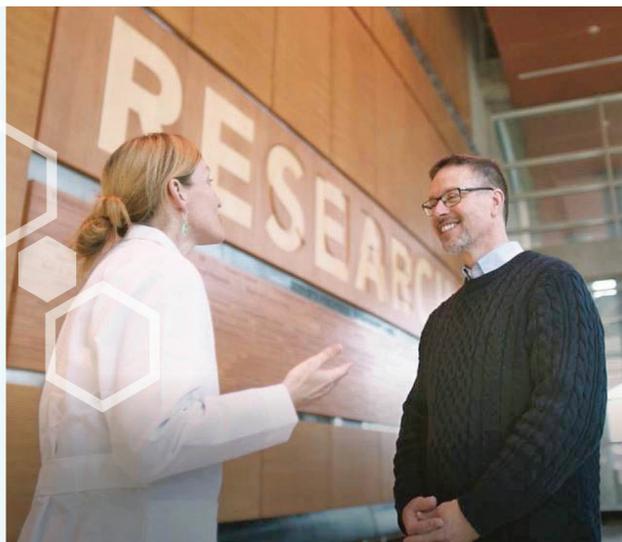


# Together We Succeed

## Accelerating Research on Alzheimer's Disease & Related Dementias

NIH BYPASS BUDGET PROPOSAL  
FOR FISCAL YEAR 2021



The **National Institutes of Health (NIH)** presents an annual Professional Judgment Budget for the additional Federal funds needed to treat or prevent Alzheimer's disease and related dementias by 2025. This report outlines the toll these diseases take on our Nation and the scientific opportunities we could pursue with enhanced funding in Fiscal Year (FY) 2021. To view the entire NIH Professional Judgment Budget for FY 2021, visit [www.nia.nih.gov/bypass-budget](http://www.nia.nih.gov/bypass-budget).

### DEMENTIA AFFECTS MILLIONS OF AMERICANS

As many as **5.6 million** older Americans live with Alzheimer's disease. This number is expected to climb to nearly **14 million** by 2050, unless we find ways to stop the disease. Many thousands more live with related disorders such as frontotemporal, vascular, Lewy body, and other types of dementia.



### DEMENTIA IS COSTLY

Alzheimer's is costly to families, not only financially but also in the sheer intensity of caregiving for a loved one with the disease. Researchers estimate that family caregivers spend **92 hours** per month, on average, caring for adults with dementia age 65 and older. For the nation, health and long-term care costs for dementia were estimated as high as **\$215 billion** in 2010; these annual costs may soar to **\$511 billion** by 2040.



### ALZHEIMER'S IS A LEADING CAUSE OF DEATH

Alzheimer's disease remains the **sixth leading cause of death** overall in the U.S., accounting for 4.2 percent of all deaths in 2016. It is the fifth leading cause of death among Americans age 65 and older.

### BUDGETING NOW FOR A CURE IN 2025

For FY 2021, the NIH estimates needing **\$2.822 billion** for research on Alzheimer's disease and Alzheimer's disease-related dementias (AD/ADRD). This bypass budget proposal compensates for the reduction proposed in the FY 2020 President's budget for AD/ADRD, considers funds expected to become available from completed initiatives, and adds **\$354 million** in additional resources needed to reach the 2025 goal.

## Recent Advances, New Initiatives in Alzheimer's & Related Dementias Research

### Recent Advances, New Initiatives in Alzheimer's & Related Dementias Research

The complexity of Alzheimer's disease and related dementias remains daunting. This remarkable period of scientific growth and discovery—and a continued high level of effort—will help us meet the challenge of treating or preventing Alzheimer's and related dementias by 2025. This year, we can report significant progress on several fronts. Read more about the research advances featured below at [www.nia.nih.gov/bypass-budget](http://www.nia.nih.gov/bypass-budget).

### Deeper Understanding of Genetic Risk Factors

In 2018 alone, the number of genetic risk factors found to be implicated in Alzheimer's disease was larger than what had been identified in all previous years combined. And, for the first time, researchers have been able to report findings from a large-scale genome-wide association study of dementia with Lewy bodies that found associations with genes common to multiple neurodegenerative diseases and others involving pathways that may be unique to this type of dementia.

### Revealing Disease Mechanisms

New studies point more specifically than ever before to how brain function may be compromised in dementia. Findings about the microbiome and disruptions in the "gut-brain axis," sleep deprivation, and the misfolding of a protein called TDP-43 are vital to understanding specific mechanisms causing Alzheimer's disease and related dementias.

### Better Biomarkers to Detect and Diagnose Disease

The identification and use of clinical, imaging, genetic, and biochemical biomarkers is literally redefining Alzheimer's disease. It is now possible, in a research setting, to use brain imaging and measures of tau and amyloid proteins in cerebrospinal fluid to diagnose Alzheimer's and to use these markers to gauge the biological effects of interventions being tested in clinical trials. Scientists continue to refine and validate new methodologies, including easier and less expensive approaches to biomarker use.

### Accelerating Drug Design to Human Testing

A vibrant drug discovery and development enterprise features more than 30 novel drugs for Alzheimer's disease and related dementias in different stages of development for more than 12 different targets. With the support of NIA's signature **Accelerating Medicines Partnership—Alzheimer's Disease** program, researchers identified 100 novel candidate targets and

shared their data widely so that the broad scientific community can begin target validation and preclinical testing of promising candidate drugs.

### Testing Treatments, Making Clinical Trials More Efficient and Inclusive

In 2018, NIA introduced the **National Strategy for Recruitment and Participation in Alzheimer's Research** and, in 2019, launched a repository of resources to support recruitment and retention of volunteers. Plans are underway for a novel pilot program to improve inclusive recruitment in clinical trials at sites across the country.

As of spring 2019, NIH supported approximately 200 clinical trials on a wide range of interventions aimed at treating Alzheimer's and related dementias. While amyloid continues to be a target, 26 of the 41 pharmacological trials supported by NIA are focused on other targets. More than 80 current trials are testing nonpharmacological interventions, and an additional 60 are aimed at care and caregiving for people with dementia. New and ongoing initiatives support more efficient, practical, and inclusive trials.

### Intensifying Research on Care, Services

Fueled by the infusion of new funding as well as the first National Research Summit on Dementia Care in 2017, NIH is expanding and upgrading its crucial research program on care and services. The summit process resulted in 58 recommendations, and NIH in response quickly took steps to solicit related funding applications. In 2018, NIA announced it would create new **Edward R. Roybal Centers** focused on dementia caregiving and expanded the **Resource Centers for Minority Aging Research** to include a **new subset of eight Centers** for social and behavioral science related to Alzheimer's disease and related dementias.

