

Pioneering Brain Health

Proactive Brain Care:

Why Comprehensive Testing is Vital After 50

Introduction

In the rapidly evolving landscape of global health, a paradigm shift has occurred over the last century, with chronic conditions surpassing infectious diseases as primary causes of morbidity and mortality¹. The focus on controlling and preventing chronic diseases, exemplified by successful campaigns like smoking cessation, has led to groundbreaking advancements in cardiovascular health. However, this preventive model has been slower to integrate into healthcare systems reliant on illness-based payment structures. The percentage of aging populations within societies is continuously growing and with it the increasing burden of neurological conditions. This emphasizes the urgent necessity for collaborative efforts aimed at preventing age-related brain diseases and promoting brain health across the lifespan.

This white paper explores the concept of brain health within the contexts of aging and preventive care, delving into the intricate mechanisms underpinning aging and brain aging. The narrative underscores the complexity of brain aging, emphasizing the multifaceted forces that shift individuals from a state of brain health to manifesting neurological diseases (figure 1). A critical examination of these processes leads to strategic recommendations aimed at bolstering brain health through a life-course approach.

The neuroscience community is poised to embrace a preventive care approach², given the association between modifiable risk factors (e.g., hypertension, smoking) and neurological conditions.

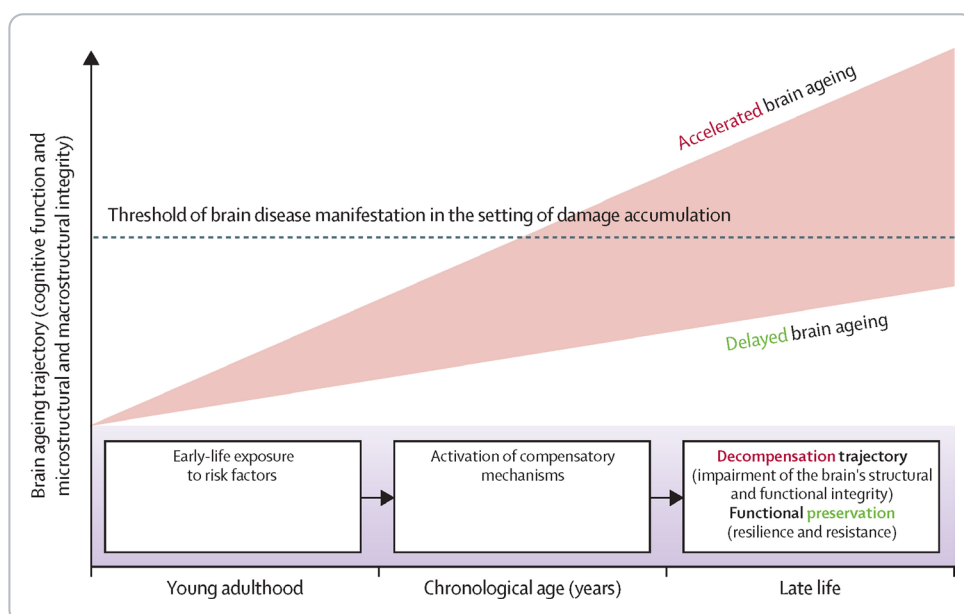


Figure 1. Trajectories of accelerated versus delayed brain ageing. The Lancet: The role of population-level preventive care for brain health in ageing [🔗](#)



With over 40% of dementia cases and 90% of stroke cases attributed to modifiable risk factors, there exists a compelling case for a preventive focus.



Current and future directions in brain health underscore the growing recognition of brain health as a crucial area for clinical practice, research, and policy. International health and neurological associations have acknowledged the importance of a life-course approach, advocating for a shift from individual-level factors to broader population-wide variables. As the concept of brain health continues to evolve, efforts are needed to develop a global measure of brain health and bridge existing knowledge gaps.

This white paper advocates for a comprehensive brain health test designed for individuals aged 50 and above, emphasizing the holistic insights it provides into brain functionality, lifestyle, and genetic factors that influence longevity. This discussion will delve into the broader implications of early brain health disease identification, with a specific focus on brain health.

Components of a Comprehensive Brain Health Test³

Diagnosing problems in the brain can be challenging due to the complexity of the nervous system. Symptoms of a brain condition often manifest in other physical parts of the body or behavioral changes. When concerns about brain health arise, an initial evaluation is conducted, involving a thorough medical history and a neurological exam. This examination checks various aspects such as alertness, muscle strength, coordination, reflexes, and responses to pain. Additionally, the eyes are examined for optic nerve swelling, and basic memory tests may be administered. Previous studies have demonstrated that around 30% of patients referred to a physician with subjective complaints of cognitive impairment (SCI) will have a normal, healthy neurological and cognitive evaluation while already having significant brain abnormalities associated with early brain degeneration (Fogel et al., 2021)⁴.

Advanced diagnostic tests for brain health conditions encompass a range of procedures, including balance tests like posturography and vestibular tests, blood tests to detect abnormal hormone levels, CT scans and CT angiography for the examination of cerebral blood flow and Electroencephalography (EEG).

Other diagnostic tests include gait mapping, memory screening tests, motion analysis for movement disorders, magnetic resonance angiography (MRA) and magnetic resonance imaging (MRI) for detailed brain imaging, myelograms using spinal tap, neuropsychological testing for cognitive function, neurovascular ultrasound, as well as advanced CT scans such as positron emission tomography (PET) and single-photon emission computed tomography (SPECT).

These diagnostic tools contribute to a comprehensive understanding of brain health and aid in the identification of potential brain conditions.

Benefits of a Brain Health Test for Longevity

Brain health tests can offer numerous benefits, particularly in the context of promoting longevity and overall well-being.

Early Detection of Brain Conditions

Detecting problems at the early physiological stage of deterioration enables timely intervention and management, potentially preventing, or at least delaying, the progression of conditions that could impact longevity.

Holistic Insight

This multifaceted, holistic, approach allows for a thorough understanding of an individual's brain health, considering both internal and external factors that influence longevity.

Tailored Interventions

By uncovering specific aspects of brain health, the test facilitates the development of personalized and targeted interventions. This could include lifestyle modifications, cognitive exercises, or medical treatments tailored to address individual needs, thereby optimizing brain health and contributing to longevity.

Preventive Strategies

Armed with a comprehensive understanding of brain health, individuals and healthcare providers can implement preventive strategies. This may involve adopting lifestyle changes, managing modifiable risk factors, and engaging in activities that promote cognitive well-being, all of which contribute to a healthier and potentially longer life.

Genetic Insights

Understanding genetic factors related to brain health provides valuable information about an individual's predisposition to certain conditions. This knowledge allows for proactive measures and early interventions to mitigate genetic risks, contributing to improved longevity.

Enhanced Quality of Life

Preserving and enhancing brain health positively impacts various aspects of daily life. Improved cognitive function, emotional well-being, and overall mental vitality contribute to a higher quality of life in the later years, enhancing the overall experience of longevity.

Empowerment, Awareness and Engagement

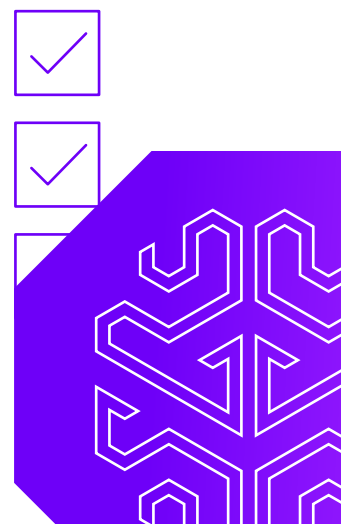
A Brain Health test empowers individuals by providing them with knowledge about their brain health. This awareness fosters a proactive approach to health management, encouraging individuals to take an active role in their well-being and make informed choices that support their brain health and longevity.

Global Measure of Brain Health

As efforts continue to develop a global measures of brain health, participating in Brain Health Test contributes valuable data to this evolving field. This collective information aids researchers in refining their understanding of brain health determinants, potentially influencing public health policies and interventions.

Monitoring Treatments

Monitoring the efficacy of a given brain-directed treatment enables improved and optimal personalized patient care.



Integration of Delphi-MD into Brain Health Assessments

The integration of Delphi-MD into the comprehensive Brain Health Test represents a cutting-edge advancement in neuro-diagnostic capabilities, significantly elevating the quality of care individuals receive. Delphi-MD, conducted seamlessly at the point of care, stands out as a state-of-the-art objective brain health test designed to provide primary care givers with a wealth of invaluable insights. This innovative tool operates within a collaborative care model, involving neurologists to ensure a multidisciplinary and thorough approach to brain health assessment.

One of the standout features of Delphi-MD is its capacity for facilitating early detection of neurodegenerative conditions. By analyzing subtle changes in neural physiological associated with conditions like Alzheimer's or Parkinson's disease, the test empowers healthcare providers with the ability to identify age related brain disorders at an early stage of progression. This early identification is pivotal for initiating timely interventions and implementing management strategies that may prevent further deterioration or at least delay the progression of the neurodegenerative conditions.

The Delphi-MD Brain Health Test represents a paradigm shift in neuro-diagnostic capabilities. It transcends traditional assessments by providing actionable insights, early detection capabilities, and personalized guidance, making it an invaluable tool for healthcare providers dedicated to promoting optimal brain health and longevity.



**Delphi-MD:
from improved
brain disorders'
management
to promoting
brain health**

Conclusion

A comprehensive brain health test, enriched by advancements like Delphi-MD, not only provides a holistic view of an individual's health but also underscores the importance of early disease identification, particularly in the realm of brain health. These innovations contribute to a future where individuals can proactively manage their overall well-being, paving the way for a resilient, vibrant, and brain-healthy aging society. As we unlock the secrets of longevity, these integrated approaches promise a future where the aging population can thrive with informed strategies for longevity and optimal brain health.

References

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