TRINITY MIRKOR



Mild cognitive impairment can lead to dementia: Study

Individuals with mild cognitive impairment, especially of the "amnestic subtype" (aMCI), are at increased risk for dementia due to Alzheimer's disease relative to cognitively healthy older adults. Now, a study co-authored by researchers from MIT, Cornell University, and Massachusetts General Hospital has identified a key deficit in people with aMCI, which relates to producing complex language.

This deficit is independent of the memory deficit that characterizes this group and may provide an additional "cognitive biomarker" to aid in early detection -the time when treatments, as they continue to be developed, are likely to be most effective.

The researchers found that while individuals with aMCI could appreciate the basic structure of sentences (syntax) and their meaning (semantics), they struggled breakdown at that higher with processing certain level where you're ambiguous sentences in integrating form and which pronouns alluded to meaning."

Participants in the

Framingham Heart Study

who achieved higher levels

of education tended to age more slowly and went

on to live longer lives as

compared to those who

did not achieve upward

educational mobility,

according to a new study

at Columbia University

Mailman School of Public

Health and The Robert

people not referenced in the sentences themselves. "These results are among the first to deal with complex syntax and really get at the abstract computation that's involved in processing these linguistic structures," says MIT linguistics scholar Suzanne Flynn, co-author of a paper

detailing the results. The focus on subtleties in language processing, in relation to aMCI and its potential transition to dementia such as Alzheimer's disease is novel, the researchers say. "Previous research has looked most often at single words and vocabulary," says co-author Barbara Lust, a professor emerita at Cornell University. "We looked at a more complex level of language knowledge. When we process a sentence, we have to both grasp its syntax and construct a meaning. We found a



To conduct the study, the scholars ran experiments comparing the cognitive performance of aMCI patients to cognitively healthy individuals in separate younger and older control groups. The research involved 61 aMCI patients of Massachusetts General Hospital, with control group research conducted at Cornell and MIT.

The study pinpointed how well people process and reproduce sentences involving "anaphora." In linguistics terms, this generally refers to the relation between a word and another form in the sentence, such the use of "his" in the sentence.

"The electrician repaired his equipment." (The term "anaphora" has another related use in the field of rhetoric, involving the repetition of terms.)

In the study, the researchers ran a variety of sentence constructions past aMCI patients and the control groups. For instance, in the sentence, "The electrician fixed the light switch when he visited the tenant," it is not actually clear if "he" refers to the electrician, or somebody else entirely. The "he" could be a family member, friend, or landlord, among other possibilities.

On the other hand, in the sentence, "He visited

clock. In primary analysis,

the tenant when the electrician repaired the light switch," "he" and the electrician cannot be the same person. Alternately, in the sentence, "The babysitter emptied the bottle and prepared the formula," there is no reference at all to a person beyond the sentence. Ultimately, aMCI

patients performed significantly worse than the control groups when producing sentences with "anaphoric coreference." the ones with ambiguity about the identity of the person referred to via a pronoun.

"It's not that aMCI patients have lost the ability to process syntax or put complex sentences together, or lost words; it's that they're showing a deficit when the mind has to figure out whether to stay in the sentence or go outside it, to figure out who we're talking about," Lust explains. "When they didn't have to go outside the sentence for context, sentence production was preserved in the individuals with aMCI whom we studied."

Healthy exercise key to good night's sleep

Early riser or night owl, everyone appreciates

a good night's sleep. But despite the best of intentions, quality sleep can elude us, sometimes to the point where it can contribute to serious health issues.

Now, a world first study from the University of South Australia shows that getting a good night's sleep is tied to how you structure your day, with exercise at the heart of sleep quality.

The study examined different components of time use and different aspects of sleep among 1168 children (average age 12 years) and 1360 adults (their parents, average age 44 years, mainly mothers) the study found that children and adults with higher levels of moderate to vigorous physical activity had less troubled sleep, reduced tiredness, and better sleep quality.

Australian guidelines indicate that most adults need about eight hours

Lisa Matricciani, says understanding factors that affect sleep quality is vital for good health and



"Despite what we know

about sleep, many people still struggle to achieve a good night's sleep," Dr Matricciani says.

it's how we spend our "When people think daytime hours. about sleep quality, they tend to focus on "In this study we created different simulations to adjustments immediately see how extending and before bedtime - for restricting aspects of time example, avoiding screens, were related to different not eating too much, and aspects of sleep. avoiding alcohol - but our "We found that if research looks beyond this children and adults to the range of activities increased moderate to we undertake during the

vigorous physical activity, day. "What we found is that they would feel less tired. have less troubled sleep our daytime activities are and better-quality sleep. tied to different aspects of our sleep, from sleep making more time for quality, sleep efficiency sleep predicted more (how much of the time vou spend in bed when restless sleep. you are actually asleep), good night's sleep. If it's and the overall amount of sleep we get, to levels of tiredness during the day, and when we choose to go to bed.

"Sometimes, the for most of us."

simply a matter of being more active during the day, then it may be a relatively achievable goal

"Interestingly, simply

"Everyone wants a

directly displace sleep

- think of kids playing

video games late into the

night - but other times,

Tiny magnetic particles in air linked to Alzheimer's

Magnetite, a tiny particle found in air pollution, can induce signs and symptoms of Alzheimer's disease, new research suggests.

Alzheimer's disease, a type of dementia, leads to memory loss, cognitive decline, and a marked reduction in quality of life. It impacts millions globally

toxic air pollution particles could lead to Alzheimer's and is a leading cause of disease. death in older individuals. "Fewer than 1% of The study Neurodegenerative effects Alzheimer's cases are inherited, so it is likely of air pollutant particles: Biological mechanisms that the environment and lifestyle play a key role implicated for early-onset in the development of the Alzheimer's disease, led by disease." said Associate Associate Professor Cindy Professor Gunawan, from Gunawan and Associate the Australian Institute for Professor Kristine McGrath Microbiology and Infection from the University of Technology Sydney (UTS) was rece published. The resea team, from U UNSW Sydney the Agency Science, Technol and Research Singapore, exam the impact of pollution on b health in mice, well as in hu neuronal cells in lab Their aim wa better underst how exposure to homefirst



"Previous studies have indicated that people who live in areas with high levels of air pollution are at greater risk of developing Alzheimer's disease. Magnetite, a magnetic iron oxide compound, has also been found in greater amounts in the brains of people with Alzheimer's

genetically predisposed to Alzheimer's to very fine particles of iron, magnetite, and diesel hydrocarbons over four months. They found that magnetite induced the most consistent Alzheimer's disease pathologies.

This included the loss of neuronal cells in the hippocampus, an area of the brain crucial for memory and in the somatosensory cortex, an area that processes sensations from the body. Increased formation of amyloid plaque was seen in mice already predisposed healthy mice and those Alzheimer's.

Home First Finance Company India Limited

aging, the researchers Study birth cohort

N. Butler Columbia Aging Center. Upward applied an algorithm known educational mobility was as the DunedinPACE significantly associated with a slower pace of aging and lower risk of



Higher education helps life's longevity

used to develop it. DunedinPACE (stands for epigenetic clock to Pace of Aging Computed genomic data collected from the Epigenome), is by the Framingham Heart measured from a blood test and functions like a speedometer for the aging process, measuring how fast or slow a person's body is changing as they grow older. Biological aging refers to the accumulation of molecular changes that progressively undermine the integrity and resilience capacity of our cells, tissues and organs as we grow older. The Columbia researchers used data from 14,106 Framingham Heart Study spanning three generations to link children's educational attainment data with that of their parents. They then used data from a subset of participants who provided blood samples during data collection to calculate the pace of biological aging using the DunedinPACE epigenetic education?



researchers also tested whether differences in educational attainment between siblings was associated with a difference in the pace of aging. 'A key confound in studies like these is that people with different levels of education tend to come from families with different educational backgrounds and different levels of other resources," explained Gloria Graf, a PhD candidate in the Department of Epidemiology supervised by Belsky, and first author of the study. "To address these confounds, we focused on educational mobility, how much more (or less) education a person completed relative to their parents, and sibling differences in educational attainment -- how much more (or less) education a person completed relative to their siblings. These study designs control for differences between families and allow us to isolate the effects of

of sleep per night, with children and teenagers requiring 8-11 hours per night.* UniSA researcher, Dr

death

The Framingham Heart Study is an ongoing observational study first initiated in 1948 that currently spans three generations.

The Columbia analysis is the first to connect educational mobility with pace of biological aging and mortality. "We've known for a long time that people who have higher levels of education tend to live longer lives. But there are a bunch of challenges in figuring out how that happens and, critically, whether interventions to promote educational attainment will contribute to healthy longevity," said Daniel Belsky, PhD, associate professor of Epidemiology at Columbia Mailman School and the Aging Centre and senior author of the paper.

Study. The latest findings showed that, according to the yardstick of the DunedinPACE epigenetic clock, two years of additional schooling

translated to a two- to three percent slower pace of aging. This slowing in the pace of aging corresponds to a roughly 10 percent reduction in risk of mortality in the Framingham Heart Study, according to previous research by Belsky on the association of DunedinPACE with risk

of death. DunedinPACE was developed by the Columbia researchers and colleagues and reported in January 2022. Based on an analysis of chemical tags on the DNA contained in white blood cells, or DNA methylation marks, DunedinPACE is

disease. "However, this is the first study to look at whether the presence of magnetite particles in the brain can indeed lead to signs of Alzheimer's," she said. The researchers exposed

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DEMAND NOTICE U/s 13(2)

You the below mentioned borrower has availed loan by mortgaging the schedule mentioned property and you the below mention has stood as borrower/co-borrower guarantor for the loan agreement. Consequent to the defaults committed by you, your loan account has been classified as non- performing asset on 04-03-2024 under the provisions of the Securitisation & Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 (in short SARFAESI Act). We Home First Finance Company India Limited have issued Demand Notice u/s 13(2) read with section 13(13) of the SARFAESI Act to the address furnished by you. The said notices are issued as on 04-03-2024 and these notices state that you have committed default in payment of the various loans sanctioned to you. Therefore, the present publication carried out to serve the notice as the provision of Section 13(2) of SARFAESIAct and in terms of provision to the rule 3(1) of the Security Interest (Enforcement) Rules, 2002:

Sr. No.	Name and Address of the Account, Borrower(s) & Guarantor(s)	Details of the security to be enforced	Total Outstanding as on date of Demand Notice plus further interest and other expenses (in Rs.)					
1.	Karthick Chinnannan, Late Shanthi Chinnannan (Deceased), Other legal representatives of Late Shanthi Chinnannan (Deceased),	Site no-B 323, sf no-131/1A,132/7,Saraswathi Nagar, Omalur sro & taluk Salem Tamil Nadu 636304	1,208,470					
You a and c inclue said a secu	You are hereby called upon to pay Home First Finance Company India Limited within the period of 60 days from the date of publication of this Notice the aforesaid amount with interest and cost failing which Home First Finance Company India Limited will take necessary action under the Provisions of the said Act against all or any one or more of the secured assets including taking possession of secured assets of the borrowers, mortgagors and the guarantors. The power available to the Home First Finance Company India Limited under the said act include (1) Power to take possession of the secured assets of the borrowers/guarantors including the rights to transfer by way of lease, assignment of sale for releasing secured assets (2) Take over management of the secured assets including rights to transfer by ways of lease, assignment or sale and realize the secured assets and any transfer as of							

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Place: Salem Date: 07.03.2024

Coronary artery calcium score to predict heart attacks

Coronary artery calcium scoring with CT can identify symptomatic patients with a very low risk of heart attacks or strokes, according to a new study. Researchers said the findings may one day help some patients with stable chest pain avoid invasive coronary angiography.

Coronary artery calcium scoring with CT was developed to noninvasively measure the amount of calcium in the arteries of the heart. Higher scores are linked with atherosclerosis, a buildup of plaque in the arteries.

A score of 1 to 399, time?

for instance, suggests a moderate amount of plaque, while 400 or higher indicates a large plaque burden

"Coronary artery calcium is a strong and independent predictor of cardiovascular events," said study first author Federico Biavati, an M.D./Ph.D. candidate in the BIOQIC research training group and a radiology resident at Charité --

Universitätsmedizin Berlin, Germany. "The presence of coronary

artery calcification indicates that atherosclerosis may have been present for some

The complete absence of coronary calcifications, on the other hand, is a good indicator of the absence of advanced atherosclerosis.

However, the role of coronary artery calcium in patients with stable chest pain is less clear.

Stable chest pain is a temporary but recurring condition triggered by stress, exercise or cold weather.

Under the direction of Marc Dewey, M.D., professor and vice chair of radiology at Charité, Biavati and colleagues assessed the prognostic value of coronary artery calcium scoring for major adverse cardiovascular events in 1,749 individuals, mean age 60. The participants were drawn from the DISCHARGE trial, a research project involving 26 centers in 16 European countries.

Participants had stable chest pain and had been referred for invasive coronary angiography, a procedure in which a catheter is threaded to the heart under X-ray guidance. A contrast agent is then injected through the catheter to help doctors visualize the arteries of the heart.