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Highly Processed Foods Cause Weight Gain

Highly processed foods contribute to weight gain through several interconnected biological, behavioral, and environmental mechanisms. Here's a clear, science-based breakdown.

1. They alter hunger and fullness signals

Ultra-processed foods (UPFs) are engineered to be hyper-palatable—rich in sugar, fat, salt, and flavor enhancers.

This leads to:

- Overriding natural satiety cues → You keep eating even when your body has enough energy.
- Rapid eating due to soft textures → Less chewing → delayed fullness signals.
- Hormonal effects → Controlled studies show UPFs decrease leptin sensitivity (fullness hormone) and increase ghrelin (hunger hormone).

Result: You take in more calories before your body says “stop.”

2. They are calorie-dense and nutrient-poor

Highly processed foods pack a lot of calories into small volumes and are typically low in fiber, protein, and micronutrients. Low fiber + low protein = reduced satiety per calorie.

Examples of calorie-dense UPFs:

- chips and crackers
- donuts and pastries
- sugary beverages
- fast-food items

Result: Easy to overeat without feeling full.

3. They spike blood sugar and insulin

Many UPFs contain refined carbohydrates and added sugars that are absorbed quickly. This causes:

- Rapid glucose spike
- Insulin surge
- Fast drop in blood sugar
- Rebound hunger and cravings

Chronic high-insulin states also signal the body to store more fat, especially abdominal fat.

4. They change the gut microbiome

UPFs often contain emulsifiers, artificial sweeteners, preservatives, and low dietary fiber.

These additives can:

- disrupt gut bacteria balance
- increase gut inflammation
- impair metabolic regulation
- contribute to insulin resistance

A disrupted microbiome is strongly connected to weight gain.

5. They reduce your calorie burn (metabolic efficiency)

Whole foods require more energy to digest—called the thermic effect of food (TEF).

Examples:

- Whole grains require chewing → higher TEF
- Processed starches and sugars digest quickly → low TEF

Research shows that eating heavily processed food can burn up to 50% fewer calories during digestion compared to whole foods.

6. They promote reward-driven eating

UPFs activate the dopamine reward system more strongly than whole foods. Some researchers compare the effects to mild addictive patterns. This leads to:

- cravings
- snacking even when not hungry
- emotional eating

- habit-reinforced overeating

7. Liquid calories bypass satiety systems

Sodas, energy drinks, sweetened coffees, and meal-replacement shakes:

- don't activate chewing
- don't stretch the stomach as much
- empty faster

This makes it easy to consume large amounts without fullness or compensating by eating less later.

8. They encourage overeating through design and environment

UPFs are cheap, convenient, heavily advertised, available everywhere, and shelf-stable. This combination increases consumption frequency—mindless eating adds up rapidly.

In summary

Highly processed foods drive weight gain by:

- promoting overeating
- weakening fullness signals
- spiking insulin
- altering gut bacteria
- reducing calorie expenditure
- triggering reward-based eating

Even when calorie counts look similar on paper, the body processes UPFs differently, making weight gain more likely.