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New Alzheimer's Test Claims 90% Accuracy

Analysis by Dr. Joseph Mercola | October 15, 2024

STORY AT-A-GLANCE

- A new blood test for Alzheimer's boasts 90% accuracy, outperforming conventional clinical assessments and enabling earlier diagnosis and treatment
- Early detection of Alzheimer's, even before symptoms appear, allows for more effective interventions and lifestyle changes to slow disease progression
- Visual symptoms associated with posterior cortical atrophy (PCA) provide another avenue for earlier Alzheimer's detection, especially in women
- The FDA-approved drug lecanemab shows modest benefits in slowing cognitive decline but comes with significant risks, including brain swelling and hemorrhages
- Protecting cognitive function involves reducing exposure to linoleic acid, endocrine-disrupting chemicals and electromagnetic fields, which impair mitochondrial function and increase dementia risk

Scientists from Lund University in Sweden have unveiled a new blood test that could transform how Alzheimer's disease is diagnosed. This test, which measures specific proteins in the blood, boasts an impressive 90% accuracy rate in detecting Alzheimer's pathology.

A study, conducted across both primary and secondary care settings, demonstrated that this blood test outperforms conventional clinical assessments by a significant margin.[1] Currently, diagnosing Alzheimer's often relies on expensive and invasive procedures like positron emission tomography (PET) scans or spinal taps.

However, this new blood test offers a simpler, more accessible alternative that could be implemented in your local doctor's office. The test focuses on two key biomarkers: phosphorylated tau 217 (p-tau217) and the ratio of amyloid-β 42 to amyloid-β 40 (Aβ42:Aβ40).

These proteins are closely associated with the hallmark brain changes seen in Alzheimer's disease. By measuring their levels in the blood, doctors could identify Alzheimer's with unprecedented ease and accuracy, years before symptoms become apparent.

Early Detection Enables Prompt Intervention, Even Before Symptoms Start

Current treatments for Alzheimer's disease (AD) are most effective when started early, before significant brain damage has occurred. This new blood test could enable doctors to initiate treatment at the earliest stages of the disease, slowing its progression and preserving cognitive function for longer. As researchers explained in Frontiers in Aging Neuroscience:[2]

> *"Early diagnosis of AD is essential in order to facilitate the development of disease-modifying and secondary preventive therapies prior to the onset of symptoms. There has been a notable shift in the goal of the diagnosis process, transitioning from merely confirming the presence of symptomatic AD to recognizing the illness in its early, asymptomatic phases."*

By the time memory problems become noticeable in typical Alzheimer's, significant brain damage has often already occurred. Many experts believe that treating the disease in its earliest stages, before widespread brain cell loss, offers the best chance of slowing its progression. Moreover, early detection opens up opportunities for lifestyle interventions that may help stave off or mitigate the effects of Alzheimer's.

Imagine being able to make informed decisions about your brain health years before any symptoms appear. This test could empower you to take proactive steps, such as

adjusting your diet, increasing physical activity or engaging in cognitive training exercises, all of which have shown promise in maintaining brain health.

Additionally, early diagnosis allows for better planning and preparation for the future, giving you and your family more time to consider care options and make important decisions while you're still in full control of your faculties.

Improving Diagnosis Across Health Care Settings

The new blood test could improve Alzheimer's diagnosis across different health care settings, as the study showed that the test performed consistently well in both primary care clinics and specialized memory clinics.[3]

In primary care settings, where misdiagnosis rates for Alzheimer's can be high, the blood test achieved an accuracy of 89% to 90%, far surpassing the 58% accuracy rate of primary care physicians using conventional diagnostic methods. Even in specialized memory clinics, where expert neurologists typically diagnose Alzheimer's, the blood test outperformed clinical assessments, achieving 91% to 92% accuracy compared to the specialists' 71%.[4]

This means that whether you visit your family doctor or a specialized clinic, you could receive a more accurate diagnosis using this blood test, and ultimately more patients could be correctly identified early in the disease process, reducing the stress and uncertainty of misdiagnosis and ensuring that appropriate care and support are provided from the outset.

Detecting Alzheimer's Before Symptoms Appear

In a separate study published in Biomedicines, researchers found that p-tau217 levels start rising in the blood over two decades before cognitive symptoms emerge, outpacing other tau biomarkers like p-tau181 and p-tau205.[5] This provides an unprecedented window for early intervention, allowing you to take steps to slow or prevent the disease's progression long before irreversible brain damage occurs.

The test's ability to detect Alzheimer's in its preclinical stage could be transformative for individuals at risk. In cognitively unimpaired individuals, p-tau217 correlates strongly with amyloid and tau PET status, as well as with CSF Aβ42/Aβ40 ratios. Importantly, p-tau217 can distinguish amyloid-positive tau-negative individuals from non-AD controls, suggesting it may detect the earliest stages of AD pathology.

The unique association of p-tau217 with the CA1 region of the hippocampus, which is important for memory, and its localization in granulovacuolar bodies — small, bubble-like structures in brain cells — help explain its early rise in the disease process.

Visual Symptoms: Another Key to Earlier Alzheimer's Detection

You may think of memory loss as the hallmark of Alzheimer's disease, but a lesser-known variant could also help detect the condition much earlier. **Posterior cortical atrophy** (PCA) is a form of Alzheimer's that initially affects vision rather than memory.

An international study involving 1,092 patients shed new light on this condition.[6] PCA typically strikes around age 60, nearly a decade earlier than classic Alzheimer's. Its first symptoms are visual — trouble with depth perception, recognizing objects or navigating spaces.

You might struggle to park your car, read a clock or locate items right in front of you. These visual issues often lead to misdiagnosis, with patients seeing multiple eye doctors before getting the right answer. By understanding PCA, you could potentially spot Alzheimer's years before memory problems surface. MRI scans revealed characteristic shrinkage in the back of the brain in 85% of PCA patients.

Even more telling was PET scanning, which showed reduced brain activity in posterior regions in 97% of cases. Amyloid PET scans, which detect the buildup of abnormal proteins in the brain, were positive in 94% of PCA patients. Spinal fluid tests for these same proteins were positive in 81% of cases.

In fact, the researchers suggest PCA might be the most predictive clinical syndrome for Alzheimer's pathology. This means if you're diagnosed with PCA, there's a very high

likelihood you're dealing with Alzheimer's, even if your memory is still sharp. These biomarker tests can provide clarity and help guide treatment decisions much earlier in the disease process.

An intriguing finding from this study is that PCA affects women more often than men. About 60% of PCA patients were women, compared to a more even split in classic Alzheimer's. This sex difference might offer clues about risk factors and potential prevention strategies. The researchers speculate that women may have a greater "cognitive vulnerability" in the brain regions affected by PCA.

They noted that mathematical and visuospatial learning difficulties are more common in girls, and these same skills are often impaired in PCA. This raises questions about whether certain cognitive patterns throughout life might influence your risk of specific types of dementia later on.

It's a reminder that Alzheimer's is not a one-size-fits-all disease. Your sex, along with your unique cognitive strengths and weaknesses, shape how the disease manifests.

Risky Alzheimer's Pill Linked to Life-Threatening Side Effects

The U.S. Food and Drug Administration (FDA) granted accelerated approval for the Alzheimer's drug lecanemab (Leqembi). The drug, a monoclonal antibody, binds to amyloid beta in the brain.

An 18-month study published in the New England Journal of Medicine[7] found Leqembi reduced markers of amyloid in early Alzheimer's disease and led to "moderately less decline" in cognition and function compared to placebo. Lecanemab has been hailed as a breakthrough, but a closer look reveals significant risks that outweigh its modest benefits.

The most alarming side effect observed was ARIA (amyloid-related imaging abnormalities), which occurred in a substantial number of participants. ARIA-E, involving brain edema, affected 12.6% of those taking lecanemab compared to just 1.7% in the placebo group.

While most cases were reported as mild to moderate, 2.8% of participants experienced symptomatic ARIA-E, with symptoms including headache, visual disturbance and confusion.[8]

ARIA-H, involving brain hemorrhages, was even more common, affecting 17.3% of lecanemab recipients versus 9% in the placebo group. Beyond ARIA, lecanemab was associated with a high rate of infusion-related reactions, affecting 26.4% of participants compared to 7.4% in the placebo group.

These reactions, while mostly mild to moderate, led to a significant number of participants experiencing discomfort during treatment. The study also reported higher rates of serious adverse events in the lecanemab group (14%) compared to the placebo group (11.3%).

Risks Outweigh Lecanemab's Modest Benefits

Other concerning side effects included a higher incidence of falls (10.4% vs 9.6%) and headaches (11.1% vs 8.1%) in the lecanemab group. More worryingly, macrohemorrhages occurred in 0.6% of lecanemab recipients compared to 0.1% in the placebo group. These larger brain bleeds pose a significant risk and could have severe consequences for patients.

It's worth noting that adverse events led to discontinuation of the trial agent in 6.9% of lecanemab recipients, more than twice the rate in the placebo group (2.9%). This high dropout rate due to side effects raises questions about the drug's tolerability in real-world settings.

Further, while lecanemab showed some efficacy in slowing cognitive decline, the benefits were modest. The difference in cognitive decline between the lecanemab and placebo groups on the primary outcome measure — Clinical Dementia Rating — Sum of Boxes score, a tool used to assess the severity of dementia — was just 0.45 points on an 18-point scale. This small difference must be weighed against the significant risks associated with the drug.

The study was also limited to 18 months, leaving questions about long-term efficacy and safety unanswered. Given the chronic nature of Alzheimer's disease, patients would need to take lecanemab for years, increasing their exposure to these risks over time. As investigative journalist Maryanne Demasi wrote:[9]

> *"Now that the drug has been approved, advocacy groups like the Alzheimer's Association, which are heavily funded by the drug industry, have welcomed the news, saying the FDA made 'the right decision.' But critics doubt the benefits of lecanemab outweigh its harms, and are dismayed that the FDA approved the drug without input from its own advisory panel."*

Tips to Protect Your Cognitive Function

As a blood test to diagnose Alzheimer's moves closer to widespread clinical use, it has the potential to reshape the landscape of Alzheimer's care and research. The availability of a simple, accurate diagnostic tool could lead to more widespread screening, potentially catching the disease earlier in millions of people. This could shift the focus of Alzheimer's care from managing symptoms to preventing their onset.

While the test is not yet available for clinical use, its development represents a significant step forward in the fight against Alzheimer's. Prevention, however, is still better than treatment.

You can lower your risk of chronic diseases, including dementia, and help prevent cognitive decline by **enhancing your mitochondrial function**. Research published in Neurology[10] indicates that an inflammatory diet is linked to a higher dementia risk, a condition rooted in mitochondrial dysfunction.[11]

Three major toxins **impair your mitochondrial function** by affecting intracellular calcium and overall cellular health. Elevated intracellular calcium leads to increased superoxide and nitric oxide levels, which combine to form peroxynitrite, a potent reactive oxygen species that contributes to poor health. These toxins include:

1. **Excessive linoleic acid (LA) consumption —** LA, an omega-6 polyunsaturated fat abundant in seed and vegetable oils and processed foods, is among the most detrimental components of the Western diet. Overconsumption negatively impacts your metabolic rate and gut microbiome, two crucial factors for your health.

2. **Endocrine-disrupting chemicals (EDCs) —** EDC exposure, often from microplastics, overstimulates your estrogen receptors. Microplastics are so prevalent that you might ingest a credit card's worth of plastic weekly.[12] This plastic contains phthalates and bisphenol A (BPA), which activate estrogen receptors. Estrogen increases intracellular calcium levels, leading to peroxynitrite formation.

3. **Excessive electromagnetic field (EMF) exposure —** Daily EMF exposure, such as from cellphones, has hidden health consequences. EMFs activate voltage-gated calcium channel (VGCC) receptors within cells, triggering calcium influx and catalyzing peroxynitrite production.[13]

Chronic exposure to these toxins damages your microbiome, setting the stage for chronic disease. Therefore, in addition to maintaining a healthy diet throughout life, including avoiding excess LA, minimizing exposure to EDCs and EMFs will protect your brain health as you age.

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