NUTRINDX WHITE PAPER

Ultra-processing, explained

What the NOVA framework means and what a controlled trial actually found. A NutrIndx explainer.

What “ultra-processed” means

The NOVA framework groups foods by how much industrial processing they undergo, from unprocessed or minimally processed foods up to ultra-processed foods (UPF) — industrial formulations built largely from refined substances and additives, with little intact whole food.

NOVA classifies by processing, not by nutrients, so a food can be low in sugar yet still be ultra-processed.

What a controlled trial found

In a tightly controlled inpatient randomized trial, participants ate either an ultra-processed or an unprocessed diet matched for calories, sugar, fat, fiber and macronutrients, then switched. On the ultra-processed diet they spontaneously consumed about 500 calories per day more and gained weight; on the unprocessed diet they lost weight.

Because the diets were nutrient-matched, the effect points to properties beyond the nutrition panel — energy density and how quickly the food could be eaten.

Why it happens

Ultra-processed foods tend to be energy-dense, soft and quick to eat, which may blunt the body’s fullness signals and increase intake before satiety catches up. Texture and eating rate — not just nutrients — appear to matter.

How to spot it

Read the ingredient list rather than the front of the pack. Long lists with industrial ingredients you would not find in a home kitchen (protein isolates, modified starches, cosmetic emulsifiers, colors and flavors) are signals of ultra-processing. This is descriptive, not a verdict on any single product.

References

1 Monteiro CA, et al. NOVA: the star shines bright (food classification). World Nutrition, 2016.

2 Hall KD, et al. Ultra-processed diets cause excess calorie intake and weight gain: an inpatient randomized controlled trial of ad libitum food intake. Cell Metabolism, 2019.