Sex Differences Evident With Alzheimer’s Gene

The apolipoprotein E (APOE) gene, the strongest genetic risk factor for Alzheimer’s disease (AD), may play a more prominent role in disease development among women than men, according to new research from the Vanderbilt Memory and Alzheimer’s Center.

The study, published in *JAMA Neurology*, adds to mounting evidence that higher prevalence of AD among women may not simply be a consequence of longer longevity. The research was on a meta-analysis of cerebral spinal fluid samples from study volunteers from four datasets and autopsy findings from six datasets of brains with AD.

The study examined whether APOE in men and women was primarily associated with the *amyloid pathway*—the proteins that form plaques in the brain—or with the *tau pathway*—the proteins that form tangles in the brain. The association with the amyloid pathway was the same in men and women. However, the APOE association was much greater for women with the tau pathway.

Further analysis revealed that the sex difference with tau levels was present in amyloid-positive individuals—those with higher levels of amyloid plaque. Researchers suggest that APOE may modulate risk for neurodegeneration in a sex-specific manner, particularly in the presence of amyloidosis.


Productive Aging is Needed for Successful Workforce

To keep pace with the aging workforce, a new emphasis on productive aging is needed to keep U.S. workers of all generations as healthy and productive as possible, according to an article in the *Journal of Occupational and Environmental Medicine*. Researchers from the National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, present evidence supporting a framework for productive aging at work, with the goals of maintaining productivity in older workers and preparing younger generations to remain healthy and productive as they age.

By 2022, it is expected that one third of American individuals ages 65 to 74 will still be working, compared to approximately 20% in 2002. Researchers developed a framework for productive aging of the workforce comprising four elements: life-span perspective, reflecting factors that affect aging and individuals’ work; comprehensive and integrated approach to worker health and safety; emphasis on positive outcomes for workers and organizations, addressing workplace hazards, maintaining productivity, and promoting well-being; and supportive work culture for multigenerational issues, creating a work culture for generations with differing values and working styles.


Depression May Be Associated With Memory Problems in Older Adults

Depression in older adults may be linked to memory problems, according to a study published in the online issue of *Neurology®*. The study also showed that older adults with greater symptoms of depression may have structural differences in the brain compared to individuals without symptoms.

The study comprised 1,111 individuals who were all stroke-free, with an average age of 71. Most were Caribbean Hispanic individuals. At the beginning of
the study, all had brain scans, a psychological examination, and assessments for memory and thinking skills. Memory and thinking skills were tested again an average of 5 years later.

At the start of the study, only 22% of participants had greater symptoms of depression, which was defined as a score of ≥16 on a test with a range of 0 to 60. Scores ≥16 are considered at risk for clinical depression. After adjusting for age, race, anti-depressive medications, and other variables, greater symptoms of depression were linked to worse episodic memory. Scores on tests were lower by 0.21 of a standard deviation compared to test scores of individuals without greater symptoms of depression.

Researchers also found that individuals with greater symptoms of depression had differences in the brain, including smaller brain volume and a 55% greater chance of small vascular lesions in the brain. Researchers found no evidence of a relationship between greater symptoms of depression and changes in thinking skills over 5 years.


Grip Strength Test May Indicate Whether Older Adults Should Undergo Surgery

Whether older adults are strong enough for surgery is a common question about patients in the last years of life, when medical problems may increase. Surgery and anesthesia are stressors that can be difficult for frail individuals to overcome. But determining frailty is an inexact science, and it is often assessed with an eyeball test, examining the way individuals stand up, the way they walk, or their age. Because eyeball tests are imprecise, some patients too frail for surgery may still have an operation, and others who are strong enough could be denied a procedure.

Researchers found that performing a 1-minute grip strength test, completed with a hand grip device in the physician’s office, may be a reliable indicator of whether surgery is a good option. The grip measurement is not a new test, but it correlates reliably with other measurements of frailty. Initial research shows that the grip strength test works well as a predictor of vascular surgery complications, and researchers believe it will work well with other specialties as well.


Innovation Challenge Will Address Opioid Drug Epidemic

The U.S. Food and Drug Administration (FDA) launched an innovation challenge to spur development of medical devices, including digital health technologies and diagnostic tests that could provide novel solutions to detecting, treating, and preventing...
opioid drug addiction; addressing diversion; and treating pain. The challenge will provide companies selected by the FDA the opportunity to work closely with the agency to accelerate development and review of their innovative products.

The FDA is encouraging developers to submit proposals, including products such as diagnostics to identify patients at increased risk for addiction, alternative treatments for pain, treatments for symptoms of opioid withdrawal, and more.


Breads and Cereals May Provide Older Adults With Essential Nutrients

A study published in *Nutrients* and presented at the American Geriatrics Society Annual Scientific Meeting shows that grain foods provide many of the nutrients older adults need most. More than one third of the American population is older than 50; however, the diets of many of these individuals fall short in several nutrients defined by government health experts as necessary for healthy aging.

*Shortfall nutrients*, or under-consumed nutrients, include vitamins A, D, E, C, folate, calcium, magnesium, fiber, potassium, and iron. Under-consumption of these nutrients has been associated with adverse health outcomes. In the study, researchers examined the foods older adults are eating—or not eating—to contribute to the growing issue of shortfall nutrients.

To conduct the study, researchers reviewed more than 4,500 dietary surveys combining data from two National Health and Nutrition Examination Survey (NHANES) datasets (2011 to 2012; 2013 to 2014) for adults older than 51. The surveys asked participants to recall what they had eaten in the past 24 hours. Data were analyzed for men and women, and looked at the consumption of all grains and various sub-categories of grains (e.g., bread, tortillas, ready-to-eat cereals, cooked grains, quick breads, sweet bakery products). Researchers found that grain foods contributed less than 5% of total saturated fat and less than 15% of all calories in the total diet, yet provided a large amount of shortfall nutrients. In addition, breads, rolls, and tortillas are contributors of daily need for thiamin, niacin, dietary fiber, folate, and iron. Ready-to-eat cereals contribute iron, folate, thiamin, vitamin B6, and vitamin B12.


How Older Adults Want to Discuss Their Health

Researchers conducted three qualitative studies to gain a better understanding of if, and how, older adults prefer to discuss various health topics. In a small group study published in the *Journal of the American Board of Family Medicine*, researchers interviewed 40 older adults on how and when they preferred to discuss life expectancy with their primary care physician. Researchers found that 32.5% of participants never wanted to discuss their life expectancy, 35% were open for discussion, and 32.5% wanted to have this discussion only toward the end of life.

Researchers also published a study exploring older adults’ perceptions of frailty, published in *BMC Geriatrics*. In a study of 29 participants, researchers conducted focus groups with participants in various frailty statuses (i.e., frail, prefrail, nonfrail) and at different ages to evaluate existing ideas about frailty. Researchers found that older adults’ ideas about frailty were different from the medical definition of frailty; participants associated old age with frailty; participants who were in the nonfrail or prefrail stages did not wish to discuss frailty with their physicians, although frail participants were more open to the discussion; and all participants wanted information regarding prevention or improvement of frailty.

Finally, researchers conducted interviews with 40 individuals 65 years or older to understand their thoughts regarding stopping cancer screening when life expectancy is limited. Researchers found that participants were open to considering cessation of cancer screenings, and that participants trusted their physicians to know what was best for them.