

BrainHealth Fact Sheet

AN URGENT NEED

- The brain is our most vital organ, yet most of us do not give it a second thought unless it is injured, diseased or declining. As a result, we are faced with addressing the growing costs and negative effects of a full-blown brain health crisis.
- The pandemic highlighted the brain health crisis that has been developing for decades, increasing mental health challenges, sleep disorders, anxiety, social divisiveness and brain fog.
- By 2050, the healthcare cost for Alzheimer's patients is expected to reach \$750 billion per year.
- Disruptions in education have left millions of children falling behind.
- Since 9/11, active-duty service members and veterans are four times more likely to die from suicide than in combat.

OUR RESPONSE

Center for BrainHealth[®], part of The University of Texas at Dallas, is a global leader redefining how we understand the brain's health and performance. Our leading-edge studies and programs are supported by federal and state grants as well as private and institutional philanthropy. Our research is helping individuals get proactive with simple steps towards better brain health in 50 states and 63 countries; Texas is the epicenter of this transformation.

- Over the past 20+ years, we have reached more than 90,000 middle- and high-school students in primarily underserved communities across Texas.
- We work with every branch of the military, police departments and first responders, veterans, corporations focusing on employee wellness, and individuals to improve brain performance.
- We have created The BrainHealth Index, a proprietary tool that measures an individual's holistic brain health and performance. When taken periodically, it can track change – both upward gains and early losses – and reveal multiple pathways to expand brain health. Recent research has established a correlation between self-reported gains in the Index and physical brain changes visible through functional MRI.

MEASURABLE GAINS

Improved brain health positively impacts educational, social, health, institutional, and economic dimensions.

Randomized classroom training of middle schoolers with low socio-economic status revealed gains:

- The number of students achieving mastery level in standardized testing across all core subjects doubled.
- The number of students on track to graduate increased by 86%.

A clinical trial of individuals with chronic-stage traumatic brain injury (military, veterans, first responders and athletes) resulted in:

- 23% improvement in complex reasoning
- 58% decrease in depressive symptoms and 43% reduction in stress-related symptoms
- Measurable improvements in the physical brain: cortical thickness, cognitive control networks connectivity, and neural efficiency

In clinical trials with healthy adults over 50, we documented significant gains:

- 31% improvement in the transmission of brain network communication
- 8% average improvement in brain blood flow, countering the steady decrease that starts around age 30.

WHY IT MATTERS

Partnering with change-makers in the private and public sectors, UTD Center for BrainHealth and Texas are ushering in the next health revolution. What this means: Texans could regain decades of neural health; emerging adults could reduce depression before it becomes debilitating; students living in poverty could improve academic achievement; military and first responders could improve agility; and the aging population could increase their well-being.