

New Blood Test May Predict Alzheimer's Risk Up to 10 Years Before Symptoms Begin

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STORY AT-A-GLANCE

- › A new blood test identified cognitively healthy adults who faced a higher risk of memory and thinking decline up to 10 years before symptoms became noticeable, offering a much earlier window to understand brain health
- › Higher blood levels of the Alzheimer's-related protein were linked to a steadily increasing risk of cognitive decline and predicted future problems even after researchers accounted for expensive brain imaging results
- › The study showed that people with the highest blood test results experienced faster declines in memory and thinking over time, suggesting that harmful brain changes begin years before a diagnosis is made
- › The blood test isn't recommended for routine screening of healthy adults outside research settings, but the findings reinforce that Alzheimer's develops gradually rather than appearing suddenly
- › Supporting healthy mitochondria by reducing oxidative stress, avoiding seed oils, eating enough nutrient-dense carbohydrates and protein, getting regular sunlight, and maintaining healthy metabolic function targets biological processes that may support brain resilience as you age

Alzheimer's disease develops as a gradual loss of memory, reasoning, and the ability to carry out everyday tasks, from increasing forgetfulness and trouble finding the right words to difficulty planning and confusion with once-familiar activities. As the condition

progresses, it leads to dementia, meaning severe cognitive decline that interferes with independent living.

One concern is how late the typical diagnosis arrives. By the time someone struggles to manage a checkbook or forgets a familiar route, the underlying brain changes have been building quietly for years. That timeline is exactly why research aimed at closing the gap between when Alzheimer's starts and when anyone notices deserves serious attention.

A study explored whether a single blood measurement, taken while a person still felt perfectly fine, could estimate the likelihood of future cognitive decline years down the road.¹ The researchers followed a large group of cognitively healthy adults across multiple countries for over a decade, and what they found challenges the assumption that meaningful risk assessment requires expensive brain imaging or must wait until memory visibly falters.

These findings matter most not as a diagnostic verdict but as a signal that the window for action opens far earlier than most people realize. At the same time, this type of testing isn't yet recommended for routine screening outside of research, so the results deserve careful context before drawing broad conclusions.

The Blood Test Predicted Cognitive Decline Years Before Symptoms Appeared

The study, a longitudinal analysis published in JAMA, pooled harmonized data from 2,684 cognitively healthy adults across six selected observational and clinical trial cohorts in North America, Japan, and Australia to determine whether blood levels of phosphorylated tau 217 (p-tau217) were associated with future cognitive impairment.²

Participants remained free of measurable cognitive problems when they entered the study, yet researchers tracked them for as long as 13.5 years to see who later developed mild cognitive impairment or [dementia](#). Instead of asking whether p-tau217 simply

reflected Alzheimer's-related brain changes, the investigators wanted to know whether it accurately estimated a person's future risk over practical time frames such as two, five, and 10 years.

- **The study followed people before memory problems began** — The participants had a median age of 69.6 years, although ages ranged from 46 to 98 years, and nearly two-thirds were women. Researchers collected a baseline blood sample from every participant and then monitored changes in memory and thinking through annual cognitive evaluations.

During a median follow-up of 5.4 years, 478 participants progressed to cognitive impairment, giving investigators enough real-world outcomes to compare against the original blood test results.

- **The strongest blood test results identified the people most likely to develop cognitive impairment** — The researchers grouped participants according to how elevated their p-tau217 levels were. People in the highest category consistently experienced the greatest likelihood of future decline. That matters because it moves the conversation beyond identifying disease that already exists and toward estimating who faces the greatest future risk while they still function normally.
- **Risk increased steadily as blood levels increased** — Instead of finding one cutoff where risk suddenly appeared, researchers observed a clear stepwise pattern. Every increase in p-tau217 was associated with a 38% higher relative risk of future cognitive impairment. In absolute terms, participants with high p-tau217 levels had a 24% risk of progressing to cognitive impairment within five years, and those with very high levels had a 38% risk.
- **The blood test predicted future decline even after researchers accounted for brain scans** — Many Alzheimer's studies rely on PET imaging to measure amyloid plaques in the brain. Those scans are expensive, require specialized equipment, and often involve radioactive tracers.

Even after researchers adjusted for each participant's amyloid PET results, p-tau217 remained an independent predictor of future cognitive decline, meaning the blood test captured information about future risk that expensive brain imaging missed.

p-tau217 remained associated with future cognitive decline after researchers accounted for amyloid PET results, indicating the blood test carried predictive information that imaging alone did not capture. That finding raises the possibility that a relatively simple blood draw could become an important first step for identifying people who warrant additional evaluation in future clinical practice after further validation.

- **Higher blood levels matched faster losses in memory and thinking skills —**

Researchers looked beyond whether participants eventually developed cognitive impairment. They also measured how quickly thinking abilities changed over time using a standardized cognitive assessment called the Preclinical Alzheimer Cognitive Composite, or PACC.

This test combines several memory and thinking tasks into one overall score, allowing researchers to detect subtle declines before everyday symptoms become obvious.

- **People with the highest p-tau217 levels declined more quickly every year —**

Participants with low p-tau217 levels actually showed slight improvement over time, a pattern researchers attribute to becoming more familiar with repeated testing. In contrast, people in the highest p-tau217 category experienced continuous declines in cognitive performance.

- **The relationship remained consistent across multiple populations —** Researchers repeated their analyses within each of the participating cohorts and found mostly similar results despite differences in geography, recruitment methods, and participant characteristics. That consistency strengthens confidence that the association between elevated p-tau217 and future cognitive decline wasn't limited to one research center or one specific group of volunteers.

At the same time, the researchers emphasize that additional studies in broader, more representative populations remain necessary before these findings guide routine screening of healthy adults. The authors also noted that their 10-year projections were constrained by limited long-term data, so the longest-range estimates carry more uncertainty than the five-year figures.

Focus on the Factors That Keep Your Brain Resilient

The study focused on predicting Alzheimer's risk, not preventing it. Even so, one message stands out. The biological changes linked to Alzheimer's begin years before memory problems appear. That gives you time to strengthen the systems that support healthy brain function instead of waiting until symptoms develop.

If harmful brain changes are already underway a decade before symptoms appear, the smartest response is to strengthen the systems those changes attack — your [mitochondria](#), your oxidative defenses, your metabolic health, and the daily nutrient supply your brain depends on to repair itself.

- 1. Reduce oxidative stress by lowering excess iron and eliminating seed oils** — Your brain needs iron, but too much becomes harmful. [Excess iron](#) can react with fats and proteins inside brain cells, contributing to the oxidative damage associated with brain aging.

That damage becomes even worse when iron interacts with excess levels of [linoleic acid](#) (LA), the unstable polyunsaturated fat found in seed oils like soybean, corn, canola, sunflower, and safflower. These oils are prone to breaking down and forming reactive byproducts that may place additional oxidative stress on brain tissue.

Replace seed oils with more stable cooking fats such as grass fed butter, ghee, coconut oil, or tallow. At the same time, eat foods that help your body produce glutathione, your most important internal antioxidant. Garlic, onions, pasture-raised eggs, and [collagen-rich foods](#) all provide nutrients needed to build glutathione.

I also recommend checking your ferritin level to measure stored iron — the ideal range is between 60 and 75 ng/mL — and your gamma-glutamyl transpeptidase (GGT), a marker of oxidative stress. If ferritin is elevated, donating blood two to four times each year gradually lowers excess iron.

If blood donation isn't appropriate for you, therapeutic phlebotomy prescribed by your doctor achieves the same result. Talk to your health care provider about whether this testing and options like blood donation or therapeutic phlebotomy are appropriate for you.

- 2. Build your cellular energy from the ground up** — Your brain consumes enormous amounts of energy, so protecting your mitochondria starts with providing the right fuel. Most adults need about 250 grams of carbohydrates each day, and more if you're active. Start with whole fruit and white rice if you frequently experience bloating, abdominal pain, or loose stools.

As your digestion improves, gradually introduce well-cooked root vegetables, followed by non-starchy vegetables, starchy vegetables such as sweet potatoes and squash, beans, legumes, and eventually minimally processed whole grains. If digestive symptoms return, back down and expand your diet more gradually.

Protein deserves equal attention. Aim for roughly 0.6 to 0.8 grams per pound of ideal body weight, or about 1.32 to 1.76 grams per kilogram, with approximately one-third coming from collagen-rich foods such as bone broth, slow-cooked meats with connective tissue, or a quality collagen supplement.

Collagen supplies glycine, one of the amino acids your body uses to manufacture glutathione. Removing seed oils while providing enough carbohydrate and high-quality protein gives your mitochondria the raw materials needed to produce energy efficiently and defend themselves against oxidative damage.

- 3. Use sunlight as one of your brain's daily protection tools** — Sunlight does much more than regulate your sleep schedule. It directly supports mitochondrial energy production and stimulates melatonin production inside your mitochondria, where

much of the oxidative damage associated with aging occurs. This mitochondrial melatonin is thought to act as a potent natural antioxidant, and research is exploring its role in protecting brain cells.

In a hypothesis paper I published in the [journal Cureus](#), I propose a mechanistic framework in which [near-infrared \(NIR\) light](#), a natural component of sunlight, may stimulate mitochondria to produce melatonin.³ That locally produced melatonin may, in turn, trigger an antioxidant response inside your cells that could help protect your brain from oxidative damage. As I note in the paper, this framework synthesizes existing evidence and still requires experimental validation.

I recommend going outside for morning sunlight within the first hour after waking whenever possible. If your diet has been high in [seed oils](#), avoid prolonged exposure to intense midday sunlight until you have eliminated those oils for at least six months. Oxidized LA stored in your skin increases your susceptibility to sun damage. As those fats are gradually replaced, your tolerance for natural sunlight improves, allowing you to enjoy its benefits more safely.

- 4. Keep your metabolism working for your brain** — Your brain depends on a constant supply of energy every second of the day. One of the earliest changes in [Alzheimer's disease](#) is a decline in the brain's ability to produce and use energy efficiently. I recommend paying attention to your metabolic health long before memory problems appear.

Track your HOMA-IR (Homeostatic Model Assessment of Insulin Resistance) score to assess [insulin resistance](#) — anything below 1.0 is considered a healthy HOMA-IR score — and maintain healthy blood sugar through whole foods and avoid ultraprocessed foods that interfere with normal mitochondrial function. As with any lab test, ask your health care provider whether HOMA-IR testing is appropriate for you.

5. View Alzheimer's blood tests as one piece of the puzzle — The JAMA study found that higher p-tau217 levels identified cognitively healthy adults with a greater likelihood of future cognitive decline, but the researchers also emphasized that these blood tests aren't recommended for routine screening of healthy adults outside research settings.⁴

A laboratory result doesn't determine what happens next. Your everyday choices that support mitochondrial function, lower oxidative stress, and improve metabolic health remain within your control, and they are the areas where research suggests lifestyle may matter most for long-term cognitive health.

FAQs About a Blood Test for Alzheimer's Disease

Q: What does the new Alzheimer's blood test actually measure?

A: The blood test measures p-tau217, a protein linked to Alzheimer's-related changes in the brain. Higher levels were associated with a greater likelihood of developing future memory and thinking problems, even in people who were cognitively healthy when they entered the study. The test estimates risk years before symptoms appear, but it doesn't diagnose Alzheimer's disease by itself.

Q: Should healthy adults get this blood test now?

A: No. Although the research showed encouraging results, the investigators emphasized that the test isn't recommended for routine screening of healthy adults outside research settings. More studies are needed to confirm how well it performs in broader populations before it becomes part of everyday medical care.

Q: If the test doesn't prevent Alzheimer's, why are the findings important?

A: The study reinforces that Alzheimer's begins long before memory problems become obvious. Identifying people at higher risk years earlier creates a larger window to improve the factors that support long-term brain health, including metabolic function, mitochondrial energy production, nutrition, and reducing oxidative stress.

Q: What lifestyle habits help protect brain health?

A: Several strategies may support healthy brain function, including eliminating seed oils, maintaining healthy iron levels, eating enough nutrient-dense carbohydrates and protein to fuel your mitochondria, getting regular sunlight to support mitochondrial melatonin production, and keeping your blood sugar under control through whole-food nutrition. Together, these habits address biological processes that contribute to brain aging.

Q: Does a higher blood test result mean I will develop Alzheimer's disease?

A: No. A higher p-tau217 level indicates a higher statistical risk, not a certainty that Alzheimer's disease will develop. Many factors influence brain health over time, and the study was designed to estimate future risk rather than predict an individual's outcome with absolute certainty. Your daily lifestyle choices remain one of the most important influences on long-term cognitive health.

This article is for informational purposes only and does not constitute medical advice. Consult a qualified health care provider before making changes to your health regimen.

Sources and References

- ^{1, 2, 4} [JAMA. 2026 Jul 14:e2612556](#)
- ³ [Cureus 18\(3\): e105322. March 16, 2026](#)