

# Ultraprocessed Foods Linked to Measurable Drops in Human Attention Span

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## STORY AT-A-GLANCE

- › Researchers found that every 10% increase in ultraprocessed food intake linked to measurable declines in attention performance, even in adults without dementia
- › Attention problems such as brain fog, distractibility, slower thinking, and mental fatigue often appear long before obvious memory loss and may reflect early metabolic stress in the brain
- › The study found that ultraprocessed foods harmed attention independently of overall diet quality, suggesting that industrial food processing itself creates biological stress beyond poor nutrition alone
- › Researchers identified inflammation, unstable blood sugar, impaired cellular energy production, and cardiometabolic dysfunction as major pathways linking ultraprocessed foods to higher dementia risk
- › Removing seed oils and packaged ultraprocessed foods while rebuilding your diet around whole foods, healthy carbohydrates, movement, and sunlight helps restore steadier energy, sharper focus, and better long-term brain resilience

**More than half of the calories on the average American or British plate now come from foods built in factories rather than grown on farms. That's a problem your brain pays for in ways many people never connect back to their plate.**

Research published in *Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring* adds another piece to a growing body of evidence: the industrially processed foods filling modern diets are eroding cognitive performance in midlife adults, long before any formal diagnosis appears.<sup>1</sup>

Unlike obvious memory loss, declining cognitive function often hides in plain sight. You notice it as brain fog, distractibility, slower thinking, mental fatigue, or trouble concentrating during conversations and work tasks. Many people blame stress, aging, or lack of sleep. Meanwhile, their daily diet floods their body with industrially processed snacks, sweetened drinks, packaged meals, and refined oils that disrupt how their cells produce energy.

What makes the findings especially striking is that the cognitive effects appeared independent of overall diet quality. Someone could still eat fruits and vegetables, yet experience measurable harm if ultraprocessed products remained a major part of their routine. The processing itself appears to matter, not just the nutrients displaced by it.

If processing itself is the problem, not just sugar, not just fat, then the standard advice to "eat more vegetables" isn't enough. What you remove from your diet matters as much as what you add. Many people consume ultraprocessed foods several times a day without realizing how deeply these foods affect brain function, metabolic health, and long-term dementia risk. The next section breaks down exactly what the researchers found and why one specific aspect of cognition appeared especially vulnerable.

## **Attention Slipped as Ultraprocessed Foods Increased**

The study examined 2,192 dementia-free adults in Australia between ages 40 and 70 to determine whether **ultraprocessed food** intake affected cognitive performance and dementia risk. Researchers focused heavily on midlife because this is when many of the lifestyle patterns that shape later brain decline start to solidify.

Investigators did something important that many nutrition studies fail to do. Instead of looking only at calories, sugar, or fat intake, they specifically examined the effect of industrial food processing itself. Participants completed detailed food questionnaires that measured how much of their diet came from ultraprocessed foods such as packaged snacks, processed meats, sweetened beverages, ready meals, and heavily refined convenience foods.

- **Higher ultraprocessed food intake linked directly to worse attention scores** – Every 10% increase in ultraprocessed food consumption associated with a measurable decline in attention performance. Researchers described the effect as small statistically, but in real-world terms, even subtle declines in focus and mental processing matter because they accumulate over years. Attention controls your ability to stay mentally engaged, react quickly, absorb information, and filter distractions.

Many people associate dementia with forgetting names or losing memories. This study looked closely at attention because attention problems often appear much earlier. Researchers used computerized tasks that measured reaction speed, focus, visual attention, and working memory. Working memory means your brain's ability to briefly hold and use information, such as remembering directions while driving or tracking multiple steps during a task.

- **Participants with the highest ultraprocessed food intake showed the worst cognitive patterns** – The people consuming the most ultraprocessed foods also showed higher rates of **obesity**, lower adherence to Mediterranean-style eating patterns, and lower educational attainment. Their diets contained dramatically higher calorie intake as well. Those in the highest intake group consumed an average of 3,372 calories daily compared to 2,061 calories in the lowest intake group.
- **Memory scores stayed relatively stable while attention declined** – One of the most important findings involved what did not change. Researchers found no major association between ultraprocessed food intake and memory scores. Attention

weakened first.

That distinction matters because many people ignore attention problems until they become severe. You might notice yourself rereading the same sentence repeatedly, drifting during conversations, struggling to complete tasks, or reaching for constant stimulation from your phone. Those patterns reflect declining mental control long before obvious memory loss develops.

- **The damage appeared independent of overall diet quality** — Researchers adjusted for Mediterranean diet adherence and still found worse attention among people consuming more ultraprocessed foods. In simple terms, somebody could still eat some healthy foods yet experience negative cognitive effects if ultraprocessed products remained a major part of their routine. The researchers stated that "food processing itself may influence cognitive health beyond nutrient displacement."
- **This finding challenges the idea that only nutrients matter** — Most dietary discussions focus on protein, carbohydrates, fats, vitamins, or calories. This research suggests the industrial processing itself creates additional biological stress. Ultraprocessed foods often contain **emulsifiers**, artificial flavor systems, stabilizers, seed oils, refined starches, and chemical additives designed to increase shelf life and overeating behavior.

## What Ultraprocessed Foods Do Inside Your Brain

Researchers also measured dementia risk using a scoring system that estimates long-term **dementia risk** based on factors such as obesity, blood pressure, cholesterol, physical activity, and metabolic health. Participants with higher ultraprocessed food intake showed higher dementia risk scores even though they had no dementia diagnosis.

- **Researchers pointed toward inflammation and metabolic dysfunction as key drivers** — The paper discussed several mechanisms that likely explain why ultraprocessed foods harm cognitive performance. One major factor involved

chronic inflammation. Inflammation disrupts communication between brain cells and damages the blood vessels that supply oxygen and nutrients to the brain.

- **Poor cellular energy production likely plays a central role** — Your brain requires enormous amounts of energy every second. Ultraprocessed foods interfere with stable energy production because they flood your body with refined ingredients while lacking many of the nutrients required for efficient **mitochondrial function**. Mitochondria are the tiny energy-producing structures inside your cells. When they work poorly, mental fatigue and slower cognitive performance often follow.
- **Blood sugar instability also strains the brain** — Many ultraprocessed foods digest rapidly and create repeated spikes and crashes in blood sugar. Over time, this contributes to insulin resistance — when your cells stop responding properly to the hormone that ushers glucose out of your bloodstream — inflammation, and vascular damage.

Researchers identified **cardiometabolic dysfunction**, meaning problems involving blood sugar regulation, body fat, blood vessels, cholesterol, and blood pressure, as one of the strongest links between ultraprocessed foods and dementia risk.

- **The modern food environment keeps attention under constant assault** — Across the study population, ultraprocessed foods accounted for 41% of total calorie intake. The most heavily consumed products included sweetened beverages, dairy desserts, packaged salty snacks, processed meats, and ready-made meals.
- **These foods are designed for convenience and repeat consumption** — Most ultraprocessed foods combine refined carbohydrates with industrial fats, artificial flavor enhancers, and texture modifiers that keep you eating long after fullness signals appear. That constant overstimulation strains metabolic health while reducing the intake of whole foods that support brain function.

The study reinforces a simple but important reality: attention doesn't collapse overnight. Your daily meals either strengthen metabolic stability and brain resilience or steadily erode them. The effects start quietly. Then your focus, productivity,

stress tolerance, and mental clarity begin to slip long before a formal diagnosis ever appears. This is observational research, so it shows association rather than direct causation, but the biological mechanisms are increasingly well-mapped.

## **Lower the Daily Brain Stress Created by Ultraprocessed Foods**

Your attention span doesn't collapse randomly. Your brain slows down when your cells stop producing energy efficiently and inflammation stays elevated day after day.

Ultraprocessed foods drive both problems at the same time. They overload your body with seed oils, refined starches, additives, and artificial flavor systems while pushing out the whole foods your brain actually needs to stay sharp.

If your focus feels worse than it did a few years ago, your daily food environment deserves a hard look. The good news is that attention responds quickly when you lower the metabolic stress burden on your body. Small daily shifts compound fast. Every meal either stabilizes your brain or drains it.

- 1. Cut linoleic acid (LA) from ultraprocessed foods first** — Of all the ingredients in the ultraprocessed lineup, LA, the **dominant fat in soybean**, corn, canola, sunflower, and safflower oils, is arguably the most underestimated. Once it embeds in your cell membranes, it oxidizes easily, hampering the mitochondria your brain depends on to fire on all cylinders. Most people consume it constantly without realizing it. The largest sources include soybean, corn, canola, sunflower, and safflower oils.

These seed oils dominate restaurant foods, packaged snacks, frozen meals, salad dressings, sauces, and many "healthy" organic products. Even products like **meatless burgers** and vegan nuggets often contain dozens of synthetic ingredients and are cooked or packed in seed oils loaded with LA.

My narrative review, published in **Nutrients**, explores the **explosion of LA intake** over the last century and how skyrocketing levels have altered the metabolic landscape of the modern world.<sup>2</sup> I recommend removing the biggest exposures first instead of

trying to overhaul everything overnight. Start with fried foods, packaged snacks, fast food and restaurant meals, chips, processed salad dressings, and premade frozen foods. Replace those fats with tallow, ghee, or grass fed butter instead.

A daily LA target below 5 grams, and ideally closer to 2 grams, helps restore healthier metabolic signaling over time. The Pax health platform, coming soon, includes Food Buddy and the Seed Oil Sleuth to help identify hidden sources of LA in your diet and estimate your total daily intake. That matters because many people drastically underestimate how much seed oil they accumulate in a single day.

- 2. Rebuild your brain's energy supply with whole-food carbohydrates** — Your brain runs heavily on glucose. When your diet revolves around ultraprocessed foods, blood sugar swings become extreme and your brain pays the price with fatigue, distractibility, and poor focus.

Healthy **carbohydrates** from whole foods support steady cellular energy production instead of repeated crashes. If your gut feels compromised, with regular bloating or irregular bowel habits, begin more gently with easier-to-digest carbohydrates like fruit and white rice. Increase carbs gradually instead of forcing large amounts of fiber all at once.

If your digestion feels solid, root vegetables and properly prepared starches and grains work well for many people. Also pay attention to meal timing. Long gaps without food often increase **stress hormones** and worsen concentration, especially if your metabolism already struggles. Consistent fuel supports steadier focus throughout the day.

- 3. Use movement and sunlight to restore mental sharpness** — Attention improves when your mitochondria receive the signals they need to produce more energy efficiently. Movement and sunlight both stimulate that process. Morning outdoor light helps reset your circadian rhythm, which controls alertness, sleep quality, and mental performance. Walking outdoors also lowers stress chemistry while improving blood flow to your brain.

Hit the 3 p.m. wall? A 15-minute walk outside almost always restores focus better than another coffee, and unlike caffeine, it won't sabotage your sleep that night. Aim for daily movement instead of relying only on occasional hard workouts. Even one hour of walking spread throughout the day improves metabolic function, blood sugar stability, and cognitive resilience.

**4. Reduce the constant overstimulation that trains your brain to lose focus –**

Ultraprocessed foods and modern screen habits feed the same reward pathways. Constant novelty trains your brain to expect nonstop stimulation, making normal tasks feel mentally exhausting. If your attention span feels fragmented, create small "focus wins" during the day.

Put your phone in another room while reading. Finish one task before opening another screen. Eat meals without scrolling. Those simple actions retrain your brain to tolerate deeper concentration again.

You can also track daily successes visually because your brain responds strongly to momentum. Even a basic checklist for meals, walking, sunlight, and uninterrupted work blocks creates reinforcement that builds consistency faster than relying on motivation alone.

**5. Set up your kitchen to reduce cravings before they start –** Many ultraprocessed food cravings start with convenience, not hunger. If chips, crackers, sweetened drinks, frozen snacks, and processed desserts sit in your kitchen, your brain receives constant cues to keep reaching for them. Removing those cues lowers cravings and makes it harder to give in to them when they do arise.

I recommend keeping simple whole foods visible and easy to grab. Fresh fruit, cooked potatoes, white rice, collagen-rich proteins, hard-boiled pastured eggs, and leftovers from home-cooked meals create far less metabolic chaos than packaged snack foods. If something comes in a shiny bag with a long ingredient list, your brain usually pays the price later with fatigue and poor focus.

Grocery shopping habits matter too. Stay mostly around the perimeter of the store where the minimally processed foods are located. Avoid shopping hungry because ultraprocessed foods are engineered to hijack reward pathways when your blood sugar drops. I also recommend making a short list before you walk in and sticking to it instead of browsing every aisle.

Cravings often shrink once your blood sugar stabilizes and your brain starts receiving steady energy again. Give it three to six weeks. Most people who stay consistent describe the same surprise: the chips they used to crave now taste like cardboard dusted with chemicals, and a ripe peach genuinely satisfies. That isn't willpower; it's your reward system recalibrating.

## **FAQs About Ultraprocessed Foods and Attention**

**Q: What are ultraprocessed foods, and why do they harm attention span?**

**A:** Ultraprocessed foods are industrially manufactured products made with refined ingredients, additives, artificial flavors, stabilizers, seed oils, and heavily altered starches. Common examples include packaged snacks, sweetened beverages, processed meats, frozen meals, chips, and many convenience foods marketed as healthy. The study found that higher intake of these foods linked directly to worse attention scores and higher dementia risk scores.

These foods disrupt stable cellular energy production, increase inflammation, strain blood sugar regulation, and overstimulate reward pathways in the brain. Over time, that combination erodes focus, mental stamina, and cognitive resilience.

**Q: Did the study find memory loss too, or mainly attention problems?**

**A:** Attention took the bigger hit. Memory scores held relatively steady, which is actually the more clinically useful finding, because attention problems tend to show up years before memory does. Researchers found that people consuming more ultraprocessed foods performed worse on tasks involving focus, reaction speed, and working memory, even though their memory scores stayed relatively stable.

That matters because declining attention often appears years before obvious memory loss develops. Brain fog, distractibility, slower thinking, and trouble concentrating during conversations or work tasks often represent early warning signs that your brain's energy systems are under strain.

**Q: Why did researchers say food processing itself matters?**

**A:** The researchers adjusted for Mediterranean diet adherence and still found worse attention among people consuming more ultraprocessed foods. In simple terms, someone could still eat fruits and vegetables yet experience measurable cognitive harm if heavily processed foods remained a major part of their diet.

That finding suggests the industrial processing itself creates biological stress beyond simply displacing healthier foods. Ultraprocessed products often combine refined carbohydrates, seed oils, emulsifiers, additives, and artificial flavor systems engineered for repeat consumption and overstimulation.

**Q: How do ultraprocessed foods affect my brain biologically?**

**A:** Researchers pointed toward chronic inflammation, metabolic dysfunction, poor blood sugar control, and impaired cellular energy production as the main drivers behind the cognitive changes. Your brain consumes enormous amounts of energy every second.

Ultraprocessed foods interfere with that process because they flood your body with refined ingredients while lacking many of the nutrients required for efficient mitochondrial function. When mitochondria function poorly, mental fatigue and slower cognitive performance often follow. Repeated blood sugar spikes and crashes also contribute to insulin resistance, inflammation, vascular damage, and long-term dementia risk.

**Q: What are the most important steps to protect my attention span and brain health?**

**A:** The biggest priority is lowering your intake of ultraprocessed foods and seed oils high in LA, including soybean, corn, canola, sunflower, and safflower oils. Replacing packaged foods and restaurant meals with whole foods dramatically reduces metabolic stress on your brain. Other important steps include:

- Eating stable whole-food carbohydrates to support steady brain energy
- Walking daily and getting regular sunlight exposure to improve mitochondrial function
- Reducing constant screen-driven overstimulation
- Keeping ultraprocessed snack foods out of your home environment
- Building routines that stabilize blood sugar and reduce cravings

## Sources and References

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- <sup>1</sup> [Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring April 23, 2026](#)
- <sup>2</sup> [Nutrients. 2023 Jul 13;15\(14\):3129](#)