INTERNET NEWS

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Medscape Medical News

Lower LDL of 'Critical Importance' in Reducing Dementia Risk

Jeff Craven
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A low-density lipoprotein cholesterol (LDL-C) level below 70 mg/dL was associated with a 26% reduced risk of all-cause dementia and a 28% lower risk of Alzheimer's disease-related dementia (ADRD), with statin use further

A low-density lipoprotein cholesterol (LDL-C) level below 70 mg/dL was associated with a 26% reduced risk of all-cause dementia and a 28% lower risk of Alzheimer's disease-related dementia (ADRD), with statin use further decreasing that risk, a new study suggests.
Lead investigator Yerim Kim, MD, PhD, Department of Neurology, Kangdong Sacred Heart Hospital, Hallym University College of Medicine, Seoul, South Korea, and colleagues wrote.
To the study the issue further, investigators led a retrospective analysis of patients in 11 university hospitals in South Korea that included 108,980 patients with LDL-C levels < 70 mg/dL and a propensity score matched group of 108,980 patients with levels > 130 mg/dL.

Researchers assessed the prevalence of all-cause dementia as a primary outcome and ADRD as a secondary outcome and performed secondary analyses of patients with LDL-C levels below 55 mg/dL and patients who used statins.

LDL of 'Critical Importance'

Compared with patients who had LDL-C levels of ≥ 130 mg/dL, investigators found a 26% reduction in all-cause dementia among patients with LDL-C levels < 70 mg/dL (hazard ratio [HR], 0.74; 95% CI, 0.70-0.78) and a 28% reduction in ADRD (HR, 0.72; 95% CI, 0.67-0.77).

Among patients with LDL-C levels < 55 mg/dL, researchers noted an 18% reduction, each, in the risk for all-cause dementia (HR, 0.82; 95% CI, 0.77-0.88) and ADRD (HR, 0.82; 95% CI, 0.76-0.89). There was no significant reduction in dementia risk in those with levels < 30 mg/dL compared with patients with LDL-C levels of ≥ 130 mg/dL.

The use of statins in patients with LDL-C < 70 mg/dL was also associated with a 13% lower risk of all-cause dementia (HR, 0.87; 95% CI, 0.80-0.94) and a 12% decrease in ADRD risk (HR, 0.86; 95% CI, 0.78-0.94) compared with patients who did not use statins. There was no link between lower risk and statin use among those with LDL-C levels < 55 mg/dL.

“The primary findings of this study highlight the critical importance of LDL-C levels in dementia risk, emphasizing the critical importance of these levels irrespective of statin use,” the investigators wrote. “Lower LDL-C levels are directly associated with reduced dementia incidence, supporting cholesterol management as fundamental in preventing dementia.”

While earlier research had suggested lower LDL levels may offer a protective advantage against dementia, these findings provide a specific target number, which investigators said could prove helpful in clinical practice. Dr Yerim Kim said.

“These findings emphasize the importance of targeted LDL-C management as part of dementia prevention strategies, with potential integration into clinical guidelines,”

“The results support the use of statin therapy within specific LDL-C ranges for both cardiovascular and cognitive health benefits.”

The study was published online April 1 in the *Journal of Neurology, Neurosurgery & Psychiatry*.

New blood test may help diagnose, show how far Alzheimer's has progressed

There are currently a few tests that can be used to help diagnose Alzheimer's disease, such as blood tests looking for the proteins amyloid-beta and tau, that are associated with the condition, as well as cognitive tests and brain imaging.

However, people are not always diagnosed at the beginning of the disease — they can be diagnosed at different stages, which can influence how they are treated.

Now, researchers at WashU Medicine in St. Louis, MO, have developed a blood test that can not only help diagnose Alzheimer's disease but also provide insight to doctors on how far the disease has progressed, helping them determine the right treatment path.

This builds on previous research on a new protein biomarker for tau tangles in Alzheimer's disease.

A study on this new blood test was recently published in the journal *Nature Medicine*

New protein biomarker for tau tangles

For this new blood test, researchers focused on a protein called MTBR-tau243, which researchers of this study identified as a potential biomarker for tau tangles in Alzheimer's disease in previous research published in August 2023.

"MTBR-tau243 is a chipped (off) piece of the protein in Alzheimer's tau tangles," Randall J. Bateman, MD, the Charles F. and Joanne Knight Distinguished Professor of Neurology at WashU Medicine in St. Louis, MO, and co-senior author of this study explained to *Medical News Today*. "The blood test measures this piece of tau tangles in the blood as a measure of how many tangles are in the brain."

"New biomarkers are tools that allow us to track the disease in different ways," Bateman continued. "Just like doctors use a stethoscope, x-ray, and CAT scan to measure different aspects of the disease, these biomarkers enable us to measure different aspects of Alzheimer's disease. By tracking different processes of Alzheimer's disease, we can better diagnose, predict and even develop new and better treatments for Alzheimer's disease."

"The new biomarker — plasma eMTBR-tau243 — reflects changes in tau pathology occurring in the clinical symptomatic phase of Alzheimer's disease and can be used to stage Alzheimer's disease tauopathy, and to determine if cognitive symptoms are likely due to Alzheimer's disease tau pathology," added Kanta Horie, PhD, voluntary research associate professor of neurology at WashU Medicine in St. Louis, MO, and both co-first and co-corresponding author of this study.

During the study, researchers tested study participants from three main stages of Alzheimer's disease: presymptomatic, early-stage with mild cognitive impairments, and late symptomatic disease where participants have been diagnosed with dementia.

The scientists found that blood MTBR-tau243 levels reflected the amount of tau tangles in the brain with 92% accuracy.

Among participants showing cognitive symptoms of Alzheimer's disease, researchers discovered that MTBR-tau243 levels were significantly higher for participants at the mild cognitive stage, and up to 200 times higher for those in the late symptomatic disease stage.

"This new blood test can confirm the amount of tau tangles in the brain that helps determine the stage of Alzheimer's disease and if cognitive decline is likely due to Alzheimer's disease. This test can be used to accelerate new treatments, and with further validation, improve diagnosis and stage of Alzheimer's disease." — Randall J. Bateman, MD

MEDBRIEF

Allergic Diseases Linked to Increased Risk for Migraine

Edited by Mandeep Singh Rawat
April 17, 2025

TOPLINE:

Allergic diseases such as atopic dermatitis, asthma, allergic rhinitis, and allergic conjunctivitis are associated with a significantly increased risk for migraine,

Xuqing Huang, with the Affiliated Hospital of Hangzhou Normal University in Hangzhou, China, was the corresponding author of the study, which was published online on April 4 in the *International Archives of Allergy and Immunology.*

Allergic diseases such as atopic dermatitis, asthma, allergic rhinitis, and allergic conjunctivitis are associated with a significantly increased risk for migraine, according to a systematic review and meta-analysis.

METHODOLOGY:

•Researchers searched databases to identify observational studies that examined the association between allergic diseases and migraine.

•They focused on 10 cohort and case-control studies with more than 14.9 million participants in Asia, Europe, and North America.

TAKEAWAY:

•A significant association was found between allergic diseases and the risk for migraine (odds ratio [OR], 1.52; 95% CI, 1.40-1.65).

•Among the allergic conditions analyzed, allergic rhinitis showed the strongest association with migraine (OR, 2.16; 95% CI, 1.43-3.24).

•Odds for migraine were increased to a lesser extent with atopic dermatitis (OR = 1.27), asthma (OR = 1.49), and allergic conjunctivitis (OR = 1.74).

IN PRACTICE:

“These findings offer clinicians updated evidence that highlights the increased risk of migraine in patients with allergic diseases,” the researchers wrote. The reason for the association is unclear, but inflammation might be one mechanism by allergic diseases contribute to migraine, they noted.

Dupilumab Approved for Chronic Spontaneous Urticaria

Heidi Splete

April 18, 2025

The US Food and Drug Administration (FDA) has approved dupilumab for the treatment of chronic spontaneous urticaria (CSU) in patients aged 12 years and older who "remain symptomatic despite H1 antihistamine treatment," according to a press release from the manufacturers, Regeneron Pharmaceuticals and Sanofi.

Approval follows the FDA's request in October 2023 for more efficacy data to support approval. In November 2024, the FDA accepted the resubmission of the application, which included additional data presented at the annual meeting of the American College of Allergy, Asthma, & Immunology that showed significant reduction in itching and hives with dupilumab compared with placebo in patients with CSU.

Dupilumab (Dupixent) is already approved in the United States for several other indications including atopic dermatitis, severe asthma exacerbations, chronic rhinosinusitis with nasal polyps, and prurigo nodularis. Dupilumab is a fully human monoclonal antibody that works by inhibiting the signaling of the IL-4 and IL-13 pathways, according to the company.

The data supporting resubmission came from the third part of the LIBERTY-CUPID phase 3 program (LIBERTY-CUPID Study C) of children and adults patients with CSU. In that study, patients showed a significantly greater change from baseline to 24 weeks compared with placebo on the primary outcome measures of Itch Severity Score over 7 days and Urticaria Activity Score over 7 days.

Patients were randomized to placebo or one of two treatment groups: subcutaneous dupilumab every 2 weeks as an add-on therapy at doses of 300 mg for adults and adolescents weighing 60 kg or more; or 200 mg for adolescents weighing less than 60 kg and children weighing 30 kg or more.

The original submission of dupilumab for treatment of CSU included data from LIBERTY-CUPID studies A and B. These studies enrolled patients uncontrolled on standard antihistamines (study A) and those uncontrolled on antihistamines and refractory to or intolerant of omalizumab (study B). In these studies, patients showed significant improvement in disease activity from baseline with the addition of dupilumab to antihistamines compared to antihistamines alone. Safety profiles were consistent with dupilumab's other indications across all three studies.

"CSU has really gone unseen in dermatology for too long, even though it belongs under our umbrella," said Adam Friedman, MD, professor and chair of dermatology, George Washington University, Washington, DC. "Now, with an additional FDA-approved option, one with which we all should have familiarity and comfort for other indications, it's an opportunity to welcome this large patient population-1% in the US-into our practices," he told Medscape.

Dupilumab is approved for CSU in Japan, the United Arab Emirates, and Brazil. It had been under review for CSU in the European Union, but the application was withdrawn so the company can resubmit an updated application with additional data, according to the European Medicines Agency.

Malnutrition-Related Diabetes Officially Named 'Type 5'

Miriam E. Tucker
April 11, 2025

Malnutrition-related diabetes, distinct from both type 1 and type 2, has now been officially recognized and named "type 5 diabetes."

The vote to endorse the category took place on April 8, during the International Diabetes Federation's (IDF's) World Diabetes Congress, held in Bangkok, Thailand. In January 2025, a panel met in India to draft a consensus

The vote to endorse the category took place on April 8, during the International Diabetes Federation's (IDF's) World Diabetes Congress, held in Bangkok, Thailand. In January 2025, a panel met in India to draft a consensus statement about the condition, due to be published soon, Meredith Hawkins, MD, professor of medicine at Albert Einstein College of Medicine, Bronx, New York, told *Medscape Medical News.*

"Malnutrition-related diabetes has historically been vastly underdiagnosed and poorly understood…The IDF's recognition of it as 'type 5 diabetes' is an important step toward raising awareness of a health problem that is so devastating to so many people," Hawkins said.

(The American Diabetes Association's classification defines type 1 and type 2, followed by specific types due to other causes such as single genes, exocrine pancreatic diseases such as cystic fibrosis, or drug/chemical-induced diabetes. Gestational diabetes is listed separately.)

Malnutrition-related diabetes was first described in Jamaica in 1955. It is seen most commonly in young men in low- and middle-income countries (LMICs) who have a body mass index < 19. They are often misdiagnosed as having type 1 diabetes, but they don't develop ketonuria or ketosis despite high blood glucose levels and high insulin requirements.

In 1985, the World Health Organization officially classified “malnutrition-related diabetes mellitus” as a distinct diabetes type, but then in 1999 dropped the category, citing a lack of evidence that malnutrition or protein deficiency causes diabetes.

Hawkins became aware of malnutrition-related diabetes in 2005 while teaching at global health meetings. In 2010, she founded Einstein’s Global Diabetes Institute to study it. In 2022, she and her colleagues published findings from state-of-the-art metabolic testing in 73 Asian Indian men, including 20 with what is now called “type 5 diabetes” following exclusion of all other known forms of diabetes by immunogenetic analysis. Another 15 had type 1 diabetes, 13 had type 2 diabetes, 16 were lean without diabetes, and nine were overweight without diabetes.

Among the findings were lower total insulin secretion in the “type 5” group than in both the lean group without diabetes and the T2D group, significantly lower endogenous glucose production and significantly higher glucose uptake in the type 5 group than in the T2D group, and significantly lower visceral adipose tissue and hepatocellular lipids in the type 5 group than in the T2D group.

These findings contradict the previous belief that malnutrition-associated diabetes was associated primarily with insulin resistance. “It turns out people with this form of diabetes have a profound defect in the capacity to secrete insulin, which wasn’t recognized before. This finding has revolutionized how we think about this condition and how we should treat it,” Hawkins said.

She told *Medscape Medical News* it’s important to differentiate type 5 from type 1 diabetes because giving too much insulin can rapidly prove fatal. Although there aren’t clear guidelines yet for treating type 5, some data suggest that very small amounts of insulin combined with oral agents may be the most effective.

MEDBRIEF

Large-Scale Lung Cancer Screening Shows High Early Detection Rate

Edited by Katie Lennon

April 01, 2025

Low-dose CT screening in a high-risk population detected lung cancer in 2.0% of participants, with nearly 80% of cases diagnosed at stage I or II. The screening protocol demonstrated 97.0% sensitivity at 12 months, with a 4.8% false-positive rate.

SOURCE:

The study was led by Amyn Bhamani, PhD, and Andrew Creamer, PhD, Lungs for Living Research Centre, University College London in London, the United Kingdom. It was published online on March 25 in *The Lancet Oncology*.

METHODOLOGY:

•Annual low-dose CT screening has been recommended in the United States since 2013, but uptake remains low at only 4.5% of eligible individuals in 2022.

•Regional targeted lung health check pilot programs are ongoing in the United Kingdom and are expected to be rolled into a national program. This study was conducted to assess the implementation of these types of programs.

•Researchers conducted a prospective, longitudinal cohort study involving 12,773 participants aged 55-77 years, with current or former smoking habit within the past 20 years, identified from 329 primary care practices in London.

•Participants meeting US Preventive Services Taskforce criteria or having a Prostate, Lung, Colorectal, and Ovarian 2012 model 6-year risk ≥ 1.3% underwent noncontrast, thin collimation low-dose CT screening.

TAKEAWAY:

•Among 12,773 participants, 261 (2.0%) were diagnosed with lung cancer, including 163 (1.3%) with screen-detected cancer and 98 (0.8%) with delayed screen-detected cancer after nodule follow-up CT.

•The screening protocol demonstrated 97.0% sensitivity (95% CI, 95.0-99.1); 95.2% specificity (95% CI, 94.8-95.6), and a positive predictive value of 30.3% (95% CI, 27.3-33.4).

•Surgical resection was the primary treatment modality in 201 (77.0%) of cases, with 207 (79.3%) of lung cancers being diagnosed at stage I or II.

•Benign surgical resection rate was 11.6% (28 of 241 resections), with one death (0.4%) occurring within 90 days of surgery.

IN PRACTICE:

“Large-scale lung cancer screening is effective and can be delivered efficiently to an ethnically and socioeconomically diverse population…. The findings of our study will help lung cancer services understand the implications of this programme on resource use and help to develop quality assurance standards for lung cancer screening, both in the UK and elsewhere,” wrote the authors of the study.

THANK YOU !