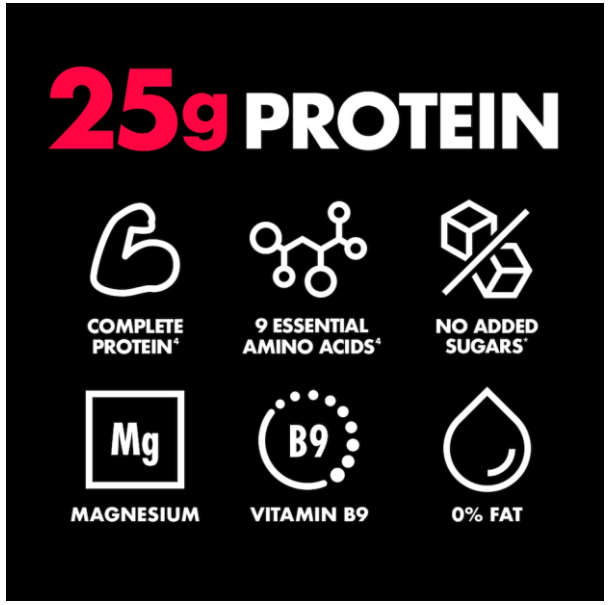
2 large (600g) leeks.
50g butter.
1 onion (chopped).
2 garlic cloves (crushed).
500g minced beef.
3 peppers (chopped).
150g mushrooms (chopped).
150ml red wine.
200ml beef stock, using 1 beef stock cube.
200g can chopped tomatoes.
2 tbsp (36g) tomato purée.
1 tsp dried oregano.
2 bay leaves.
Salt and pepper (to taste).
2 tubs (400g) full fat soft cheese*.
50g extra-mature cheddar (grated).
25g parmesan (finely grated).

Per serving (6 servings):
549 kcal, 16g carbs, 7g fibre,
38g fat, 29g protein.

1. Trim leeks to the width of the lasagne dish. Cut length ways, open them out and separate out the larger outer leaves- these will be your 'lasagne' sheets.
2. Fry onion and garlic in butter in a non-stick pan. Add minced beef, peppers and mushrooms. Cook for 5 minutes.
3. Add wine, stock, tomatoes, tomato purée, oregano and bay leaves. Simmer for 30 minutes, and season with salt and pepper.
4. Add 'lasagne' sheets to a half-filled saucepan of boiling water. Bring to the boil and cook for 5 minutes. Drain, then dry on kitchen paper when cold.
5. Place the mince mixture and 'lasagne' sheets in the dish, in alternating layers.
6. Melt soft cheese in a pan and add cheddar. Bring to a simmer. Cook for 5 minutes until thick and smooth, stirring regularly.
7. Pour the sauce over the lasagne and sprinkle with parmesan. Bake for 30 minutes at 200°C.

£2.20 per portion

Protein



Cost - £2 / 300ml for 25g protein

Typical Values	per 100g	per serving (300g)
Energy (kJ)	253	759
Energy (kcal)	60	180
Fat (g)	0.5	1.5
of which saturates (g)	0.3	0.9
Carbohydrate (g)	5.5	17
of which sugars (g)	5.2	16
Protein (g)	8.4	25
Salt (g)	0.17	0.51
Calcium (mg)	177 (22% RI**)	530
Magnesium (mg)	56.3 (15% RI**)	169
Vitamin B9 (µg)	30.0 (15% RI**)	90.0

Ingredients

14 ingredients

Yoghurt (**Milk**), Whey Protein (**Milk**), Concentrated Strawberry Purée (0.8%), Concentrated Raspberry Purée (0.3%), Modified Maize Starch, Flavourings, Thickener (Pectin), Acidity Regulators (Citric Acid, Sodium Citrate), Sweeteners (Acesulfame K, Sucralose).

NOVA 4

Ultra-processed foods

8 ultra-processing markers

- Additive: E440 - Pectins
- Additive: E950 - Acesulfame k
- Additive: E955 - Sucralose
- Ingredient: Flavouring
- Ingredient: Milk proteins
- Ingredient: Sweetener
- Ingredient: Thickener
- Ingredient: Modified starch

NUTRITION	PER 100 g	PER 30 g SERVING
Energy kJ/kcal	1619/387	486/116
Fat (of which saturates)	7.0 g 2.5 g	2.1 g 0.8 g
Carbohydrate (of which sugars)	4.0 g 4.0 g	1.2 g 1.2 g
Fibre	0 g	0 g
Protein	77 g	23 g
Salt	0.38 g	0.11 g

Ingredients

2 ingredients

Whey Protein Concentrate (**Milk**), Sunflower Lecithin

Food processing

NOVA 4

Ultra-processed foods

2 ultra-processing markers

- Additive: E322 - Lecithins
- Ingredient: Milk proteins

Cost – £0.66 / 30g for 23g protein

Alternative

Typical Values	Per 100g	As sold
Energy	547kJ / 131kcal	323kJ / 78kcal
Fat	9.0g	5.3g
Saturates	2.5g	1.5g
Carbohydrate	<0.1g	<0.1g
Sugars	<0.1g	<0.1g
Fibre	0g	0g
Protein	12.6g	7.4g
Salt	0.39g	0.23g

Cost - £0.81 / 3 eggs for 22g protein

Alternative

Typical Values	Per 100g
Energy	486kJ / 115kcal
Fat	3.3g
Saturates	0.8g
Carbohydrate	0g
Sugars	0g
Fibre	0g
Protein	21.5g
Salt	0.18g

Cost - £0.61 per 100g for 21.5g protein

Bread

Product details

Description

Sliced wholemeal seeded bread

Packed with seeds to give an irresistibly nutty and malty flavour.

We share your passion for enjoying the most flavoursome, best quality food and drink and we guarantee every product has a distinct taste story...

that's why you can taste the difference

Ingredients

21 ingredients

Contains added sugars (~ 2%)

Added sugars: Sugar

Wholemeal Wheat Flour, Water, Mixed Seeds (14%) (Sunflower Seeds, Brown Linseed, Millet, Poppy Seeds), Wheat Gluten, Sugar, Yeast, Fermented Wheat Flour, Salt, **Soya Flour**, Rapeseed Oil, Spirit Vinegar, **Malted Barley Flour**, Malted Wheat Flour, **Rye Flour**, Palm Oil, Flour Treatment Agent: Ascorbic Acid.

Allergens: Gluten, Soybeans

Traces: Gluten, Spelt-wheat

Food processing

NOVA 4

Ultra-processed foods

1 ultra-processing marker

Elements that indicate the product is in the 4 - Ultra processed food and drink products group:

- Ingredient: Gluten

It's the original for a reason-just simple, high quality ingredients for that perfect, tangy flavour and delicious chewy texture of a great sourdough. Our Great White is created under the watchful eye of dough legend Jason Geary, a modern maverick, blending traditional methods with new ideas. We make our sourdough culture on-site and leave it to ferment properly for a whole day. Corners are never cut. Nothing is ever rushed.

Table of Nutritional Information

This pack contains 7 Servings	Per 100g	Per 1/10 loaf
Energy	1004kj	452kj
Fat	0.7g	<0.5g
of which saturates	<0.5g	<0.5g
Carbohydrate	46.4g	20.9g
of which sugars	2.1g	0.9g
Fibre	3g	1.3g
Protein	9.7g	4.4g
Salt	0.8g	<0.5g

Processed foods

Elements that indicate the product is in the 3 - Processed foods group:

- Ingredient: Salt

Wheat Flour (**Wheat Flour**, Calcium Carbonate, Iron, Niacin, Thiamin), Water, **Rye Flour**, Salt, Fermented Wheat

Allergens: Gluten

2 Minute English Muffin (bread alternative).

1 egg.

1 tbsp (15ml) water.

1 tbsp (12ml) extra virgin olive.

1 heaped tbsp (30g) ground almonds.

1 heaped tbsp (20g) golden flaxseed/linseed (milled).

3/4 tsp (4g) baking powder.

1 pinch sea salt.

Optional: 1 tsp of seeds, such as chia seeds.

1. In a small glass dish or ramekin, whisk the egg with the water and olive oil.
2. Whisk in the remaining ingredients.
3. Microwave on high for two minutes, or until the muffin feels firm to the touch.
4. Leave to cool.

Per serving (2 servings):

232 kcal, 4g carbs, 4g fibre, 20g fat, 8g protein.

App or Website

open FOOD facts

N.B. The analysis is based solely on the ingredients listed and does not take into account processing methods.

Practical Exercise: Case Study

Scenario: T2D review; UPF ≥60% TEI; limited budget

Breakfast: Oats so Simple golden syrup flavour
Snack: 2 x Digestives
Lunch: Ham sandwich (wholemeal bread), fruit yoghurt and packet of crisps
Snack: grapes
Evening meal: Baked Beans, jacket potato and grated cheese
Supper: Horlicks

- How could this diet be improved?
- Ask-Provide-Ask
- If-Then plan

Policy & environment – what is needed

- **Make real food the default:** rebalance pricing (VAT/tax levers), regulate marketing to children, improve food in schools/hospitals, curb promotions on UPF.
- **Label & transparency:** front-of-pack systems that surface *processing* (not just nutrients); clearer ingredient lists and additive disclosure.
- **Procurement & access:** invest in cooking facilities, time, and community supply (markets, vouchers, produce prescriptions).
- **Pragmatic swaps, not perfection:** water/tea/coffee ↔ sugary drinks; home cooking ↔ ready meals.
- **Audit the label:** long ingredient list + flavourings/sweeteners + emulsifiers/protein isolates = red flags.
- **Practical hints** - reducing cues, slower-digesting foods, prep ‘grab-and-go’ whole foods. planning “If–Then” alternatives

References

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@X-PERT Health

Real food vs fake food

Real food vs fake food: the hidden impact of ultra-processing on your body and mind

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