



DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY
Wednesday 20240422

Alzheimer's

Scientists decode abnormal build-up of proteins in neurons that cause Alzheimer's (The Tribune: 20240422)

<https://www.tribuneindia.com/news/health/scientists-decode-abnormal-build-up-of-proteins-in-neurons-that-cause-alzheimers-612853>

However, trigger behind the accumulation remains unknown, says study

Scientists decode abnormal build-up of proteins in neurons that cause Alzheimer's

Photo for representational purpose only. iStock

A team of Japanese researchers has identified how proteins collect abnormally in neurons which is a feature of neurodegenerative diseases like Alzheimer's.

Diseases such as Alzheimer's and Amyotrophic Lateral Sclerosis (ALS) are known to be accompanied by an abnormal build-up of proteins in neurons.

However, the trigger behind this accumulation remains unknown, according to the study that appeared in the journal eLife.

The team, led by Associate Professor Kanae Ando of Tokyo Metropolitan University, focused on the presence of mitochondria in axons, the long tendril-like appendages that stretch out of neurons and form the necessary connections that allow signals to be transmitted inside our brains.

It is known that the levels of mitochondria in axons can drop with age, and during the progress of neurodegenerative diseases.

The team used fruit flies to show that depletion of mitochondria in axons can directly lead to protein accumulation.

At the same time, significantly high amounts of a specific protein were found. Restoring the levels to normal led to a recovery in protein recycling.

Such findings promise new treatments for neurodegenerative diseases, said researchers

“As populations age and the prevalence of neurodegenerative conditions continues to increase, the team’s findings present a vital step in developing therapies to combat these serious illnesses,” the study noted.

New immunotherapy

New immunotherapy to fight cancer, keep healthy cells safe (The Tribune: 20240422)

<https://www.tribuneindia.com/news/health/new-immunotherapy-to-fight-cancer-keep-healthy-cells-safe-612802>

A team of US researchers has developed a new immunotherapy technique that uses cytokine proteins as a potential treatment, effectively targeting tumours without causing harm to healthy cells.

Cytokines are small protein molecules that help control inflammation in the body. They are released by the body's immune cells to fight against cancer and improve treatment effectiveness.

The team from Virginia Tech's College of Engineering developed the new technique which ensures that immune cell boosts cytokines which curbs tumour spread to other tissues or organs. It also preserved the cytokine's structure and reactivity levels to not expose toxicity to the rest of the body.

“Cytokines are potent and highly effective at stimulating the immune cells to eliminate cancer cells,” said Rong Tong, associate professor in chemical engineering at Virginia Tech.

“The problem is they're so potent that if they roam freely throughout the body, they'll activate every immune cell they encounter, which can cause an overactive immune response and potentially fatal side effects,” he added.

In contrast, current cancer treatments such as chemotherapy cannot differentiate between healthy cells and cancer cells, resulting in side effects like hair loss and fatigue, as it affects all cells in the body.

“Stimulating the body's immune system to attack tumours is a promising alternative to treat cancer. The delivery of cytokines can jump-start immune cells in the tumour, but overstimulating healthy cells can cause severe side effects,” the researchers noted in the paper published in the journal Science Advances.

Cholera vaccine

UN approves an updated cholera vaccine that could help fight a surge in cases (The Tribune: 20240422)

<https://www.tribuneindia.com/news/health/un-approves-an-updated-cholera-vaccine-that-could-help-fight-a-surge-in-cases-612452>

Cholera is an acute diarrhea disease caused by a bacteria typically spread via contaminated food or water

UN approves an updated cholera vaccine that could help fight a surge in cases

The World Health Organisation has approved a version of a widely used cholera vaccine that could help address a surge in cases that has depleted the global vaccine stockpile and left poorer countries scrambling to contain epidemics.

WHO authorised the vaccine, made by EuBiologics, which also makes the formulation now used, last week. The new version, called Euvichol-S, is a simplified formula that uses fewer ingredients, is cheaper, and can be made more quickly than the old version.

The vaccine was shown to be help preventing the diarrheal disease in late-stage research conducted in Nepal.

WHO's approval means donor agencies like the vaccines alliance Gavi and UNICEF can now buy it for poorer countries. Leila Pakkala, director of UNICEF's supply division, said in a statement that the agency will be able to boost supplies by more than 25 per cent

Gavi estimated there could be about 50 million doses for the global stockpile this year, compared with 38 million last year.

Dr. Derrick Sim of Gavi called WHO's authorisation “a lifeline for vulnerable communities around the world”.

More is still needed, however: Since January, 14 countries affected by cholera outbreaks have requested 79 million doses. In January, the UN agency said the global vaccine stockpile was “entirely depleted” until the beginning of March. As of this week, WHO said there were 2.3 million doses available.

Cholera is an acute diarrhea disease caused by a bacteria typically spread via contaminated food or water. It is mostly seen in areas that have poor sanitation and lack access to clean water. While most people infected with cholera don’t experience symptoms, those with severe cases need quick treatment with intravenous fluids and antibiotics. If left untreated, cholera kills about a quarter to half of people infected.

Since last January, WHO has reported more than 824,000 cholera infections, including 5,900 deaths worldwide, with the highest numbers of cases reported in the Middle East and Africa.

The UN agency said warming temperatures that allow the cholera bacteria to live longer, have also worsened outbreaks and led to the highest death rates in a decade.

Liver diseases

Liver diseases in kids up due to junk food, sugar consumption (The Tribune: 20240422)

<https://www.tribuneindia.com/news/lifestyle/liver-diseases-in-kids-up-due-to-junk-food-sugar-consumption-612417>

Triglycerides, a type of fat, accumulate in liver cells when there is an imbalance between amount of fat the body takes in or produces and the liver's ability to process and eliminate it

Liver diseases in kids up due to junk food, sugar consumption

Medical experts have found that one in three children have non-alcoholic fatty liver disease (NAFLD), primarily caused by excess sugar consumption.

It has become a significant concern even among children aged 5-16 years. Previously, children were thought to be safe from this liver disease.

The number of children with NAFLD has risen alarmingly from 10-33 per cent in just a decade.

Paediatric hepatologist at Ram Manohar Lohia Institute of Medical Sciences (RMLIMS), Piyush Upadhyay said the consumption of processed meals high in sugar and unhealthy fats is a major contributing factor to NAFLD in children.

Warning against the dangers of sugary drinks and junk food, he explained that triglycerides, a type of fat, accumulate in liver cells when there is an imbalance between the amount of fat the body

takes in or produces and the liver's ability to process and eliminate it. The liver normally processes and removes fats from the body.

“This imbalance can be caused by several factors, including genetics, a sedentary lifestyle, obesity, insulin resistance and an unhealthy diet. Decades ago, fatty liver disease was primarily caused by alcohol addiction,” Upadhyay added.

“However, non-alcoholic fatty liver disease is becoming increasingly common. I see around 60-70 children with NAFLD every month, which is more than double the number I saw a decade ago,” he said.

Another gastroenterologist, Punit Mehrotra said, “Many studies have shown that NAFLD can be reversed in children as well as adults by making lifestyle changes, such as reducing sugar and junk food intake and exercising regularly for at least 30 minutes.”

He emphasised the potential of NAFLD to progress to liver cirrhosis, a serious condition requiring a liver transplant.

Director of the gastroenterology department at Medanta hospital, Ajay Verma explained, “When we look at all the costs involved in the consumption of junk food and sugar and the number of healthy years of life lost, cutting down on sugar seems to save money and keep people healthier for longer.”

Plastice Pollution (The Asian Age:20240422)

<http://onlinepaper.asianage.com/articledetailpage.aspx?id=17969986>

Pradeep S. Mehta
and Simi T.B

Urgent action is
required at all
levels to tackle
plastic pollution

Amid the observance of Earth Day 2024 with the theme “Planet vs Plastics”, the pressing global crisis of plastic pollution commands urgent attention. If one recalls the famous line from the 1967 comedy film *Graduate*, a young lad, Benjamin, played by Dustin Hoffman, is advised by an elder for future career choices to go in for plastics. Indeed, those days, plastics were the “in” thing. But Benjamin may not have been able to envision the havoc it has been creating.

Plastics have now become a significant menace, endangering our environment, health, and economy. The rapid rise in production, combined with the alarming accumulation of plastic waste choking land, oceans and the innards of animals, highlight the critical nature of this issue. Cattle and fish have been found to contain a huge amount of plastic waste in their inner bodies.

Globally, nations are taking significant actions to tackle plastic pollution. In 2022, UN member states unanimously endorsed a resolution aimed at ending plastic pollution, signalling a unified global commitment. An inter-governmental negotiating committee is currently drafting a legally binding agreement on plastic pollution, which is expected to be finalised by the end of this year.

Recent data reveals a massive growth in global plastic production, skyrocketing from two million tonnes in 1950 to a staggering 430 million tonnes in 2023, with projections anticipating a doubling of capacity by 2040. However, the gravest concern lies not solely in the sheer volume of plastic produced but

also its profound impact on our planet.

According to OECD, approximately 22 per cent of plastic waste eludes waste management systems, finding its way into unregulated dumpsites, incineration in open pits, or polluting terrestrial and aquatic environments, particularly affecting low and middle-income economies.

Health Impacts and Circular Economy Call: Today, the health impact of plastic pollution is increasingly evident, with studies highlighting its disproportionate effects on marginalised communities, particularly women and children. Risks include reproductive issues, hormonal imbalances, reduced IQ, respiratory diseases and neurological disorders. Furthermore, plastic pollution takes a toll on ecosystems, according to UNEP reports, with over 800 marine species experiencing ingestion, entanglement, and other harmful effects. Alarmingly, an estimated 11 million tonnes of plastic waste enter our oceans annually, a figure projected to triple by 2040. The imperative for a radical shift in our approach is clear.

Transitioning from the linear model of production, consumption and disposal to a circular economy offers a viable solution. By embracing this approach, we can significantly reduce the volume of plastics entering our lands and oceans, cut greenhouse gas emissions and even create hundreds of thousands of new jobs. As per UNEP reports, this could lead to an 80 per cent reduction in the volume of plastics entering oceans by 2040, a 55 per cent decrease in virgin plastic production, \$70 billion in government savings, 25 per cent reduction in greenhouse gas emis-

sions and the creation of 700,000 jobs, mostly in the Global South.

However, to effectively mitigate plastic pollution, countries must foster innovation and incentivise businesses who are adopting eco-friendly practices. This includes implementing taxes on single-use plastic products, alongside offering tax breaks, subsidies, and other financial incentives to promote alternatives such as reusable products. Furthermore, strengthening waste management infrastructure is crucial for enhancing waste reduction and recycling endeavours.

Plastic Waste Challenge and Promising Initiatives: In the last five years, India has experienced a significant surge in plastic waste generation, as per the Central Pollution Control Board’s annual report. From 1,598,714 tonnes per annum in 2016-17, it escalated to 4,128,967 tonnes per annum in 2020-21, indicating a concerning trend upward. Despite India’s relatively low per capita plastic waste production, recent reports indicate it ranks among the top 12 countries responsible for 60 per cent of global mismanaged plastic waste.

However, concerted efforts to address this issue have gained momentum, with government initiatives such as banning selected single-use plastics items, implementing Extended Producer Responsibility, Plastic Waste Management Rules, and the Prime Minister himself spearheading campaigns like the Swachh Bharat Mission.

Simultaneously, it is imperative to recognise and replicate best practices that can serve as a blueprint

for further progress. Initiatives like the “Garbage Café” at Ambikapur, Chhattisgarh, showcase how local communities actively engage in waste management. By offering food in exchange for plastic waste, the café not only promotes environmental awareness but also fosters community involvement. In Kerala, every household and business establishment are mandated to pay a user fee monthly for the Haritha Karma Sena’s door-to-door collection of segregated non-biodegradable waste, including plastics.

Comprising predominantly over 30,000 women, this group ensures the prompt delivery of collected items to authorised recycling facilities. Their efforts have led to a 43.61 per cent growth in waste collection, with segregated plastic waste alone increasing from 820.59 tonnes in May 2022 to 1018.04 tonnes in May 2023. These initiatives underscore the potential for impactful plastic waste management strategies that can be scaled up to address the global plastic pollution crisis.

The Path Forward: At present, like in most other developing economies, India has multiple challenges, particularly in areas such as littering, segregation at source and inadequate waste management infrastructure. Addressing these issues requires a multi-faceted approach, encompassing education, regulation, stringent enforcement, innovation and community involvement.

The writers work for CUTS International, a global public policy research and advisory group. Today is Earth Day

Carbohydrate-rich

Cardiologist busts notions of ‘good’ and ‘bad’ habits (The Hindu: 20240422)

<https://www.thehindu.com/sci-tech/health/cardiologist-busts-notions-of-good-and-bad-habits/article68075586.ece>

The Indian diet is traditionally carbohydrate-rich and the addition of fast food to our culture has only made it worse. A radical re-look at our food culture is the need of the hour, an expert says.

Students take part in the Millet Walkathon Rally to promote healthy eating habits in Tiruchi.

Students take part in the Millet Walkathon Rally to promote healthy eating habits in Tiruchi. | Photo Credit: M. Moorthy

Since a number of our patients are now youngsters, the process of counselling them has become an interesting experience. Invariably they ask: “Why did I end up getting this disease?” We explain patiently the possible medical causes — diabetes, hypertension, sedentary lifestyle, genetic aspects, family history, and stress. Sometimes, their response to that is: “But, doctor, I do not have any bad habits.”

Processed foods

Why are sugary processed foods harmful? | (The Hindu:20240422)

<https://www.thehindu.com/sci-tech/health/why-are-sugary-processed-foods-harmful-explained/article68088790.ece>

PREMIUMHow does the Food Standards and Safety Authority of India monitor sugar, salt and fat content in food items, particularly malt-based milk beverages and baby food? Why are experts calling for more stringent measures in labelling food items? What lies ahead?

An estimated 101.3 million people in India could be diabetic, a study co-published by the Indian Council of Medical Research stated.

An estimated 101.3 million people in India could be diabetic, a study co-published by the Indian Council of Medical Research stated. | Photo Credit: Getty Images/iStockphoto

The story so far: Over the past week, the spotlight has returned on high sugar content in flavoured malt-based milk powders and baby food. Government authorities are warning against branding such items as “healthy” and have called out the allegedly misleading promotion and marketing tactics while loading products with added sugar.

On analysing the product in question, (a drink like Bournvita, for example,) it is observed that it contains 86.7g of carbohydrates per 100g, of which 49.8g is sugar content. Of the total sugars, 37.4g is sucrose or added sugar. For every recommended per serve of 20g chocolate powder, the consumer is downing nearly 10g of total sugar. “Apart from added sugar, the process of malting, which involves germinating cereals, drying, roasting and powdering them, also produces sugar. Malting was a process originally used to produce single malt whiskey, and is also used in making malt-based milk beverages,” a scientific panel member of the Food Standards and Safety Authority of India (FSSAI) told The Hindu. Once you germinate a grain, the starch in the grain breaks down to sugar by the action of a group of enzymes called amylase. When you roast it, it develops a nice flavour as that sugar gets caramelised. “Maltose is nothing but two units of glucose, a form of sugar, bonded together. Apart from added sugar, the chocolate powder contains maltodextrin, liquid glucose, maltose generated from malting process of cereals and so on,” the member said.

Gut health

The dynamic duo: enhanced liver function and gut health (The Hindu:20240422)

<https://www.thehindu.com/sci-tech/health/the-dynamic-duo-enhanced-liver-function-and-gut-health/article68078883.ece>

On World Liver Day, let’s look at what needs to be done to support the liver and the gut to execute their functions

A sand sculpture to promote a ‘Healthy Liver for Healthy Life’ created by artist Sudarshan Pattnaik at Marina beach in Chennai.

A sand sculpture to promote a ‘Healthy Liver for Healthy Life’ created by artist Sudarshan Pattnaik at Marina beach in Chennai. | Photo Credit: File photo

In the intricate ecosystem of our bodies, two unsung heroes often overlooked are the liver and the gut. While the liver diligently detoxifies, metabolises, and stores nutrients, the gut orchestrates digestion and plays a pivotal role in our immune system. However, the connection between these two vital organs goes deeper than meets the eye. In this article, we delve into the symbiotic relationship between liver function and gut health, shedding light on how nurturing one benefits the other.

(For top health news of the day, subscribe to our newsletter Health Matters)

Health insurance

IRDAI removes age bar for purchasing health insurance (The Hindu:20240422)

<https://www.thehindu.com/sci-tech/health/irdai-decision-to-remove-age-bar-on-health-insurance-purchases-will-improve-access-for-seniors-hospitals-say/article68087788.ece>

IRDAI directs insurance providers to develop tailored products for seniors; hospitals say this will improve access for those who need healthcare the most, but note that premiums may be higher for this demographic

IRDAI's latest move is aimed at bringing in extended health benefits to the elderly. File

IRDAI's latest move is aimed at bringing in extended health benefits to the elderly. File | Photo Credit: The Hind

The Insurance Regulatory and Development Authority of India (IRDAI) has removed the age limit for purchasing health insurance policies, with effect from April 1.

(For top health news of the day, subscribe to our newsletter Health Matters)

Earlier, there was an age limit of 65 years to buy new health insurance policies. IRDAI's latest move is aimed at bringing in extended health benefits to the elderly.

olive oil

Can olive oil help keep snoring at bay? Here's what experts have to say (Indian Express:20240422)

<https://indianexpress.com/article/lifestyle/life-style/can-olive-oil-help-keep-snoring-at-bay-heres-what-experts-have-to-say-9277897/>

Dr Steven Gundry advocates ingesting olive oil before going to bed. But, is this just some wild theory circulating on the internet again? We confirm its efficacy with experts

olive oil, snoring “While it's known for its health benefits, including potential anti-inflammatory properties, its direct effects on the respiratory system in terms of lubrication haven't been extensively studied,” Dr Ravi Shekhar Jha, pulmonologist at Fortis shares. (Source: Freepik)

We are all aware of how useful olive oil is not just for adding more flavour to the food we're cooking, but also its positive impact on our overall health. But, did you ever think that it could be the solution to your snoring problem?

Snoring is a common issue that causes disruptions in sleep for both the snorer and their sleeping partner. It occurs when air passages are blocked during sleep, causing the surrounding tissues to vibrate and produce noise.

Onion or garlic

This is why you have bad breath for a long time after eating onion or garlic (and how to fix it) (Indian Express:20240422)

<https://indianexpress.com/article/lifestyle/life-style/bad-breath-after-eating-onion-garlic-why-how-to-fix-9264273/>

The next time you enjoy a delicious oniony or garlicky meal, fret not! Armed with these tips, you can combat bad breath and keep your conversations fresh.

bad breath, smellHow to combat bad breath from onions (Source: Freepik)

Onions and garlic are staples in many cuisines worldwide, adding a delicious kick to countless dishes. But let's be honest, they also come with a not-so-pleasant side effect: bad breath.

Ever wondered why the odour lingers for hours, even after brushing your teeth? Well, we have, too. So, of course, we were intrigued when we stumbled upon a reel by Krish Ashok explaining why this happens. We talked to G Sushma, a clinical dietician at CARE Hospitals, Banjara Hills in Hyderabad, who explained to us the science behind this phenomenon and offered tips to combat it.

Pregnant woman

Can a pregnant woman pass on stress to her unborn child? (Indian Express:20240422)

<https://indianexpress.com/article/lifestyle/life-style/intergenerational-stress-waves-can-chronic-stress-affect-your-future-generations-9282492/>

Neha Cadabam, senior psychologist and executive director at Cadabams Hospitals, told indianexpress.com that transmission of stress can occur through biological, psychological, and social channels, affecting not just the individuals directly exposed to stressors but also their descendants.

stress“Stress can have a significant impact on the amygdala, which is a key part of the brain involved in processing emotions, particularly fear and stress responses,” neurologist and content creator Dr John Strugar says.

Can stress experienced by one generation affect the mental health of the generations after?

Turns out it could. This phenomenon, referred to as intergenerational stress waves by neurosurgeon and content creator Dr John Strugar, suggests that stress isn't just a personal experience – it can leave lasting imprints that ripple across generations.

Strugar, in a recent reel, shared that a mother's stress during pregnancy, for instance, can influence the developing brain of her baby. This impact stems from elevated levels of stress hormones, like glucocorticoids, which can alter the structure and function of certain brain regions such as the

amygdala. “Stress can have a significant impact on the amygdala, which is a key part of the brain involved in processing emotions, particularly fear and stress responses,” he captioned the post.

Nutrition alert

Nutrition alert: Here’s what a 100-gram serving of persimmon contains(Indian Express:20240422)

<https://indianexpress.com/article/lifestyle/food-wine/nutrition-alert-heres-what-a-100-gram-serving-of-persimmon-contains-9266141/>

Kanikka Malhotra, consultant dietician and diabetes educator explains the benefits of this delicious orange-coloured fruit, and how to best consume it

persimmonBollywood actress Katrina Kaif loves to eat persimmons for breakfast (Source: Freepik)

Bollywood actress Katrina Kaif recently revealed in a candid interview that she starts her mornings with a delicious and nutritious fruit — persimmon.

This lesser-known vibrant orange fruit, packed with health benefits, is grown indigenously in the states of Jammu and Kashmir, Himachal Pradesh, Tamil Nadu and Uttarakhand. It is known for its sweet and slightly tangy flavour, and is a rich source of vitamins and minerals.