

And how the new study can help us answer this question?

#### nature medicine

Ultraprocessed or minimally processed diets following healthy dietary guidelines on weight and cardiometabolic health: a randomized, crossover trial

#### Received: 24 February 2025

Accepted: 11 June 2025

Published online: 04 August 2025

Check for updates

#### A list of authors and their affiliations appears at the end of the paper

 $\label{lem:consumption} Ultraprocessed food (UPF) consumption is associated with noncommunicable$ disease risk, yet no trial has assessed its health impact within the context of national dietary guidelines. In a 2  $\times$  2 crossover randomized controlled feeding trial, 55 adults in England (body mass index  $\geq$ 25 to  $\leq$ 40 kg m<sup>-2</sup>, habitual UPF intake ≥50% kcal day-1) were provided with two 8-week ad libitum diets following the UK Eatwell Guide: (1) minimally processed food (MPF) and (2) UPF, in a random order. Twenty-eight people were randomized to MPF then UPF, and 27 to UPF then MPF; 50 participants comprised the intention-to-treat sample. The primary outcome was the  $\,$ within-participant difference in percent weight change (%WC) between  $diets, from \, baseline \, to \, week \, 8. \, Participants \, were \, blinded \, to \, the \, primary \,$ outcome. MPF (%WC, -2.06 (95% confidence interval (CI), -2.99, -1.13) and UPF (%WC, -1.05 (95% CI, -1.98, -0.13)) resulted in weight loss, with significantly greater %WC on MPF (Δ%WC, -1.01 (95% CI, -1.87, -0.14), P = 0.024; Cohen's d, -0.48 (95% CI, -0.91, -0.06)). Mild gastrointestinal adverse events were common on both diets. Findings indicate greater weight loss on MPF than UPF diets and needing dietary guidance on food processing in addition to existing recommendations. Clinicaltrials.gov registration: NCT05627570.

people worldwide live with overweight or obesity<sup>1</sup>, drived risks of noncommunicable disease and early death<sup>2</sup>. as been from recent major changes in the food rticular, the increased accessibility and consump sed food (UPF)<sup>1,4</sup>. Most commonly defined using on 5, UPF are industrial formulations combining ods with additives and industrial ingredients reakfast cereals, sweets, and mass-produced bread. rgy intake is reported to come from UPF°, with d Europe<sup>7</sup>. Higher UPF intakes are esity\*, cardiometabolic disease,

and all-cause mortality 0.20. As a result, countries including Brazil 11 and organizations including the World Health Organization 12 recommend reducing UPF intake in their dietary guidance. In the UK, where nearly two-thirds of adults live with overweight or obesity<sup>13</sup>, calls have been made for policy action on reducing UPF, yet this is still debated<sup>14</sup>.

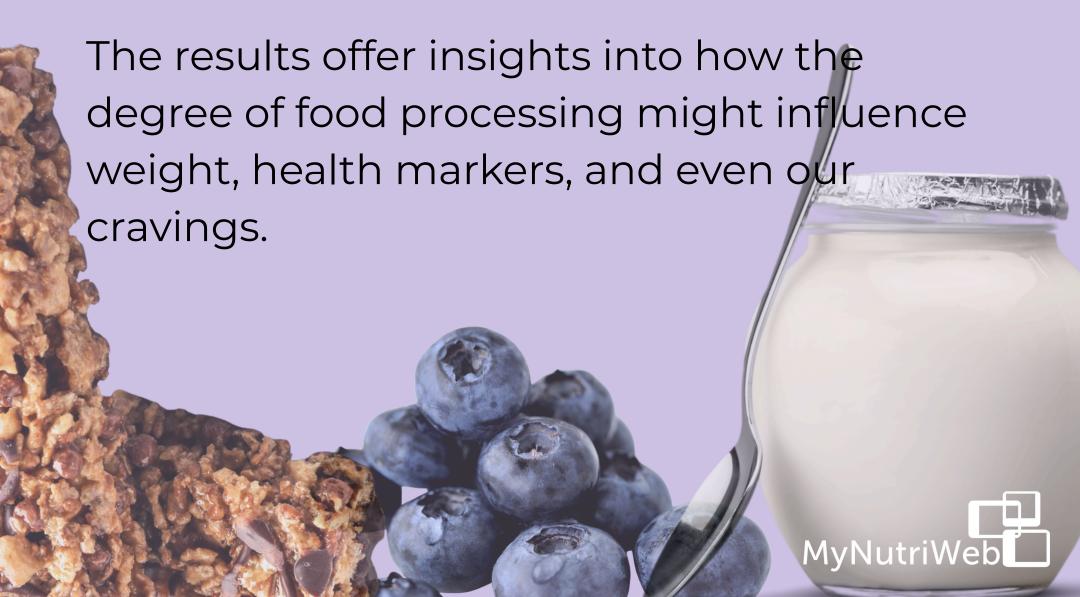
The Eatwell Guide (EWG) provides the UK public with guidance on a

healthy diet is a following recommendations by the Scientific Advisory Committee on Nutrition (SACN). The EWG focuses on macronutrients (for example, fat, protein, carbohydrate) and food groups (for example, fruits and vegetables, dairy, starchy food), but not UPFis. Currently fewer than 0.1% of UK adults follow EWG recommendations, and nearly

MyNutriWeb

# Are UPFs simply a modern convenience, or do they contribute to poor health outcomes?

To shed light on this question, a recent study compared the effects of UPFs with minimally processed foods (MPFs), both designed to follow the UK's Eatwell Guide.



### What are UPFs?

Ultraprocessed foods (UPFs) were first described in the NOVA classification (Monteiro, 2009) dividing food into four main categories: (1) unprocessed, (2) minimally processed, (3) processed and (4) ultraprocessed.

UPFs can be described as "industrial formulations combining extracts of original foods with additives and industrial ingredients" (Monteiro, 2019).

Some examples of ultraprocessed products include frozen pizza, crisps, ice cream, but also bread with added fibre or soya milk - generally considered nutritious products.



# High intake of UPFs is associated with increased risk of developing many non-communicable diseases

However, up until now very few randomised clinical trials (RCTs) have examined the health impact of food processing in the context of dietary guidelines.

This means that we still don't really understand the difference in health outcomes between following a diet that meets the Eatwell Guide (EWG) recommendation, but is rich in UPFs vs. a diet that also meets the recommendations but is primarily based on minimally processed foods (MPFs).



## The new study - how was it designed?

A recent study conducted by Dicken et al. (2025) brought us closer to better understanding these differences.

It compared UPF diet versus MPF diet (both following the EWG) to better understand their impact on health outcomes - including body weight, anthropometrics, body composition, cardiometabolic and appetite-related outcomes.

- 50 participants (mean age: 43.2 years, mean weight: 84.9kg, mean BMI: 32.7 kg/m², 90.9% female)
- Mean habitual UPF intake was 67.4% kcal/day



### The new study - how was it designed?

- Participants were provided with an 8-week MPF diet and an 8-week UPF diet, both following EWG recommendations, in a random order, with a 4-week washout period.
- The UPF diet included fortified breakfast cereals, oat bars, ready meals like readymade chicken wraps or plant-based alternatives, while the MPF diet contained i.e. porridge, homemade salads or wraps.
- Participants were allowed to consume as much food as they wanted (ad libitum consumption) within a 4 000 kcal/day limit.



## The new study - what did it find?

- Both diets led to significant % weight change (WC) (MPF, -2.06% vs UPF, -1.05%). Within-participant differences in %WC were significantly greater on the MPF versus UPF diet (Δ%WC, -1.01%).
- Fat mass, body fat percentage, visceral fat rating and total body water mass were significantly lower at 8 weeks from baseline on the MPF but not UPF diet.
- ✓ Improvements in Control of Eating Questionnaire (CoEQ) and craving control were significantly greater on the MPF than UPF diet.



### What can we learn from it?

Overall, the findings indicate that following national dietary guidelines with an MPF-based diet, rather than a UPF-based one, may lead to more beneficial improvements in body composition and better cravings control.

### This may be associated with:

- nutrient composition
- texture
- energy density
- eating rate



However, it has some limitations to consider when interpreting it...



### Limitations and future directions

- Participants were living at home, which limits monitoring of adherence.
- The study was not double blinded (researches were not blinded for the type of diet participants received).

#### What do we need for the future?

- More focus on systemic-level interventions rather than individual-level activities.
- Discussions to consider the place of food processing in public health policies and food-based dietary guidelines.
- More nuance when talking about UPFs and their place in a healthy sustainable diet.

If you found our summary useful, remember to save, like or share! And don't forget you can access it in our resource hub.





