Chronological Age Not Enough to Determine Differences in Older Adults’ Health and Well-Being

Chronological age has almost no role in accounting for differences in older adults’ health and well-being, according to a new, large-scale study by a multidisciplinary team of researchers at the University of Chicago.

The study comprised a major longitudinal survey of a representative sample of 3,000 individuals ages 57 to 85. Using a comprehensive model of health and aging, the team showed how other factors, such as psychological well-being, sensory function, mobility, and health behaviors, are essential parts of an overall health profile that better predicts mortality.

Researchers also found that:
- cancer alone is not related to other conditions that undermine health;
- poor mental health undermines health in ways not previously recognized;
- obesity poses little risk to older adults with excellent physical and mental health;
- sensory function and social participation play critical roles in sustaining or undermining health;
- having broken a bone after age 45 is a major marker for future health issues;
- older men and women have different patterns of health and well-being during aging; and
- mobility is one of the best markers of well-being.


Exercise May Help Protect Against Alzheimer’s Disease

New research suggests exercise might provide some measure of protection from Alzheimer’s disease and other dementias.

Thirty men and women ages 59 to 69 underwent treadmill fitness assessments and ultrasounds of the heart. They then received brain scans to look for blood flow to certain areas of the brain.

Researchers demonstrated a positive correlation between fitness and blood flow to areas of the brain where the hallmark tangles and plaques of Alzheimer’s disease pathology are usually first detected. Results showed blood flow to critical areas of the brain was higher in individuals who were more physically fit.


Tau Protein Measures are Better Markers of Alzheimer’s Disease Than Amyloid Beta Measures

Using a new imaging agent that binds to tau protein and makes it visible in positron emission tomography scans, a new study in Science Translational Medicine has shown that measures of tau are better markers of the cognitive decline characteristic of Alzheimer’s disease than measures of amyloid beta.

The study included 36 control participants who were cognitively normal and 10 patients with mild Alzheimer’s disease. To determine degrees of cognitive impairment, some participants who underwent brain imaging also were assessed with the traditional clinical dementia rating scale, cerebrospinal fluid measures, and widely used pen-and-paper tests of memory and other brain functions.

Researchers found that measures of tau protein better predict symptoms of dementia than measures of amyloid beta when brain images of cognitively normal participants were compared to those with mild Alzheimer’s disease.

This analysis helped establish that the new tau agent, T807, is an important tool for understanding the timeline of Alzheimer’s disease progression and defining which regions of the brain are involved.
Older Adults May Benefit from Lowering Their Blood Pressure Below Current Guidelines

Adults 75 and older with hypertension, including those who are frail and have poor overall health, could benefit from lowering their blood pressure below current medical guidelines, according to a multi-institutional investigation in the Journal of the American Medical Association.

The new findings address questions from a large, randomized clinical trial called SPRINT (Systolic Blood Pressure Intervention Trial) that concluded last year. Using medication to lower systolic blood pressure to 120 mmHg, less than the currently recommended 140 to 150 mmHg, significantly reduced risk for heart disease and death. However, the question remained whether older patients, who are particularly susceptible to side effects, could tolerate the intensive treatment.

Fitness levels of 2,636 older adult SPRINT participants were categorized in two ways. Frailty status was determined by a 37-item index that gauges quality of life measures, including number of chronic conditions and mental acuity. Participants were also categorized by walking speed, with slow gait as an independent indicator of poor health.

Results were similar when comparing the least fit groups from both types of measurements. Grouping the study population by frailty status showed that although the most frail patients had higher rates of heart disease and death, these rates were similarly lowered by tighter blood pressure control (3.9% versus 5.8% for heart disease and 2.95% versus 4.28% for death). Further, intensive blood pressure treatment did not significantly increase risk for injurious falls and other serious side effects among the frail group.

Socioeconomic Factors Play a Significant Role in Racial Gap Between Black and White Individuals with Cognitive Impairment

Social and economic disadvantages play a significant role in why Black individuals face a higher risk than White individuals of developing cognitive impairment later in life, according to a study in the Journal of Health and Social Behavior.

Researchers analyzed survey data from 8,946 participants in the Health and Retirement Study. The information was collected in multiple waves over a 12-year period (1998-2010). All participants were 65 or older in 1998.

The odds that Black individuals will develop cognitive impairment, including dementia, in later life were 2.52 times greater than the odds for White individuals. Much of that racial disparity was explained by childhood disadvantages, such as growing up poor and in the segregated South, and lower socioeconomic status in adulthood. Racial differences in health problems (e.g., heart disease, diabetes) and health behaviors (e.g., smoking, drinking) did not explain much of the racial gap in cognitive impairment.

Once researchers took the various socioeconomic factors into account, the odds ratio of cognitive impairment between Black and White individuals—or the racial gap—was reduced from 2.52 to 1.45, meaning socioeconomic factors explained a significant amount of the gap.

Coprophagia Linked to Neurodegeneration

A new study in the Journal of Neurology reviewed the cases of 12 adult patients diagnosed with coprophagia over the past 20 years and found that the behavior is associated with a wide range of neuropsychiatric disorders, particularly neurodegenerative dementia.

Of the 12 patients with coprophagia diagnosed from 1995-2015, one half had dementia. The 12 patients with coprophagia were split evenly between men and women. Additional behaviors were common in these patients, including scatolalia (fecal smearing), hypersexuality, aggression, and pica (eating objects of any kind). The median age at onset of coprophagia was 55, with a range from 20 to 88 years.

Brain scans of the six patients with dementia showed medial temporal lobe atrophy. The cause of degeneration was unknown. However, in the other six patients without dementia, age, seizures, or metabolic changes were potential causes of degeneration.

Socioeconomic Factors explained a significant amount of the gap.
Visual Blurring May Cause Walking Errors in Older Adults

Visual blurring (such as that produced by bifocals or multifocal lenses) may cause errors in foot position when walking, which could contribute to the risk of tripping and falling in older adults, suggests a study in *Optometry and Vision Science*. Nineteen older adults (mean age = 72 years) with normal vision were evaluated while performing a series of precision stepping tasks, which included fixing their gaze on a target footprint, or 30 to 60 cm ahead of the target. Gaze position was performed by an eye-tracking device. Participants were also tested while wearing either their normal glasses or glasses producing blurred vision. The amount of blur was similar to that caused by looking at a distance through the reading lens of a pair of bifocals or multifocal (progressive) lenses. Stepping accuracy was measured precisely using digital photography.

Participants made larger foot placement errors and varied more in step position when looking ahead of the stepping target. Visual blurring also led to increased stepping errors and variability. The errors were greatest with the combination of blurred vision and looking ahead, especially when looking 2 feet ahead of the target. Blur resulted in significant understepping error (i.e., the foot falling short) when participants’ gaze was directed beyond the target.


New Blood Test Accurately Detects Early Alzheimer’s Disease

A new study in *Alzheimer’s & Dementia: Diagnosis, Assessment & Disease Monitoring* announced the development of a blood test that leverages the body’s immune response system to detect an early stage of Alzheimer’s disease (referred to as the mild cognitive impairment [MCI] stage) with unparalleled accuracy. In a proof-of-concept study involving 236 participants, the test demonstrated an overall accuracy, sensitivity, and specificity rate of 100% in identifying individuals whose MCI was caused by an early stage of Alzheimer’s disease.

Researchers analyzed blood samples from 236 participants, including 50 individuals with MCI with low levels of amyloid-beta 42 peptide in their cerebrospinal fluid. Using human protein microarrays, each containing 9,486 unique human proteins used as bait to attract blood-borne autoantibodies, researchers identified the top 50 autoantibody biomarkers capable of detecting ongoing early-stage Alzheimer’s disease pathology in patients with MCI. In multiple tests, the 50 biomarkers were 100% accurate in distinguishing patients with MCI due to Alzheimer’s disease from healthy age- and gender-matched controls. Further testing of the selected MCI biomarker panel demonstrated similar high overall accuracy rates in differentiating patients with early Alzheimer’s disease at the MCI stage from those with more advanced, mild-moderate Alzheimer’s disease (98.7%), early-stage Parkinson’s disease (98%), multiple sclerosis (100%), and breast cancer (100%).


Hearing Loss Negatively Impacts Older Adults’ Quality of Life

Research has found that hearing loss has wide-ranging impacts on older adults’ ability to communicate, move, and participate in different hobbies and activities.

Researchers studied how men and women living in the Jyväskylä region of Finland ages 75 to 90 moved within their life space. The study took account of the extent of the life space, times of movement, and assistance needed for moving. Life space mobility describes not only older adults’ ability to move, but also their opportunities to participate in events outside their homes. According to the results, individuals who experienced hearing problems in different everyday situations moved less within their life space than those who considered their hearing to be good. During the 2-year monitoring period, individuals who were hard of hearing were twice as likely as others to limit their life space only to nearby areas. The life space of individuals with good hearing remained more often unlimited.