

Health Matters

Preventing diabetes in high genetic risk persons

A new study from the University of Eastern Finland is the first in the world to show that a healthy diet and regular exercise reduce the risk of type 2 diabetes even in individuals with a high genetic risk. In other words, everyone benefits from lifestyle changes, regardless of genetic risk.

Type 2 diabetes is a global problem. According to the International Diabetes Federation, IDF, one in eleven adults worldwide has diabetes, with type 2 diabetes accounting for 90 per cent of the cases.

To date, researchers have identified more than 500 genetic variants that predispose individuals to type 2 diabetes, but lifestyle factors, too, affect the risk of developing the disease.

Significant lifestyle-related risk factors include overweight, low intake of dietary fibre, high intake of saturated fats, and lack of exercise.

Previous studies have shown that type 2 diabetes can be effectively prevented by lifestyle changes, but it has not been explored whether the disease can be prevented even in individuals carrying numerous genetic variants that predispose them to type 2 diabetes.

The T2D-GENE Trial was a three-year lifestyle intervention that involved nearly 1,000 men aged 50 to 75 in eastern Finland.

All those invited to the study had elevated fasting glucose at baseline. The lifestyle intervention group included more than 600 men, and the rest served as a control group.

Men in the intervention group received guidance on health-promoting lifestyles in group meetings, and they were supported by a web portal designed for the study.

Those invited to the study belonged either to the lowest or the highest tertile in terms



of genetic risk, i.e., they had either a high or a low risk of developing type 2 diabetes.

Genetic risk was determined based on 76 gene variants known to predispose to type 2 diabetes.

During the intervention, neither the study participants nor the researchers knew to which genetic risk group the participants belonged.

All those who participated in the intervention received the same lifestyle guidance.

Men participating in the lifestyle intervention were able to significantly improve the quality of their diet.

They increased their intake of dietary fibre, improved the quality of fats in their diet and increased their consumption of vegetables, fruits and berries.

Weight loss was also observed, although this was not an actual weight loss study. The participants were physically very

active already at baseline, and they managed to maintain their good exercise habits throughout the study.

With these changes, it was possible to reduce the deterioration of glucose metabolism.

The prevalence of type 2 diabetes was significantly lower in the lifestyle intervention group than in the control group.

The effects of lifestyle changes were equally significant for individuals regardless of whether they had a low or a high genetic risk.

"These findings encourage everyone to make lifestyle changes that promote health. Furthermore, they demonstrate the effectiveness of group- and internet-based lifestyle guidance, which saves healthcare resources," says University Lecturer, Docent Maria Lankinen of the University of Eastern Finland, the first author of the study.

Lonely people tend to have more nightmares: Study

People who are lonely are more apt to have bad dreams, according to a collaboration that included an Oregon State University scientist.

The findings are important because both loneliness and sleep disorders are serious public health issues, said OSU's Colin Hesse. They are connected to increased risk of heart disease, stroke and premature death. In a paper published recently, Hesse and researchers at the University of Arizona, the University of Tampa and Whitworth University note that stress is part of the link between loneliness and both nightmare frequency and intensity.

Other factors tying loneliness to nightmares appear to be rumination -- worry and anxiety -- and hyperarousal, described as the state of being extra alert and focused. Like stress, rumination and hyperarousal are mind states associated with loneliness.

In addition to shedding light on a potential adverse effect of too little human connection, the findings of the study led by Kory Floyd of the University of Arizona are in line with the evolutionary theory of loneliness, which posits that a sense of belonging is essential to human survival.

"Interpersonal relationships are very much a core human need," said Hesse, director of the School of Communication in OSU's College of Liberal Arts. "When people's need for strong relationships goes unmet, they suffer physically, mentally and socially. Just like hunger or fatigue means you haven't gotten enough calories or sleep, loneliness has evolved to alert individuals when their needs



for interpersonal connection are going unfulfilled."

Loneliness is a pervasive condition that significantly hinders wellness, the researchers point out, causing suffering in a range of forms including impaired sleep. The experience

of nightmares is one way that sleep quality is damaged. The findings tying loneliness to nightmares - in a correlative way, rather than a causative one, Hesse stresses - come from surveys by the authors encompassing more than 1,600 adults in the United States, ranging in age from 18 to 81.

The results also offer an explanation for nightmares that's rooted in evolution -- humans evolved to experience stress, rumination and extra alertness when lonely -- rather than environmental factors, such as having experienced some type of trauma.

"It's too early to talk about specific interventions in a concrete sort of way," Hesse said, "but our findings are certainly consistent with the possibility that treating loneliness would help lessen someone's nightmare experiences. That's a possibility to address in controlled, clinical studies."

According to the Sleep Foundation, an estimated 50 million to 70 million Americans have some type of sleep disorder. "Quality restorative sleep is a linchpin for cognitive functioning, mood regulation, metabolism and many other aspects of well-being. That's why it's so critical to investigate the psychological states that disrupt sleep, loneliness being key among them," Hesse said.

Fatigue-detecting earbuds to stop dozing on wheels

Everyone gets sleepy at work from time to time, especially after a big lunch. But for people whose jobs involve driving or working with heavy machinery, drowsiness can be extremely dangerous - if not outright deadly. Drowsy driving contributes to hundreds of fatal vehicle accidents in the US each year, and the National Safety Council has cited drowsiness as a critical hazard in construction and mining.

To help protect drivers and machine operators from the dangers of drifting off, engineers at the University of California, Berkeley, have created prototype earbuds that can detect the signs of drowsiness in the brain.

The earbuds detect brain waves in the same way as an electroencephalogram (EEG), a test that doctors use to measure electrical activity in the brain. While most EEGs detect brain waves using a series of electrodes attached to the head, the earbuds do so using built-in electrodes that are designed to make contact with the ear canal.

The electrical signals detected by the ear buds are smaller than those picked up by a traditional EEG. However, in a new study, the researchers show that their Ear EEG platform is sensitive enough to detect alpha waves, a pattern of brain activity that increases when you close your eyes or start to fall asleep.

"I was inspired when I bought my first pair of Apple's AirPods in



2017. I immediately thought, "What an amazing platform for neural recording," said study senior author Rikky Muller, an associate professor of electrical engineering and computer sciences at UC Berkeley. "We believe that this technology has many potential uses, and that classifying drowsiness is a good indicator that the technology can be used to classify sleep and even diagnose sleep disorders."

Using an earbud as an EEG electrode poses a variety of practical challenges. In order to obtain an accurate EEG, electrodes need to make good contact

with the skin. This is relatively easy to achieve in traditional EEGs, which use flat metal electrodes stuck to the scalp. However, it is much trickier to design an earbud that will fit snugly - and comfortably - in a wide variety of ear sizes and shapes.

When Muller's team started working on the project, other groups developing Ear EEG platforms were either using wet electrode gels to ensure a good seal between the earbud and the ear canal, or creating custom-molded earpieces for each individual user. She and her team wanted to design a model that was

dry and user generic, so that anyone could stick them in their ears and get reliable readings.

"My personal goal was to try to make a device that could be used every day by someone who would really benefit from it," said Ryan Kaveh, a UC Berkeley postdoctoral scholar and co-first author of the study. "In order to do that, I knew that it would have to be reusable, fit a variety of people, and [be] easy to manufacture." Kaveh co-lead the study with graduate student Carolyn Schwendeman and collaborated with Ana Arias's lab at UC Berkeley to design the final earpiece in three sizes: small, medium and large. The earpiece incorporates multiple electrodes in a cantilevered design that applies gentle outward pressure to the ear canal and uses flexible electronics to ensure a comfortable fit. The signals are read out through a custom, low-power, wireless electronic interface.

The formation of hardened plaques around neurons is one of the earliest signs of Alzheimer's disease, often beginning decades before behavioral symptoms such as memory loss are detected. These plaques are formed from pieces of the peptide beta-amyloid that accumulate over time. In the new study, Saido's team at RIKEN CBS focuses on the enzyme neprilysin because previous experiments showed that genetic manipulation that produces excess neprilysin in the brain - a process called upregulation -

Dopamine alleviates symptoms in Alzheimer's disease

A new way to combat Alzheimer's disease has been discovered by Takaomi Saido and his team at the RIKEN Center for Brain Science (CBS) in Japan. Using mice with the disease, the researchers found that treatment with dopamine could alleviate physical symptoms in the brain as well as improve memory. The study examines dopamine's role in promoting the production of neprilysin, an enzyme that can break down the harmful plaques in the brain that are the hallmark of Alzheimer's disease. If similar results are found in human clinical trials, it could lead to a fundamentally new way to treat the disease.

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resulted in fewer beta-amyloid plaques and improved memory in mice. While genetically manipulating mice to produce neprilysin is useful experimentally, to treat people with the disease, we need a way to do it using medication. Neprilysin pills or an injection are not feasible because it cannot enter the brain from the blood stream. The first step in the new study was therefore a tedious screening of many molecules to determine which ones can naturally upregulate neprilysin in the correct parts of the brain. The team's previous research led them to narrow down the search to hormones produced by the hypothalamus, and they discovered that applying dopamine to brain cells cultured in a dish yielded increased levels of neprilysin and reduced levels of free-floating beta-amyloid.

Now the serious experiments began. Using a DREADD system, they inserted tiny designer receptors into the dopamine producing neurons of the mouse ventral tegmental area. By adding a matching designer drug to the mice's food, the researchers were able to continuously activate those neurons,

and only those neurons, in the mouse brains. As in the dish, activation led to increased neprilysin and decreased levels of

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Pesticide exposure linked to stillbirth risk

Living less than about one-third of a mile from pesticide use prior to conception and during early pregnancy could increase the risk of stillbirths, according to new research led by researchers at the Mel and Enid Zuckerman College of Public Health and Southwest Environmental Health Sciences Centre.

Researchers found that during a 90-day pre-conception window and the first trimester of pregnancy, select pesticides, including organophosphates as a class, were associated

with stillbirth. "In this study, some specific ingredients stood out due to their significant associations with stillbirth risk," said first author Melissa Furlong, PhD, who studies the chronic health effects of environmental contaminants as an assistant professor and environmental epidemiologist at the Zuckerman College of Public Health and a member of the Southwest Environmental Health Sciences Centre at the R. Ken Coit College of Pharmacy. "These findings underscore the importance of

considering individual pesticides rather than just the overall pesticide class, as specific chemical compounds may pose unique risks. It also highlights the potential for pre-pregnancy exposures to affect reproductive outcomes." To conduct the study, researchers linked Arizona pesticide use records for 27 different pesticides with state birth certificate data that included 1,237,750 births and 2,290 stillbirths from 2006 to 2020.

They found that living within .31 miles (500 metres) of specific

pyrethroid, organophosphate or carbamate pesticide applications during a 90-day pre-conception window or the first trimester was associated with an increased risk of stillbirth. Specifically, the pesticides cyfluthrin, zeta-cypermethrin, organophosphates as a class, malathion, carbaryl and propamocarb hydrochloride were linked to increased stillbirths pre-conception. During the first trimester, fenprothrin, permethrin, organophosphates as a class, acephate and formetanate hydrochloride were associated with stillbirths.

Kotak Mahindra Bank Limited Online E - Auction

Registered Office: 27 Bk, C-27, G-block, Bandra Kurla Complex, Bandra (e) Mumbai, Maharashtra. Pin Code-400 051 Branch Office: Kotak Mahindra Bank Ltd- No: 185, 2nd Floor, Mount Road, Anna Salai, Chennai-600006. (Land Mark - Next To India Garage Mahindra Car Show Room)

Sale Notice For Sale Of Immovable Properties

E- Auction Sale Notice For Sale Of Immovable Assets Under The Securitisation And Reconstruction Of Financial Assets And Enforcement Of Security Interest Act, 2002 Under Rules 8(5) And 8(6) Of The Security Interest (enforcement) Rule, 2002. Subsequent To The Assignment Of Debt In Favour Of Kotak Mahindra Bank Limited By 'pnb Housing Finance Limited' (Hereinafter Referred To As "PNB-HFL") The Authorised Officer Of Pnb Housing Finance Limited (Hereinafter Referred To As "PNB-HFL") Has Taken The Possession Of Below Described Immovable Property (Hereinafter Called The Secured Asset) Mortgaged/charged To The Secured Creditor On 26.08.2019. Notice Is Hereby Given To The Borrower (s) And Guarantor (s) In Particular And Public In General That The Bank Has Decided To Sale The Secured Asset Through E-auction Under The Provisions Of The Sarfaesi Act, 2002 On "as is Where is" "as is What is" And "whatever There Is" Basis For Recovery Of Rs.1,55,89,910/- (On thereabouts) Lying In Egattur Village No.34, Comprised In Old Survey No.103 And Present S.no.103/1 & 103/2 As Per Pattna Nos. 165 & 210 And Situated Within The Registration District Of Kancheepuram And Sub Registration District Of Thirupur, Demarcation Of The Land Is As Under: East By: S.no. 106, 104 & 100, West By: S.no. 109, 110 & 111, North By: S.no. 109, 110 & 108, South By: S.no. 102, 100 & 104.

Loan Availed By Mr. Ravi Anulswamy & Mrs. Chitra Ravi As Per Below Details.

Particular	Detail
Date Of Auction	23.09.2024
Time Of Auction	Between 12.00 Pm To 1.00 Pm With Unlimited Extension Of 5 Minutes
Reserve Price	Rs. 62,00,000/- (Rupees Sixty Two Lakh Only)
Earnest Money Deposit (EMD)	Rs. 6,20,000/- (Rupees Six Lakh Twenty Thousand Only)
Last Date For Submission Of Emd With Kyc	22.09.2024 UPTO 5:00 PM (IST)

The Borrowers' Attention Is Invited To The Provisions Of Sub Section 8 Of Section 13, Of The Act, In Respect Of The Time Available, To Redeem The Secured Asset.

Borrowers In Particular And Public In General May Please Take Notice That If In Case Auction Scheduled Herein Fails For Any Reason whatsoever Then Secured Creditor May Enforce Security Interest By Way Of Sale Through Private Treaty In Case Of Any Clarification/Requirement Regarding Assets Under Sale, Bidder May Contact Mr. Suriya Narayanan, p (+91 9600222111), Mr. Velumrangan Kathirvel (+91 9884718338), Bidder May Also Contact The Bank's IvR No. (+91-9152219751) For Clarifications.

For Detailed Terms And Conditions Of The Sale, Please Refer To The Link <https://www.kotak.com/en/bank-auctions.html> Provided In The Bank's Website i.e. www.kotak.com And/or On <http://bank.auctions.in/>

Authorized Officer,
Kotak Mahindra Bank Limited

Place : Chennai , Date: 13.08.2024

HDFC BANK Registered Office: HDFC Bank House, Senapati Bapat Marg, Lower Panel (West), Mumbai - 400 013 and having one of its office as

We understand your world Retail Portfolio Management at HDFC Bank Ltd, 1st Floor, I-Think Techno Campus, Kanjurmarg (East), Mumbai - 400042.

SALE INTIMATION AND PUBLIC NOTICE FOR SALE OF SECURITIES PLEDGED TO HDFC BANK LTD.

The below mentioned Borrowers of HDFC Bank Ltd. (the "Bank") are hereby notified regarding the sale of securities pledged to the Bank, for availing credit facilities in the nature of Loan/Overdraft Against Securities.

Due to persistent default by the Borrowers in making repayment of the outstanding dues as per agreed loan terms, the below loan accounts are in delinquent status. The Bank has issued multiple notices to these Borrowers, including the final sale notice on the below-mentioned date whereby, Bank had invoked the pledge and provided 7 days' time to the Borrower to repay the entire outstanding dues in the below accounts, failing which, Bank would be at liberty to sell the pledged securities without issuing further notice in this regard. The Borrowers have neglected and failed to make due repayments, therefore, Bank in exercise of its rights under the loan agreement as a pledgee has decided to sell / dispose off the Securities on or after 20th August 2024 for recovering the dues owed by the Borrowers to the Bank. The Borrowers are, also, notified that, if at any time, the value of the pledged securities falls further due to volatility in the stock market to create further deficiency in the margin requirement then Bank shall at its discretion sell the pledged security within one (1) calendar day, without any further notice in this regard. The Borrower(s) shall remain liable to the Bank for repayment of any remaining outstanding amount, post adjustment of the proceeds from sale of pledged securities.

Sr. No.	Loan Account Number	Borrower's Name	Outstanding Amount as on 8 th August 2024	Date of Sale Notice
1	XXXX6490	N SHIVRAJ VYAS	21,162.45	12-08-2024
2	XXXX0328	D CHINNADURAI	91,097.21	12-08-2024
3	XXXX8400	VINOD KARUNAKARAN	12,981.77	12-08-2024

Date : 13.08.2024
Place : TAMIL NADU
HDFC BANK LTD.