



DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY
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Long Covid (Hindustan Times :20240808)

<https://www.hindustantimes.com/lifestyle/health/long-covid-new-insights-into-symptoms-mechanisms-and-treatment-prospects-101723036637631.html>

Long Covid: New insights into symptoms, mechanisms and treatment prospects

3%-5% of people worldwide still develop long Covid after an acute Covid-19 infection. Here's how people can lower their risk of developing long Covid

Researchers from the Universities of Arizona, Oxford and Leeds examined dozens of previous studies on long Covid to investigate the number and range of people affected, the underlying disease mechanisms, the numerous symptoms that patients develop, and current and future treatments.

Long Covid, also known as post-Covid-19 condition, is described as symptoms that last for three months or longer following acute Covid-19. The illness can harm several organ systems, resulting in reduced function and symptoms such as fatigue, cognitive impairment (often known as 'brain fog'), breathing difficulties, and discomfort.

Long Covid can affect almost anyone, including all age groups and children. It is more prevalent in females and those of lower socioeconomic status, and the reasons for such differences are under study. The researchers found that while some people gradually get better from long Covid, in others the condition can persist for years. Many people who developed long Covid before the advent of vaccines are still unwell.

"Long Covid is a devastating disease with a profound human toll and socioeconomic impact," said Janko Nikolich, MD, PhD, senior author of the paper, director of the Aegis Consortium at the U of A Health Sciences, professor and head of the Department of Immunobiology at the U of A College of Medicine - Tucson, and BIO5 Institute member.

"By studying it in detail, we hope to both understand the mechanisms and to find targets for therapy against this, but potentially also other infection-associated complex chronic conditions such as myalgic encephalomyelitis/chronic fatigue syndrome and fibromyalgia."

If a person has been fully vaccinated and is up to date with their boosters, their risk of long Covid is much lower. However, 3%-5% of people worldwide still develop long Covid after an acute Covid-19 infection. According to the Centers for Disease Control and Prevention, long Covid affects an estimated 4%-10% of the US adult population, and 1 in 10 adults who had Covid develop long Covid.

The review study also found that a wide range of biological mechanisms are involved, including persistence of the original virus in the body, disruption of the normal immune response, and microscopic blood clotting, even in some people who had only mild initial infections.

There are no proven treatments for long Covid yet, and current management of the condition focuses on ways to relieve symptoms or provide rehabilitation. Researchers say there is a dire need to develop and test biomarkers such as blood tests to diagnose and monitor long Covid and to find therapies that address the root causes of the disease.

People can lower their risk of developing long Covid by avoiding infection - wearing a close-fitting mask in crowded indoor spaces, for example - taking antivirals promptly if they do catch Covid-19, avoiding strenuous exercise during such infections, and ensuring they are up to date with Covid vaccines and boosters.

"Long Covid is a dismal condition, but there are grounds for cautious optimism," said Trisha Greenhalgh, lead author of the study and professor at Oxford's Nuffield Department of Primary Care Health Sciences. "Various mechanism-based treatments are being tested in research trials. If proven effective, these would allow us to target particular subgroups of people with precision therapies. Treatments aside, it is becoming increasingly clear that long Covid places an enormous social and economic burden on individuals, families, and society. In particular, we need to find better ways to treat and support the 'long-haulers' - people who have been unwell for two years or more and whose lives have often been turned upside down."

Parkinson's Disease (Hindustan Times :20240808)

<https://www.hindustantimes.com/lifestyle/health/seaweed-antioxidants-show-promise-in-parkinsons-disease-prevention-research-101723024907476.html>

Seaweed antioxidants show promise in Parkinson's disease prevention: Research

Researchers at Osaka Metropolitan University found that Ecklonia cava seaweed antioxidants may help prevent Parkinson's disease by reducing neuronal damage.

The neurodegenerative condition known as Parkinson's disease is transported by the loss of neurons that produce dopamine, a neurotransmitter essential for both motor control and cognitive function. The number of people with Parkinson's disease is rising quickly as the world's population ages. Reactive oxygen species overproduction damages neurones, which causes Parkinson's disease. Because reactive oxygen species formation kills dopaminergic neurones, which control dopamine neurotransmitters, it must be suppressed. Since there is now just symptomatic treatment available, therapeutic

regimens and preventative measures must be developed. (Also read: This coach has something important to tell you about Parkinson's Disease)

Fortunately, Associate Professor Akiko Kojima-Yuasa of Osaka Metropolitan University's Graduate School of Human Life and Ecology led a research group that has verified the physiological effect of *Ecklonia cava* polyphenols, seaweed antioxidants, on the prevention of Parkinson's disease.

In this study, two types of motor function tests were conducted using Parkinson's disease model mice that were orally fed the antioxidants daily for one week and then administered rotenone. Results showed that motor function, which was decreased by rotenone, was restored. There was also improvement in intestinal motor function and the colon mucosa structure, a special tissue that covers the colon.

Further, cellular experiments using Parkinson's disease model cells verified the biochemical interaction of the preventive effect of *Ecklonia cava*. Validation results showed that the antioxidants activate the AMPK enzyme (adenosine monophosphate-activated protein kinase), an intracellular energy sensor, and inhibit the production of reactive oxygen species that cause neuronal cell death. (Also read: Dance, music therapy could help manage Parkinson's disease: Study)

"This study suggests that *Ecklonia cava* antioxidants may reduce neuronal damage by AMPK activation and inhibiting intracellular reactive oxygen species production," stated Professor Kojima-Yuasa. "It is hoped that *Ecklonia cava* will be an effective ingredient in the prevention of Parkinson's disease."

Cannabis Plant (Hindustan Times: 20240808)

<https://www.hindustantimes.com/lifestyle/health/cbg-from-cannabis-plant-reduces-anxiety-stress-and-boosts-memory-new-study-101723035642936.html>

CBG from cannabis plant reduces anxiety, stress and boosts memory:

Derived from the cannabis plant, cannabigerol (CBG) has proven to effectively reduce anxiety and stress, a new study published in the journal *Scientific Reports* has found which also pointed that it may help in improving memory.

CBG from cannabis plant reduces anxiety, stress and boosts memory: New study (Photo by Manaure QUINTERO / AFP)

CBG from cannabis plant reduces anxiety, stress and boosts memory: New study (Photo by Manaure QUINTERO / AFP)

Dried leaves from the cannabis or marijuana plant are smoked or chewed for euphoric effect. Psychoactive substances present in the plant include cannabinoids, from which CBG and cannabidiol (CBD) are derived.

In many countries, including high-income ones, the medicinal use of cannabis is legal, such as in treating chronic pain or nausea due to chemotherapy, legalising recreational cannabis is being debated around the world.

The study's authors, including those at the Washington State University in US, said that with CBG use increasing in popularity and producers making "bold, unsubstantiated claims of its effects", the clinical trial evidence they have provided could inform both consumers and scientific community.

For the study, the researchers assessed the baseline levels of anxiety, stress and mood of 34 individuals over two virtual meetings.

The participants then consumed either 20 milligrams (mg) of CBG or a placebo, following which their anxiety, stress and mood, along with effects of intoxication, were re-assessed.

A week later, the procedure was repeated, this time with the participants consuming the product alternate to the one previously taken.

"Relative to placebo, there was a significant main effect of CBG on overall reductions in anxiety as well as reductions in stress at (20, 45 and 60 minutes after consumption)," the authors wrote.

They also found significant improvements in memory, with the participants recalling more words after taking 20 mg of CBG than after taking placebo.

Further, CBG did not impair cognition, movement, or other adverse effects commonly related with tetrahydrocannabinol (THC), the the psychoactive ingredient in cannabis, the researchers said.

The participants were also found to report low intoxication and minimal changes in symptoms like dry mouth, sleepiness and increased appetite.

However, the researchers cautioned that the results need to be interpreted carefully, citing study limitations, including modest use of CBG, timing of assessments and their remote nature (conducted over video conferencing).

"We need to avoid claims that CBG is a miracle drug. It's new and exciting, but replication and further research are crucial," corresponding author Carrie Cuttler, an associate professor of psychology at Washington State University, said.

"Ongoing and future studies will help build a comprehensive understanding of CBG's benefits and safety, potentially offering a new avenue for reducing feelings of anxiety and stress without the intoxicating effects of THC," Cuttler said.

Microplastics (Hindustan Times: 20240808)

<https://www.hindustantimes.com/lifestyle/health/microplastics-are-everywhere-but-are-they-harming-us-101723020701741.html>

Microplastics are everywhere, but are they harming us?

Microplastics have been found in the ocean and the air, in our food and water. They have been found in a wide range of body tissues, including the heart, liver, kidneys and even testicles.

A blue rectangular piece of microplastic sits on the finger of a researcher with the University of Washington-Tacoma environmental science program after it was found in debris collected from the Thea Foss Waterway in Tacoma. (AP)

A blue rectangular piece of microplastic sits on the finger of a researcher with the University of Washington-Tacoma environmental science program after it was found in debris collected from the Thea Foss Waterway in Tacoma. (AP)

Evidence suggests they might, but it's limited in scope. Some researchers are worried, but acknowledge there are lots of unanswered questions.

Dr Marya Zlatnik, a San Francisco-based obstetrician who has studied environmental toxins and pregnancy, has seen studies raising concerns about microplastics' impact on the health of babies and adults.

But it's a young research field, and it's not something she generally discusses with patients.

“I'm not entirely sure what to say yet,” Zlatnik said.

Here's a look at what's known so far:

WHAT ARE MICROPLASTICS?

Plastics are man-made materials — many of them derived from oil or other petroleum products. They can break down into smaller particles, through exposure to heat and weather and even animal digestion.

Researchers have increasingly been interested in microplastics, which can be as wide as a pencil eraser or as small as a fraction of the width of a human hair. Nanoplastics, another area of study, are even smaller.

These minuscule plastics have been detected in air, water and soil, in milk, and in bottled and tap drinking water. They also have been found in a variety of foods, including salt, sugar, honey, rice and seafood.

There is scientific debate about how much people inhale and ingest, and it can vary on what they eat and drink and where they live, researchers say.

Some Australian researchers, on behalf of the World Wildlife Fund, calculated in 2019 that many people each week consume roughly 5 grams of plastic from common food and beverages — the equivalent of a credit card. That estimate is not universally embraced by researchers, but is commonly mentioned in news articles.

Researchers are still trying to understand exposure levels, but study after study is finding signs of plastics in body tissues.

“Microplastics have been measured in pretty much all of the body tissues that have been evaluated,” said Tracey Woodruff, a University of California at San Francisco researcher. Scientists have even reported finding them in the penis, in ovaries and in placentas.

(Also Read | Wait, what? Plastic use and pollution may affect your fertility)

WILL MICROPLASTICS HURT YOU?

That's still being sorted out.

A 2022 World Health Organization report concluded there was no clear risk to human health, based on the available evidence.

There's also not an obvious signal of widespread public health impact, at least in terms of mortality. Cancer, heart disease and stroke death rates have been falling, not rising.

But researchers only started measuring plastics in the human body — and trying to assess the health effects — in recent years. Some of that work is only coming to fruition now.

It makes sense that microplastics are harmful because they contain toxic chemicals, said Woodruff, who was part of a team that reviewed nearly 2,000 studies about microplastics at the request of California legislators. It may be, for example, that microplastics play a role in rising occurrences of some cancers in younger people, she said.

Available information indicates plastics can spark inflammation and cause other problematic changes in the body that can, for example, raise the risk of heart attack and stroke.

A small study in the *New England Journal of Medicine* earlier this year suggested, but did not prove, that patients with evidence of plastics in their arteries were at greater risk of death from heart attacks and strokes. But an expert not involved in the research suggested the study may have overstated any effects.

“Even though there's a lot we still don't know about microplastic particles and the harm they cause to humans, the information that is available today is in my mind very concerning,” said Dr. Philip Landrigan, of Boston College.

WHAT CAN YOU DO ABOUT MICROPLASTICS?

There are ways to reduce potential microplastics exposure, researchers say.

Take your shoes off before you go in the house, to avoid tracking in plastics-laden dust (not to mention germs, dirt and other debris) throughout your home.

Eat foods — especially fresh fruits and vegetables — that you prepare in the home.

Don't microwave a meal in a plastic tray, no matter what TV dinner instructions might say, Woodruff said.

And opt for reusable stainless steel or glass water bottles, rather than disposable plastic ones, she added.

Zlatnik, the obstetrician, noted that families with limited incomes may have bigger things to worry about.

"If someone is worried about where their next meal is going to come from, I'm not going to give them advice to keep their leftovers in glass containers and to not microwave in plastic," she said.

kidney (THE TIMES OF INDIA: 20240808)

<https://timesofindia.indiatimes.com/city/pune/man-donates-kidney-to-wife-with-different-blood-group/articleshow/112358837.cms>

Pune: When the husband of a 40-year-old homemaker from Pune offered to donate his kidney to save her life, their blood group mismatch emerged among the key hurdles. Meticulous planning and drug use, however, helped doctors to not just perform the transplant surgery, but also prevent organ rejection by the recipient's body, a major concern in such cases.

The transplant took place at Pune's Manipal Hospital at their Baner branch. The woman was diagnosed with Systemic Lupus Erythematosus (an auto-immune disease) and lupus nephritis (a kidney disease) in 2015. Besides, hypertension in the woman remained uncontrolled in spite of trying five different types of medications. In 2020, the woman's health deteriorated further with the onset of herpes zoster and diabetes.

Herpes zoster is a viral infection that causes an outbreak of a painful rash or blisters on the skin. By April 2021, she had developed early signs of kidney failure, which rapidly progressed, culminating in the need for dialysis by 2023.

As her health condition continued to deteriorate, doctors advised an urgent kidney transplant. This is when her husband (43) offered to donate one of his kidneys. When the couple's blood was tested, it was found that the husband had an AB positive blood group, while that of the wife was A positive. Besides, the husband had triple renal arteries, a rare anatomy occurring in only 10% of the population.

Urologist Dr Anand Dharaskar, one of the doctors who performed the transplant, said, "Performing a transplant in this case was complicated as the donor had three renal arteries, while the recipient had only one. Suturing the three arteries was difficult in the donor's case. So, we performed a laparoscopic surgery to harvest the kidney, which is less invasive, quicker to heal and more cosmetically preferred for the donor. Transplanting

the kidney into the recipient with only one artery was equally daunting, requiring precise vascular reconstruction to ensure proper blood flow.”

Dr Dharaskar and nephrologist Dr Tarun Jeloka, along with their team, successfully performed the kidney transplant on July 18, 2024.

Dr Jeloka said, “To reduce the risk of organ rejection by the recipient’s body, we gave the patient a monoclonal antibody medication two weeks before the transplant, followed by additional medications a week before. We also did a procedure, called plasma exchange, to remove harmful antibodies from the blood till a safe level was achieved. Despite the higher risks, the transplant was successful, just like a matched transplant.” Dr Jeloka said, “The patient’s kidney function became normal within two days, and she was able to go home without any complications.”

The donor was discharged within seven days after the surgery, while the recipient was discharged within nine days of the procedure. Both the donor and recipient are stable, doctors said.

Breathlessness (THE TIMES OF INDIA: 20240808)

<https://timesofindia.indiatimes.com/life-style/health-fitness/health-news/breathlessness-is-it-heart-related-or-lung-related-what-to-do-to-ease-it/articleshow/112342367.cms>

Breathlessness: Is it heart related or lung related? What to do to ease it

The article discussed the causes and treatments of dyspnea, or breathlessness, which is often linked to heart or lung issues. It highlighted the importance of proper diagnosis and named specific heart conditions like heart attacks and lung diseases such as COPD. Treatment often involves medications and lifestyle changes. Accurate diagnosis is key for effective management.

Breathlessness: Is it heart related or lung related? What to do to ease it

The illness known as dyspnea, or breathlessness, is characterized by trouble breathing or a feeling of being out of breath. It frequently signals an underlying health problem and can vary in intensity from minor pain to severe misery. Breathlessness is more common in people who already have respiratory or cardiovascular diseases, such as asthma, chronic obstructive pulmonary disease (COPD), or heart disease.

An increased risk may also apply to older adults, people who have smoked in the past, and people who have been exposed to environmental contaminants. It is essential to recognize if dyspnea is due to heart or lung problems in order to properly diagnose and treat the condition.

Understanding the causes

Heart-Related Breathlessness

Breathlessness related to the heart usually results from cardiovascular issues. Heart attacks, coronary artery disease (CAD), and congestive heart failure (CHF) can all affect how well the heart pumps blood, which can cause fluid to accumulate in the lungs. Breathing becomes difficult as a result of this fluid buildup, particularly while resting flat

or exerting physical effort. Other symptoms that patients may encounter include weariness, a chronic cough, and leg edema.

Lung-Related Breathlessness

According to Dr Pratibha Dogra, Senior Consultant - Pulmonology and sleep medicine expert, Marengo Asia Hospital, Gurugram, “Respiratory disorders frequently result in dyspnea connected to the lungs. Asthma, pneumonia, and chronic obstructive pulmonary disease (COPD) are typical causes. Breathing becomes challenging for those with COPD due to airflow obstruction, especially after strenuous exertion. Asthma produces wheezing and dyspnea due to inflammation and airway constriction. A lung infection called pneumonia can cause an abrupt loss of breath along with fever, coughing, and other symptoms.”

Diagnosis of breathlessness

Making the distinction between dyspnea caused by the lung and heart requires an accurate diagnosis. In addition to performing a physical examination and reviewing the patient's medical history, doctors may also order diagnostic procedures such blood tests, lung function tests, echocardiograms, and chest X-rays. These assessments aid in determining the root cause and directing the proper course of action.

Remedies and treatment of breathlessness

Having an upright posture facilitates improved lung expansion.

Breathe through your nose as you inhale, then gently release the air through pursed lips.

Deep breaths from your diaphragm are the main emphasis of diaphragmatic breathing.

Employ a fan: Being cold can assist lessen the sensation of being out of breath.

Techniques for relaxation: To maintain composure, engage in mindfulness or meditation.

Steer clear of triggers: Steer clear of pollution, smoking, and allergies.

Speak with a physician: If your symptoms are persistent, consult a doctor.

Treating the cardiac disease that is producing the symptoms is the main goal of care for heart-related breathlessness. This includes taking drugs including beta-blockers to improve cardiac function, ACE inhibitors to control blood pressure, and diuretics to lessen fluid accumulation. Modifications in lifestyle, such as cutting back on salt, exercising frequently, and practicing stress management, are important in symptom relief. In more serious situations, heart surgery such as angioplasty can be necessary to get the heart working normally again.

On the other hand, the respiratory problem is addressed in order to treat lung-related dyspnea. Inhalers and corticosteroids, which reduce airway inflammation, are useful tools for managing asthma. Treatment for Chronic Obstructive Pulmonary Disease (COPD) usually consists of oxygen therapy to guarantee appropriate oxygen levels and bronchodilators to reduce airway tightness. When someone has bacterial pneumonia, doctors recommend antibiotics. To further enhance lung health and lessen dyspnea, it is imperative to stop smoking and stay away from environmental toxins.

Whether caused by lung or cardiac problems, dyspnea requires careful assessment and treatment. Finding the underlying reason is crucial to a successful treatment plan. People

can regain their overall health and alleviate symptoms by treating the underlying cause and following recommended treatments. Taking prescription medications as directed by a doctor is essential to treating dyspnea and improving quality of life.

Colostrum-the Liquid Gold (THE TIMES OF INDIA: 20240808)

<https://timesofindia.indiatimes.com/life-style/health-fitness/health-news/colostrum-the-liquid-gold-6-reasons-why-the-first-breast-milk-is-crucial-for-newborn/articleshow/112347029.cms>

Colostrum-the Liquid Gold: 6 reasons why the first breast milk is crucial for newborn

Don't mess with students: 10 lessons for India from Bangladesh crisis

The article highlighted the significant benefits of colostrum, the first breast milk produced after childbirth, emphasizing its role in strengthening the infant's immune system, promoting gut health, and providing optimal nutrition. It also discussed colostrum's laxative effect aiding in meconium clearance and preventing jaundice, as well as its digestibility and importance in regulating blood sugar levels in newborns. Colostrum-the Liquid Gold: 6 reasons why the first breast milk is crucial for newborn

The vital role of colostrum

Breastfeeding a newborn is a special experience for every mother. The nourishment a newborn receives in those crucial first days is of paramount importance. Therefore, it is essential for all mothers to be well-informed about the extensive benefits of colostrum, also known as "liquid gold".

Colostrum is the first form of breast milk produced by one's body following the newborn's delivery.

Being the first milk that the baby consumes after birth, it is rich in nutrients and white blood cells that produce antibodies, playing a crucial role in building the infant's immune system and fending off illnesses and infections during their early days.

Doctor also lays out the wide range of benefits of Colostrum, stressing how they are indispensable for the infant's health and immune:

1. Immune System Strengthening

Colostrum is loaded with antibodies, particularly immunoglobulin A (IgA), which plays an important role in protecting mucous membranes in the throat, lungs, and intestines from pathogens. It also contains white blood cells that can combat infections directly and antimicrobial peptides like lactoferrin, which curbs the growth of harmful bacteria and viruses, protecting the infant.

2. Gut Health and Protection

According to Dr Sanjay Wazir, Neonatologist and Pediatrician, Motherhood Hospitals, Gurgaon, "Colostrum helps in building a healthy gut by coating the intestines with a protective layer, inhibiting the absorption of bacteria and allergens. This barrier is vital for developing a robust digestive system. Additionally, colostrum promotes the growth of beneficial gut bacteria, contributing to a balanced microbiome. It also contains growth

factors that promote the development and repair of the intestinal lining, ensuring the infant's digestive tract is strong and healthy from the start.”

3. Optimal Nutrition

As the first form of milk produced by the mother, colostrum offers ideal nutrition for a newborn. It is nutrient-dense, packed with proteins, vitamins such as A, E, and K, and minerals like zinc and sodium in highly concentrated forms. This nutrient-rich composition provides the energy needed for early growth and development, supporting your baby during the critical initial days after birth.

4. Laxative Effect and Meconium Clearance

One of the substantial benefits of colostrum is its natural laxative effect, which helps the baby pass meconium, the thick and sticky first stool. This early expulsion of meconium is essential as it lowers the possibility of jaundice, a condition caused by the buildup of bilirubin in the blood. By promoting the excretion of bilirubin, colostrum helps shield the infant from this common condition.

5. Digestibility

Colostrum is extremely easy to digest, which makes it ideal for a newborn's immature digestive system. Its composition is perfectly suited to the baby's needs, ensuring they can absorb the nutrients efficiently. Due to its thick consistency and nutrient density, babies receive all they need in small amounts, reducing the risk of overfeeding and associated digestive issues.

6. Blood Sugar Regulation

Colostrum plays a vital role in preventing low blood sugar (hypoglycemia) in full-term babies. It helps maintain stable blood sugar levels, which is vital as newborns adjust to feeding outside the womb. The carbohydrates in colostrum provide a steady supply of energy, ensuring that the baby remains active and alert.

Colostrum is pivotal in laying a robust foundation for an infant's health. Its rich composition of antibodies, growth factors, and nutrients supports the immune system, enhances digestion, and ensures proper nutrition, significantly contributing to the overall development and well-being of the newborn. The early intake of colostrum not only fortifies the infant against infections and diseases but also promotes healthy growth and development, underscoring its indispensable role in early life.

Breastfeeding (THE TIMES OF INDIA: 20240808)

<https://timesofindia.indiatimes.com/life-style/health-fitness/health-news/the-science-behind-breastfeedings-benefits-for-mom-and-baby/articleshow/112353760.cms>

The science behind breastfeeding's benefits for mom and baby

Breastfeeding has been verified by numerous scientific studies to offer significant health benefits for both mother and baby. Breast milk provides essential nutrients, antibodies, and good bacteria, promoting a healthy gut and stronger immune system. Additionally, breastfeeding aids postpartum recovery, helps mothers lose pregnancy weight, and reduces the risk of certain cancers.

The science behind breastfeeding's benefits for mom and baby

Breastfeeding has often been claimed to be the gold standard of baby nutrition, but its benefits extend far beyond. In the case of breastfeeding, there are several health benefits accruable to both mother and baby, all of which are verified by many scientific studies. Knowing these benefits will help in promoting and sustaining the breastfeeding practices so important for mother and child alike.

Breast milk contains all the nutritional elements required by a baby.

It has the appropriate mix of proteins, fats, vitamins, and minerals needed for proper growth and development. Colostrum is the first milk that is produced and consists of large amounts of antibodies, particularly IgA, which coats the intestines of the newborn, preventing the passage of pathogens and thus protecting it from infections. As the baby matures, so does the composition of breast milk to meet nutritional requirements for the growing infant. Breast milk is also much more easily digested than formula and increases the chances of fewer gastrointestinal problems, such as constipation and colic, in babies. In addition, breast milk contains good bacteria that give rise to a healthy gut microbiome, which becomes essential to the well-being of any baby.

Breastfeeding boosters, hence, also play a very vital role in strengthening the immune system of the child. Infants who are breastfed have a lesser risk of respiratory infections, ear infections, and gastrointestinal diseases. This is because of the presence of antibodies and several other elements boosting the immune system present in breast milk. This can also help reduce the risk of certain chronic conditions later in life, like asthma, obesity, and type 1 diabetes, and lower risks of some forms of cancer.

It also has considerable health advantages for mothers. Breast milk production helps in postpartum recovery. The stimulation due to uterine contractions from breastfeeding will cause less postpartum bleeding, making the uterus return to its non-pregnant size faster than normal. In addition, it burns extra calories; thus, it helps lose extra pregnancy weight. Other studies have shown that breastfeeding decreases the risk of breast and ovarian cancers. The hormonal changes with this activity of breastfeeding, specifically the increase in oxytocin levels, help in achieving yet another very basic nature of rearing a child: bonding. In addition, the elevated prolactin and the lowered gonadotropins in this process act as natural birth control, preventing the return of the menstrual cycle and thus ovulation.

Alzheimer's (Medical News Today: 20240808)

<https://www.medicalnewstoday.com/articles/managing-cholesterol-may-help-lower-the-risk-of-alzheimers-parkinsons-disease>

Managing cholesterol may help lower the risk of Alzheimer's, Parkinson's disease

Cholesterol is a fat-like substance that is an essential part of the membranes of all cells. It is produced by the body, primarily in the liver, but people also consume it in their diet. A new review has found four molecular mechanisms by which cholesterol imbalances, particularly in the brain, may lead to neurodegenerative diseases, such as Alzheimer's and Parkinson's disease.

The review suggests that managing cholesterol could help reduce the risk of these diseases.

Cholesterol is a fatty or waxy molecule that has several functions in the human body. It is essential in the structure of cell membranes, and for making steroid hormones, bile acids and vitamin D.

Cholesterol is particularly important in the brain for the formation and functioning of nerve cells.

The two main types of cholesterol are low-density lipoproteins (LDLs, or “bad cholesterol”), which collect in the walls of blood vessels, and high-density lipoproteins (HDLs, or “good cholesterol”), which move LDLs out of the bloodstream.

Studies suggest that a higher level of HDL may be associated with a reduced risk of cardiovascular disease, while high LDL increases the risk of heart disease and stroke.

Now, a new review of the existing research has laid out the molecular mechanisms that may link cholesterol imbalances with neurodegenerative diseases. The researchers suggest that by managing cholesterol levels, people could potentially reduce their risk of developing diseases such as Alzheimer’s and Parkinson’s disease.

The review appears in *Experimental and Molecular Medicine*.

David Gill, MD, an associate professor of neurology at the University of Rochester Medical Center and of the Division of Cognitive and Behavioral Neurology, who was not involved in this research, commented on the review for *Medical News Today*, commenting that:

“The article describes a number of ways that cholesterol is involved in how the brain functions, including helping brain cells communicate [...], stabilizing the membrane of the brain cell, regulating production of a protein called beta Amyloid, and playing a role in how a protein called Tau clumps together.”

Cholesterol: A key risk factor in neurodegeneration

A recent *Lancet* commission review listed high LDL cholesterol after the age of 40 as one of 14 modifiable factors that increase the risk of dementia, the most common neurodegenerative disease.

This latest review adds to this by identifying four molecular mechanisms of neurodegeneration that are linked to cholesterol imbalances.

The first is synaptic dysfunction. Synapses are the connections between nerve cells, and their function relies on cholesterol in the plasma membrane.

Lack of cholesterol in the plasma membrane can interrupt the passage of impulses between nerve cells, leading to the declines in cognitive and motor function seen in neurodegenerative diseases.

The second mechanism is linked to cell membrane structure and protein clustering. Cholesterol deficiency in nerve cells causes defects in the cell membranes which can lead to neurodegeneration.

The third is related to oligomers of beta-amyloid protein. Imbalance of cholesterol influences the clumping and misfolding of proteins, such as amyloid precursor protein (APP). High cholesterol levels speed up the formation of beta-amyloid from APP, making beta-amyloid plaques that are characteristic of Alzheimer's disease.

Finally, there is, alpha-synuclein aggregation: Cholesterol accelerates the aggregation of alpha-synuclein and formation of Lewy bodies, the main causes of neurodegeneration in Parkinson's disease.

How exactly does cholesterol lead to neurodegeneration?

Yongsoo Park, PhD, one of the authors of the recent *Experimental and Molecular Medicine* review, from the Neurological Disorders Research Center at the Qatar Biomedical Research Institute (QBRI), Hamad Bin Khalifa University (HBKU), explained for MNT that:

“Cholesterol cannot directly cross the blood-brain barrier (BBB), and most brain cholesterol is synthesized locally within the brain. However, there is a complex relationship between peripheral cholesterol (cholesterol in the bloodstream) and brain cholesterol that can influence neurodegeneration.”

“First, high levels of cholesterol in the bloodstream can contribute to the formation of atherosclerotic plaques in blood vessels, including those supplying the brain. This can impair blood flow and reduce the delivery of oxygen and nutrients to brain tissues, potentially leading to neurodegeneration,” Park told us.

“Second,” he added, “elevated cholesterol levels in the bloodstream can also compromise the integrity of the BBB. A compromised BBB might allow peripheral molecules, which would normally be excluded, to enter the brain, potentially contributing to neuroinflammation and neurodegeneration.”

However, he also suggested that these molecular mechanisms were “mainly due to problems with de novo synthesis of cholesterol in the brain and cholesterol dysregulation in neurons.”

Can managing blood cholesterol make a difference?

General advice to help maintain health is to try and minimize LDL and increase levels of HDL in the blood, and this review suggests that doing this may also help to preserve the health of nerve cells in the brain.

“There are a number of tenets to a healthy brain lifestyle that include not smoking, controlling blood pressure, and maintaining a healthy weight as well as increasing mental, physical and social activity and following a heart healthy diet,” Gill told us.

People can manage their cholesterol levels by taking medications, such as statins, and by modifying their diet and lifestyle.

The Centers for Disease Control and Prevention (CDC) Trusted Source recommend the following to help reduce high LDL cholesterol:

make healthy eating choices, such as limiting the intake of saturated fats, trans fats, salt and added sugars, and choosing foods that are naturally high in fiber and unsaturated fats
maintain a healthy weight

get regular physical activity

do not smoke/ give up smoking

limit your alcohol consumption, as too much alcohol can raise cholesterol levels.

Park explained that “lowering blood cholesterol levels can reduce the risk of atherosclerosis, thereby maintaining better blood flow to the brain and preserving BBB integrity [and] decrease chronic inflammation, as high cholesterol is associated with the release of inflammatory cytokines.”

People with Alzheimer’s risk gene should watch their cholesterol

“We also know that a gene that plays a role in cholesterol in the brain, APOE, also plays a role in the risk of Alzheimer’s disease,” said Gill.

“Given that cholesterol plays a role in the build up of these proteins as well as the structure of the membrane of the brain cell as well as how well brain cells communicate, it makes sense that cholesterol may play a role in the Alzheimer’s disease process,” he noted.

Thus, controlling blood cholesterol could be particularly important for people who have the APOE ϵ 4 allele (gene variant) that increases their risk of developing Alzheimer’s disease, as Park told us:

Cholesterol (The Tribune: 20240808)

<https://www.tribuneindia.com/news/health/indian-researchers-find-a-new-cheaper-route-to-manage-cholesterol/>

Indian researchers find a new, cheaper route to manage cholesterol

Researchers from S. N. Bose National Centre for Basic Sciences, Kolkata, have explored a new way to manage conditions like elevated low-density lipoprotein (LDL), or cholesterol, levels.

Proteins are vital for our health, performing a wide range of functions. However, incorrect protein interactions can cause diseases. Traditionally, scientists have tried to develop small molecule drugs that act as competitive inhibitors to protein-protein interaction (PPI)

sites. However, this has proven difficult due to the large and smooth nature of protein interaction areas.

An alternative approach uses large peptides or antibodies to inhibit PPIs, though these can be costly and difficult to administer.

A promising new method involves allosteric inhibitors -- drugs that bind to different parts of the protein, changing its behaviour and preventing harmful interactions.

The challenge is identifying these special target spots on proteins. The researchers propose a new computational protocol to predict and identify alternative binding pockets and hotspots on a protein surface that are allosterically coupled to the functional site using advanced computer simulation approaches.

As a test case, they examined PCSK9, a protein that controls cholesterol levels by interacting with low-density lipoprotein receptor (LDLR). Increased PCSK9-LDLR interaction can elevate LDL levels, contributing to heart disease. Current treatments targeting PCSK9 are expensive and not suitable for everyone. Finding an orally administered small-molecule drug that blocks the PCSK9-LDLR interaction could be transformative.

Dr Suman Chakrabarty's team has made significant progress in identifying targetable parts of the PCSK9 protein. They used thermodynamics to argue that the bidirectional nature of allostery can identify allosteric pockets. By comparing the conformational ensembles of bound and unbound protein states, they propose targeting unique conformations in the unbound state for drug discovery. This collaborative approach between academia and industry aims not only to lower cholesterol but also to create a new paradigm in drug design, targeting proteins more effectively to prevent diseases.

Diabetics (The Tribune: 20240808)

<https://www.tribuneindia.com/news/health/can-increasing-heat-exposure-worsen-health-of-diabetics/>

Can increasing heat exposure worsen health of diabetics?

Researchers note that certain hormonal disorders can disrupt body's ability to regulate temperature, making it harder to cool down and increasing the risk of heat-related illnesses
article_Author

Increasing heat wave conditions due to climate change may be detrimental to the health of people with diabetes—about 537 million adults worldwide, according to a study.

A team of endocrinologists and researchers from the University of Oxford, London School of Hygiene; Tropical Medicine, and Queen Mary University of London argued that as climate change is increasing seasonal temperatures and causing more frequent heat waves, understanding their effects, especially on diabetics, has become more crucial than ever.

Hormones play a role in nearly all biological functions—controlling processes such as conservation of body water, sweating, and heat generation from cell metabolism—yet the influence of environmental factors on hormone release and action is not well characterised, they said.

Lead author Professor Fadil Hannan from the Nuffield Department of Women's Reproductive Health at Oxford, UK, said “very little” is known about how “increased heat exposure due to climate change could affect endocrine health”.

Hannan said the research is “important for patients living in hot climates, who may have inadequate access to cooled environments”. It may help develop early interventions for endocrine patients most at risk from heat extremes.

The team examined a review of studies published from the 1940s onwards which indicates that “heat exposure affects hormones involved in processes ranging from the stress response, blood glucose control, fertility, and breast milk production”.

The “review highlights the gap in evidence regarding the impact of sustained heat exposure on the endocrine system, which is particularly relevant to the increasing numbers of people living with endocrine conditions such as diabetes mellitus or thyroid disorders” as these people may have limited tolerance to higher temperatures.

The researchers noted that certain hormonal disorders can disrupt the body's ability to regulate temperature, making it harder to cool down and increasing the risk of heat-related illnesses, and hospitalisation for these patients. This in turn “also increases the burden of heat on the health system”, they said.

Heart Attack (The Indian Express: 20240808)

<https://indianexpress.com/article/lifestyle/health/sleeping-stomach-heart-attack-risk-experts-9442373/>

Does sleeping on the stomach increase heart attack risk? Experts answer

A heart attack is a serious condition that occurs when the blood supply to the heart muscle is significantly disrupted or completely blocked, said Dr Amit Gangwani, consultant interventional cardiologist, Zynova Shalby Hospital

There are many facets to sleep and its effect on one's health. But does your sleeping position, especially on the stomach, directly impact breathing and cause the heart to stop beating? Let's find out.

Dr Amit Gangwani, consultant interventional cardiologist, Zynova Shalby Hospital said, heart blockage is mainly caused by factors like the buildup of excessive fat, and cholesterol around the arteries. “Lack of continuous blood flow to the tissues in the heart muscle can lead to the death of the cells. It is a medical emergency that needs prompt diagnosis to prevent the risk of further complications,” said Dr Gangwani.

Dr Gangwani, however, added that there's no direct link between sleeping on the stomach and increased risk of heart attack. "A heart attack is a serious condition that occurs when the blood supply to the heart muscle is significantly disrupted or completely blocked," said Dr Gangwani.

Agreed Dr Varsha Koul, senior consultant, cardiology, Batra Hospital and Medical Research Centre, adding that "Based on current research, a person's sleeping position is not widely recognised as a risk factor for heart disease or other cardiovascular issues."

However, sleeping on the stomach can severely impact various other parts of the body, cause difficulty in breathing, and also put extra pressure on the spine.

Festive offer

Dr Naveen Chandra G S, HOD and lead consultant, department of interventional cardiology, Aster Whitefield Hospital, Bengaluru noted that although the direct connection between sleeping and heart attacks is not definitively established, "stomach sleepers are more prone to heart problems".

sleeping Which is your most preferred sleeping position? (Source: Pexels)

"When you lie face down on the bed, it puts pressure on the chest and abdomen which might constrict blood flow, making your heart work inefficiently. Furthermore, this position may also increase spinal and nerve pressures leading to overall stress and discomfort that can negatively impact cardiovascular health," said Dr Chandra.

It is vital to know that difficulty in breathing is one of the warning signs of cardiovascular diseases like heart attack, stroke, heart failure, and angina. "This sleeping position can be problematic for people suffering from respiratory diseases like chronic obstructive pulmonary disease (COPD)," said Dr Gangwani.

While sleeping position alone is unlikely to be a sole cause of heart attacks, Dr Chandra said that it can be a contributing factor especially when people have existing heart conditions or other risk factors such as obesity, high blood pressure, or sleep apnea.

Making sure your spine stays neutral while asleep requires one to either lie on their back or side with proper support for better heart health. "Additionally, leading a lifestyle that promotes good cardiac function by exercising regularly, eating healthy meals, and managing anxiety goes a long way in reducing chances of suffering from cardiac-related problems," said Dr Chandra.

Treatment of lumps (Navbharat Times: 20240808)

<https://navbharattimes.indiatimes.com/lifestyle/health/zika-virus-and-chandipura-virus-spread-fastly-in-india-keep-eyes-on-fever-and-weakness-like-10-symptoms/articleshow/112334465.cms>

शरीर के किसी भी हिस्से हो गांठ, झट से गला देगी बस ये एक चीज, आप भी आजमाएं ये आयुर्वेदिक इलाज

Ganth ka ilaj in Hindi: कई गांठ ऐसी होती हैं जिनमें दर्द नहीं होता है, हालांकि इसका मतलब यह नहीं है कि यह कैंसर की गांठ हो, गांठ के इलाज के लिए आप आयुर्वेदिक उपचार भी आजमा सकते हैं।

यदि शरीर के किसी हिस्से में गांठ बन जाए तो व्यक्ति के मन में सबसे पहला डर कैंसर का ही आता है, लेकिन यह बिल्कुल भी जरूरी नहीं है कि हर गांठ का मतलब कैंसर ही हो।

इसके पीछे कई तरह के कारण हो सकते हैं जैसे चोट या संक्रमण। डायबीटीज, हाई ब्लड प्रेशर, ओबेसिटी, कम फिजिकल एक्टिविटी आदि भी शरीर में गांठ बनने की वजह हो सकते हैं। कुछ गांठें ऐसी होती हैं जो बेहद नरम होती हैं और इन्हें लिपोमा कहा जाता है। जो गांठें सौम्य होती हैं उनसे कैंसर जैसी जानलेवा बीमारी का खतरा नहीं होता है।

डॉक्टर इरफ़ान का अनुसार, आयुर्वेद में इस तरह की गांठों का इलाज मौजूद है। कुछ आसान उपायों को अपनाकर इस तरह परेशानी से बचा सकता है।

शरीर में कहीं भी बन सकती है गांठ

इस तरह की गांठें शरीर के किसी भी हिस्से में बन सकती हैं जैसे कंधा, पीठ, छाती, हाथ, पेट और गर्दन। औरतों को बच्चेदानी में सिस्ट की समस्या होती है। गांठें चाहे जैसी भी हों लेकिन ज्यादा समय तक इन्हें अनदेखा नहीं करना चाहिए। यदि आपको अपने शरीर में ऐसी कोई समस्या दिखे तो आप तुरंत जांच करवाएं और डॉक्टर से सलाह लें।

क्या है लिपोमा?

शरीर में बनने वाली अनचाही गांठें लिपोमा हो सकती हैं। वैसे तो यह बॉडी के किसी भी हिस्से में हो सकता है लेकिन ज्यादातर यह कंधे, पेट, जांघ, हाथ, पैर और पीठ में होता है। आमतौर पर इस तरह की गांठें दर्द नहीं होती लेकिन अगर यह बढ़ जाए तो दर्द की समस्या भी हो सकती है। यह काफी नरम होते हैं और अगर इन्हें उंगलियों से दबाया जाए तो यह इधर उधर भागते हैं। शुरुआत में यह काफी छोटे होते हैं लेकिन धीरे धीरे बढ़ने लगते हैं।

ऐसे लोगों को लिपोमा खतरा ज्यादा होता है

बढ़ती उम्र के लोगों में लिपोमा के मामले ज्यादा देखे जाते हैं। खासतौर पर 40 से लेकर 60 वर्ष तक के लोगों में यह समस्या अधिक होती है। इससे बचने के लिए अपनी बॉडी को फिट रखना बेहद जरूरी है। खासतौर पर वजन को कंट्रोल रखना चाहिए। शरीर में जरूरत से ज्यादा फैट बढ़ जाने के कारण व्यक्ति को लिपोमा हो सकता है। इसकी वजह अनुवांशिक भी हो सकती है यानी परिवार में यदि पहले से ही किसी को ऐसी समस्या है तो घर के दूसरे सदस्य को भी यह हो सकती है।

हर तरह की गांठ का आयुर्वेदिक इलाज

डॉक्टर इरफ़ान के अनुसार माजूफल जिसे गॉलनट भी कहते हैं, फिटकरी और जैतून के छिलके को मिक्स करके इनका पाउडर बनाकर खाने से हर तरह की गांठ को खत्म किया जा सकता है। यदि महिलाओं को यूटस में सिस्ट की समस्या है तो इस आयुर्वेदिक फॉर्मूला को अपनाकर उन्हें इस परेशानी से छुटकारा मिल सकता है। सबसे पहले आपको 100 ग्राम माजूफल, 50 ग्राम फिटकरी और 50 ग्राम जैतून का छिलका लेना है। इन तीनों चीजों को अच्छी तरह पीसकर पाउडर बना लें और एक डिब्बे में बंद करके रख दें। इस पाउडर को ताजे पानी के साथ रोजाना सुबह आधा चम्मच और शाम को आधा चम्मच खाने से केवल एक महीने के अंदर ही आपके शरीर की गांठ ठीक हो जाएगी।

Mental Health (Dainik Jagran: 20240808)

<https://www.jagran.com/lifestyle/health-tips-to-handle-overthinking-and-ways-to-overcome-23773958.html>

Mental Health को बर्बाद कर सकती है ओवरथिंकिंग, बचने के लिए अपनाएं ये तरीके

तेजी से बदलती लाइफस्टाइल इन दिनों लोगों को कई समस्याओं का शिकार बना रही हैं। आजकल लोगों की मानसिक और शारीरिक स्वास्थ्य काफी प्रभावित होने लगी है। काम के प्रेशर और अन्य वजहों से लोग अक्सर मानसिक समस्याओं का शिकार हो जाते हैं। **Overthinking** इन्हीं में से एक है जो इन दिनों कई लोगों की रूटीन का हिस्सा बन चुका है।

लाइफस्टाइल डेस्क, नई दिल्ली। आज की डिजिटल यंग जनरेशन के अधिकतर लोगों में फोकस की कमी है और वे किसी न किसी की तरीके की मेंटल हेल्थ से जुड़ी समस्या जूझ रहे हैं। मेंटल हेल्थ खराब होने के कई कारण होते हैं और ओवरथिंकिंग इनमें से एक है। इन दिनों कई लोग इसकी प्रभावित है। खासकर यंग जनरेशन में यह ज्यादा आम है।

सोशल मीडिया के इस जमाने में हंसती खेलती फोटो के पीछे कई उदास और बेचैन चेहरे छिपे होते हैं, जिन्हें पहचानना बहुत जरूरी है। ओवरथिंकिंग से उबरने के रास्ते नहीं खोजे गए तो ये डिप्रेशन और सुसाइड तक की वजह बन सकता है। ऐसे में कुछ तरीकों की मदद से इसे हैंडल किया जा सकता है।

ओवरथिंकिंग को ऐसे करें हैंडल-

जो भी काम कर रहे हैं, उससे ब्रेक लें और लंबी गहरी सांस खींचें।

जो भी स्थिति सामने आते जाती है, उसे स्वीकार कर के उसके अनुसार अगले दिन के टू डू लिस्ट बनाएं और खुद को हर स्थिति में व्यस्त रखें।

जब ऐसा महसूस हो कि दिमाग अब ओवरथिंकिंग शुरू करने वाला है, तभी उठें और एक छोटा सा वॉक लें, गाना सुनें या फिर अपना फेवरेट स्नैक मंच करें। इससे दिमाग तत्काल डिस्ट्रेक्ट होता है।

ओवरथिंकिंग करने की जगह दिमाग में आ रही भावनाओं को डायरी में लिखें। भले ही ग्रामर न ठीक हो, या फिर आपके द्वारा लिखी गई बातें फिजूल और बेसिर पैर की हो, तब भी लिखें और फिर मन कुछ हल्का महसूस होने लगे तो इस पेपर को डायरी से हटा भी सकते हैं।

पै

से आज हैं तो कल नहीं हैं, पैसे के बारे में ओवरथिंकिंग करने से पैसे के साथ समय और स्वास्थ्य भी खराब होता है।

अधिक बोलने की बजाए अधिक सुनें। बोलने में कुछ अधिक मुंह से निकल जाने पर ओवरथिंकिंग की बाढ़ सी आ जाती है। इससे बेहतर है कि जमीन से जुड़े रहे, लोगों को बातें सुनें और अपनी बात किसी के ऊपर न थोपें।

समस्याओं की जानकारी होने पर भी उसे हैंडल न कर पाने के कारण ये जनरेशन मेंटल हेल्थ के सेक्टर की जनसंख्या और भी बढ़ाती है। अनुभवी लोगों के जीवन को आउटडेटेड समझने की जगह उनसे सीखें और ओवरथिंकिंग कर के अपनी समस्याओं को और बढ़ावा न दें।