First Intervention Shown to Lower Alzheimer's and Dementia Incidence

San Francisco, February 9, 2026 (GLOBE NEWSWIRE) — In a world's first, an NIH-funded randomized controlled trial of more than 2,800 older adults (the "ACTIVE Study") has reported a modest amount of cognitive training significantly reduced Alzheimer Disease and related dementias diagnoses, as reported in Medicare data over a 20-year follow-up period. The results are published in Alzheimer's & Dementia: Translational Research & Clinical Interventions, a journal of the Alzheimer's Association. The brain training exercise that achieved these results is referred to in the study as "speed training," and is available exclusively as part of the brain fitness app, BrainHQ from Posit Science.

"This is an astonishing result, and it comes at a critical time," observed Dr. Henry Mahncke, CEO of Posit Science. "The number of people affected by Alzheimer's keeps growing; new expensive drugs only slightly slow the rate of decline; and while observational studies suggest lifestyle changes can reduce Alzheimer's risk, people aren't sure which specific actions to take. These results change what's possible — now — for better brain health and Alzheimer's prevention, by demonstrating a specific type of cognitive training reduces the incidence of dementia reported in Medicare data over decades – an impeccable outcome measure. No other type of intervention – physical exercise, diet, nor other brain training – has shown such evidence."

The ACTIVE Study randomized healthy older adults (average age 74, at the study start) into four groups: a speed training group, a reasoning training group, a memory training group, and a control group. All participants were extensively examined using standard neuropsychological and gerontological measures before the study began, and at years 1, 2, 3, 5, and 10. This 20-year study is based on Alzheimer's and related dementias diagnoses in Medicare records.

Each training group was asked to complete a 60-75 minute training session, twice weekly, for the first five weeks of the study. A subset of each training group was then asked to complete "booster sessions" - 4 more sessions, both in month 11 and month 35, for a grand total of less than 23 hours (10 to 22.5 hours) spread over the initial three years of the 20-year study).

The study found that there was no significant effect from either the memory or reasoning training; however, those who were in the booster speed training group showed a significant (25%) reduction in diagnosed cases of dementia over the 20-year period.

"The two key results are that the benefit was unique to speed training – not all forms of cognitive activity worked – and that a modest amount of training was enough to drive significant benefit over two decades," Dr. Mahncke added. "We've seen significant results across hundreds of studies of BrainHQ, which have consistently shown differences between speed-based, progressively-challenging brain training and other forms of general cognitive activity."

The speed exercise was developed by Dr. Karlene Ball, University Professor at the University of Alabama Birmingham, and Dr. Dan Roenker, Professor Emeritus at Western Kentucky University, and is licensed exclusively to BrainHQ.

"We developed speed training to make brains faster because we knew that speed is fundamental to cognitive performance," said Dr. Ball. "ACTIVE has proven that, across numerous studies, showing

that speed training results in better mental health (depression, health-related quality of life, and greater confidence and control), better real-world function (functional independence, balance, gait, reaction time, driving) and now – lower risk for Alzheimer's and dementia."

"Working with scientists like Karlene, Dan and the ACTIVE team — and the thousands who have worked with us in designing, testing and validating these brain-plasticity-based training exercises — has changed the course of science," said Dr. Michael Merzenich, UCSF Professor Emeritus, Kavli Laureate in Neuroscience, and the chief scientist behind BrainHQ. "The future of brain health is using an app to monitor and improve your physical and functional brain health. With these results, we've arrived at that future, and it's an amazing moment."

Dr. Merzenich is credited with discovering lifelong neuroplasticity and for first harnessing it in his co-invention of the cochlear implant (restoring hearing to millions), before turning his attention to creating computerized brain exercises to drive physical and functional brain health. He inspired the recent widely-covered INHANCE Study, in which BrainHQ exercises became the first intervention shown to cause the human brain to upregulate the production of acetylcholine (the "pay attention" chemical) — known to downregulate with aging and to plummet with dementia — providing an explanation of the biochemical mechanism of action behind these ACTIVE results.

BrainHQ has shown benefits in more than 300 studies. Such benefits include gains in cognition (attention, speed, memory, decision-making), in quality of life (depressive symptoms, confidence and control, health-related quality of life) and in real-world activities (health outcomes, balance, driving, workplace activities). BrainHQ is used by leading health plans, medical centers, clinics, and communities, and by elite athletes, the military, and other organizations focused on peak performance. Consumers can try a BrainHQ exercise for free daily at https://www.brainhq.com.

Contact: media@brainhq.com