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Groundbreaking Alzheimer's Research Unveiled at AAIC 2024 in Philadelphia

New findings highlight advancements in early detection, environmental risks, treatment options, and dietary impacts on dementia.

MILWAUKEE, WI, JULY 31, 2024 – The Alzheimer's Association International Conference (AAIC) 2024 in Philadelphia showcases unprecedented advancements in Alzheimer's research, offering new hope for detection, treatment, and prevention of the disease.

Blood Tests for Alzheimer's Diagnosis Near Implementation

New research reveals blood tests for Alzheimer's diagnosis are approaching 90% accuracy, outperforming both primary care physicians and specialists. These tests could revolutionize early diagnosis, support clinical trial recruitment, and accelerate access to treatment, particularly as new therapies target the early symptomatic stages of the disease.

This signals a shift to simpler, more accessible, more accurate, and earlier diagnosis of Alzheimer's. Taken together, these studies describe the possibilities of a future where blood tests are solidly enmeshed in the Alzheimer's diagnostic process. This is especially important as newly approved treatments are indicated for people in the early symptomatic stages of the disease.

Currently, there is no single test that can determine if a person is living with Alzheimer's or another dementia. Physicians currently use diagnostic tools combined with medical history and other information, including neurological exams, cognitive and functional assessments, as well as brain imaging, spinal fluid analysis, and blood tests to make an accurate diagnosis.

"These blood-based biomarkers represent a major breakthrough in Alzheimer's research," said Dr. Maria Carrillo, chief science officer of the Alzheimer's Association. "They have the potential to transform how we diagnose and treat Alzheimer's disease, enabling earlier interventions and more personalized care."

Wildfire Smoke: A Significant Threat to Brain Health

A 10-year study of over 1.2 million southern Californians reveals that exposure to wildfire smoke significantly increases the risk of dementia diagnosis, more so than other forms of air pollution. According to researchers, wildfire smoke, motor vehicles, and factories all emit a type of air pollution called fine particulate matter. These microscopic droplets in the air are 30 times smaller than the width

of human hair. Researchers found that the risk of dementia diagnosis due to exposure to wildfire smoke was notably stronger — even with less exposure — than the risk due to other sources.

With the number of wildfires increasing in the U.S. and globally, experts say exposure to this type of air pollution is an increasing threat to brain health.

Clinical Trial Reveals Liraglutide, a GLP-1 Agonist, May Also Protect the Brain

Key outcomes of the recent clinical trial include a nearly 50% reduction in brain shrinkage in areas crucial for memory, learning, and decision-making when compared to placebo. Additionally, the treatment demonstrated up to an 18% reduction in cognitive decline after one year. These findings suggest potential neuroprotective effects, such as the reduction of early forms of amyloid and improvements in memory and learning.

"The slower loss of brain volume suggests liraglutide protects the brain, much like statins protect the heart," said Dr. Paul Edison, lead researcher. "While further research is needed, liraglutide may work through various mechanisms, such as reducing inflammation in the brain, lowering insulin resistance and the toxic effects of Alzheimer's biomarkers amyloid-beta and tau, and improving how the brain's nerve cells communicate."

Processed Red Meat Linked to Increased Dementia Risk

A large-scale study presented at AAIC 2024 has revealed a significant link between processed red meat consumption and increased dementia risk.

Key findings show that consuming just a quarter serving of processed red meat daily—equivalent to about two servings per week—can increase the risk of dementia by 14% compared to those consuming less than one-tenth of a serving daily, or roughly three servings per month. Furthermore, each additional daily serving of processed red meat was associated with an extra 1.6 years of global cognitive aging, impacting language and executive function. The study also suggests that replacing one daily serving of processed red meat with healthier options like nuts, beans, or tofu may reduce dementia risk by 20%.

These groundbreaking findings underscore the rapid progress in Alzheimer's research, offering new avenues for early detection, treatment, and prevention. As we continue to unravel the complexities of this disease, the Alzheimer's research community remains committed to improving the lives of those affected by Alzheimer's and all other dementias.

About the Alzheimer's Association®

The Alzheimer's Association is a worldwide voluntary health organization dedicated to Alzheimer's care, support and research. Our mission is to lead the way to end Alzheimer's and all other dementia — by accelerating global research, driving risk reduction and early detection, and maximizing quality care and support. Our vision is a world without Alzheimer's and all other dementia[®]. Visit alz.org or call 800.272.3900.