DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE Day

Monday 20240805

Zika virus (Hindustan Times :20240805)

https://www.hindustantimes.com/lifestyle/health/protecting-against-zika-virus-zika-vs-dengue-diagnosis-challenges-and-tips-for-mosquito-bite-prevention-101722783393882.html

Protecting against Zika virus: Zika vs dengue diagnosis challenges and tips for mosquito bite prevention

Zika virus is a type of flavivirus, an RNA virus typically spread by mosquitoes. It shares similarities with dengue and there is potential for cross-reactivity in diagnostic tests, complicating accurate diagnosis, especially in regions where multiple flaviviruses are endemic. The primary reservoirs and vectors for Zika are Aedes mosquitoes, particularly Aedes aegypti and Aedes albopictus, which also transmit dengue and chikungunya.

In an interview with HT Lifestyle, Dr Subrata Das, HOD - Internal Medicine and Diabetology at Sakra World Hospital in Bengaluru, shared, “What sets Zika apart is its ability to be transmitted in multiple ways, including sexual transmission, which complicates control and prevention strategies. Compared to other viruses spread by mosquitoes, Zika virus infection is linked to a higher prevalence of Guillain-Barré syndrome, a rare neurological condition that causes paralysis and muscular weakness.”

He revealed, “Most Zika patients have minimal or no symptoms, but if a pregnant person has the virus, the fetus may be exposed, leading to serious congenital conditions such as impaired brain development and vision. The Zika virus can cause fever, headaches, joint discomfort, conjunctivitis (redness in the whites of the eyes), and a rash called a macropapular rash that can be painful and consists of both raised and flat red regions of skin.”

Dr Subrata Das concluded with the advised, “It is essential to protect oneself from mosquito bites by applying insect repellent, sleeping under mosquito nets, and avoiding travel to locations where the Zika virus is common to prevent infection. Treatment for Zika virus is currently limited to symptomatic treatment , as a vaccine is still under development.”

Two people from Pimpri-Chinchwad areas on Friday tested positive for the Zika virus infection, the National Institute of Virology (NIV) reports confirmed. Apart from them, eight more cases of the infection were reported in Pune district on Friday.

Out of the total cases reported on Friday, six were from Pune and two cases each from Pune Rural and PCMC. Since July 20, Pune district has reported 65 Zika virus cases, said the officials.

Brain Cancer (Hindustan Times :20240805)

https://www.hindustantimes.com/lifestyle/health/brain-cancer-recognising-tumour-symptoms-risk-factors-and-seeking-treatment-101722780812552.html

Brain cancer: Recognising tumour symptoms, risk factors and seeking treatment

Recognising these red flags of brain tumour underscores the importance of early detection, as prompt medical intervention enhances treatment outcomes.

Brain tumours, originating either within the brain or metastasizing from elsewhere in the body, manifest with diverse growth rates and characteristics. Classified as malignant or benign, malignant primary brain tumours, such as gliomas and astrocytomas, exhibit uncontrolled growth and can spread, while benign tumours remain localised.

Brain tumour types:

In an interview with HT Lifestyle, Dr Arjun Srivatsa, Senior Consultant and Head of the Department of Neurosciences in Bengaluru, shared, “Across more than 150 identified types, meningiomas and glioblastomas emerge as prevalent entities, observed in both Indian and Western demographics. Despite the spectrum of tumour types, the overall lifetime risk of developing brain cancer remains below 1%. The manifestation and severity of symptoms associated with brain tumours are intricately tied to factors such as their location, size and growth rate.”

Dr Arjun Srivatsa explained, “While the precise causes often remain elusive, potential contributors may include genetic predisposition, exposure to radiation, and environmental influences. Symptoms of brain cancer encompass a spectrum of manifestations, from persistent morning headaches to visual disturbances stemming from specific brain regions affected by tumors. Other indicators may include sensory abnormalities, motor deficits such as weakness or paralysis, unexplained seizures in adults, nausea, dizziness and cognitive impairments like memory loss or speech difficulties.”

Dr Arjun Srivatsa elaborated, “Tumours near critical structures like the pituitary gland can exert pressure on optic nerves, resulting in vision impairments, while lesions in the occipital lobe may cause various visual field defects. Recognising these red flags underscores the importance of early detection, as prompt medical intervention significantly enhances treatment outcomes. Being vigilant about symptoms and seeking timely medical evaluation are crucial steps toward effectively managing brain tumours.”

Hormonal Imbalance (Hindustan Times: 20240805)

https://www.hindustantimes.com/photos/lifestyle/hormonal-imbalance-what-are-the-real-root-causes-doctor-explains-101722773668774.html

Hormonal imbalance: What are the real root causes? Doctor explains lifestyle

Hormonal imbalance is a persistent worry in people after a certain age. However, with the right kind of lifestyle and diet, hormonal balance can be restored in the body. "These are the seven main factors that impact your hormonal health, and they can all be grouped into three areas of focus – nourishment, stress resilience and detoxification," wrote Nutritionist Jess Bippen as she noted down seven tips to restore hormonal balance

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When certain glands in the endocrine system are overworked and overburdened, hormonal imbalances can occur. Chronic stress, poor diet and poor lifestyle choices can trigger the glands to be overworked.

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Emotional stress and trauma can have a significant impact on our hormones. Unresolved emotions can lead to chronic stress. (Unsplash)expand-icon

Emotional stress and trauma can have a significant impact on our hormones. Unresolved emotions can lead to chronic stress. (Unsplash)
Recommended Photos

Vitamins and minerals are essential for hormone production and hormonal regulation. Deficiency of such nutrients can also be the cause of hormonal imbalance in the body. (Unsplash)expand-icon

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Imbalances in gut bacteria can lead to inflammation, disrupted hormone signaling and impaired nutrient absorption. (Shutterstock)expand-icon

Imbalances in gut bacteria can lead to inflammation, disrupted hormone signaling and impaired nutrient absorption. (Shutterstock)

The liver plays a vital role in metabolising hormones and detoxifying the body. When the liver is overburdened, hormonal imbalances can occur. .

The liver plays a vital role in metabolising hormones and detoxifying the body. When the liver is overburdened, hormonal imbalances can occur. (Twitter/AHealthyBod)

Insulin and cortisol levels are directly impacted by blood sugar dysregulation. It can also lead to insulin resistance and adrenal fatigue.

Good quality sleep is very important for healthy hormonal regulation. Sleep deprivation can disturb the body's natural circadian rhythm.

Good quality sleep is very important for healthy hormonal regulation. Sleep deprivation can disturb the body's natural circadian rhythm. (Shutterstock)

Haemophilia Care (Hindustan Times: 20240805)

https://www.hindustantimes.com/lifestyle/health/haemophilia-care-heres-how-benefits-and-risks-related-to-treatment-of-haemophilia-can-be-balanced-101722761221875.html

Haemophilia care: Here's how benefits and risks related to treatment of haemophilia can be balanced

Haemophilia is a hereditary disorder that affects the ability of the body to form blood clots because of deficiency of factor VIII or IX but people with haemophilia can have active, meaningful lives provided they receive a regimen of factor replacement along with a well-organised exercise regimen to strengthen the muscle groups around major joints. With the development of medicine and technology, along with cooperative efforts between patient groups, physicians and the government for improved access to factors, management of this bleeding problem has improved in the last few decades.

In an interview with HT lifestyle, Dr Kannan Subramanian, Consultant Hematologist at Sahyadri Speciality Hospital in Pune's Deccan Gymkhana, highlighted the primary risks connected to hemophilia treatment –

1. Development of Inhibitors:
This is one of the most challenging complications in hemophilia treatment. Around 25 to 30% patients develop inhibitors against the clotting factors used in their treatment, particularly those with hemophilia A. These inhibitors can make the standard treatments less effective, necessitating alternative strategies and sometimes more intensive treatments.

2. Viral Transmission:
While much safer today due to rigorous screening and the use of synthetic products, there remains but a small risk of viral transmission with plasma-derived treatments. It's a reminder of the importance of ongoing vigilance in product safety.

3. Joint Damage and Arthropathy:
Frequent bleeding into joints, a common issue for those with severe hemophilia, can lead to long-term joint damage and pain. This is why preventing bleeds with regular treatment is so crucial, though sometimes damage accumulates subtly over time.

4. Allergic Reactions:
Some patients might experience allergic reactions to their clotting factor treatments, which can range from mild to severe. This risk is particularly noted with certain factor IX products used in hemophilia B.

5. Heart Related Risks:
As treatments improve and patients live longer, other health risks like cardiovascular disease become more prominent. It's important for treatment plans to consider overall health, including heart health, especially since traditional risk factors like reduced activity from joint problems can contribute.

6. Emerging Treatments and Their Risks:
New treatments, such as gene therapy, offer potential long-term solutions but come with their own set of uncertainties and risks, like potential immune reactions or long-term effects that are still being studied.

7. Complications from Frequent Infusions:
Regular infusions can be demanding and affect quality of life, especially for those without access to the latest extended half-life treatments. Managing these can be a logistical and emotional challenge for many.

Dr Kannan Subramanian shared, "Managing haemophilia effectively requires a thoughtful, patient-centered approach that balances these risks with the benefits of treatment, aiming to provide the best possible quality of life. It's a collaborative effort between patients, families and healthcare providers to navigate these complexities together."

Bringing his expertise to the same, Dr Santanu Sen, Consultant - Paediatrics, Paediatric Hematology, Oncology and Stem Cell Transplantation at Kokilaben Dhirubhai Ambani Hospital in Mumbai, said, "Haemophilia, a genetic disorder that impairs clotting, poses significant risks and challenges for those affected by the disease. While advancements in medical treatments have vastly improved the quality of life for haemophiliacs, the treatment of the disease is not without risks."

He revealed, "The main defect in haemophilia is the absence of clotting factors which makes the sufferers have life-threatening bleeding, at times with even trivial injuries. Dental procedures such as teeth extraction can lead to non-stop bleeding and surgical procedures without replacement of clotting factors can lead to severe bleeding and even death. Minor falls can lead to bleeding in joints which can lead to lifelong disability due to joint destruction."

According to Dr Santanu Sen, the main treatment for haemophilia remains clotting replacement therapy, whereby these factor concentrates are directly injected into the bloodstream. He said, “However, even this essential treatment carries a risk of developing inhibitors, which are antibodies that attack the infused clotting factors. Inhibitors can occur in up to 30% of patients with severe haemophilia. They can significantly complicate the management of the disorder, leading to more frequent bleeding episodes and reduced efficacy of treatments. Patients with high levels of inhibitors can become resistant to therapy and treatment can become tough.”

Another major concern is the risk of infections. Dr Santanu Sen said, “In the past, a significant proportion of haemophilia patients had been accidentally infected with HIV, Hepatitis C and Hepatitis B through the use of contaminated clotting factors. Though modern blood screening techniques have greatly reduced the transmission of these infectious diseases, there remains some risk, particularly if stringent screening protocols are not followed. This highlights the importance of rigorous standards and consistent monitoring needed to ensure the safety of blood products used in treatment. In a country like ours, the cost of haemophilia treatment is often a significant burden to patients. Though blood-derived clotting factors are available at a nominal cost to patients in government hospitals, modern and safer replacement therapies are quite expensive, leading to severe financial burdens or even putting them beyond the reach of many patients. For many patients in our country, the disparity in income levels means that these modern therapies remain an unmet need forever.”

Dr Santanu Sen pointed out, “Gene therapy, the most promising development in haemophilia treatment, aims to provide a long-term solution by introducing correct versions of defective genes to the patient. This possibly is the best and only cure for the disease. It remains prohibitively expensive and possibly would remain beyond the paying capacity of the majority of patients in our country for many years to come but even this state-of-the-art therapy is not without risks. Gene therapy carries unknown long-term risks including abnormal immune responses to the therapy itself or unforeseen genetic complications. The uncertainty surrounding these outcomes necessitates continued and ongoing research. While advances in treatments offer hope to haemophilia patients, the associated risks must be carefully managed. Continuous research, improved safety measures, and equitable access to modern treatment are crucial to ensure the best possible outcome for all patients.”

Dr Farah Jijina, Consultant - Clinical Hematology at PD Hinduja Hospital and MRC in Khar, concluded, “Patients of haemophilia who are treated with factor concentrates also can develop problems. One of the major problems which occurs is, the development of inhibitors due to which treatment with the factor becomes ineffective. The treatment of haemophilia inhibitors is extremely expensive, and many of our patients are not able to afford it. Besides this, patients can have what we call breakthrough bleeds and they can continue to have further joint damage and develop progressive joint disease. In children, prophylactic factor regimes, lead to problems of IV access and infections.”

CLOVES Syndrome (THE TIMES OF INDIA: 20240805)

https://timesofindia.indiatimes.com/life-style/health-fitness/health-news/cloves-syndrome-expert-insights-on-a-rare-genetic-condition/articleshow/112267528.cms

CLOVES Syndrome: Expert insights on a rare genetic condition

CLOVES syndrome, a rare genetic disorder, troubled individuals with various congenital anomalies including excessive fatty tissue growth, vascular malformations, and skeletal issues. Diagnosed through clinical evaluation and genetic testing, management necessitates a multidisciplinary approach. Recent advancements in targeted therapies offer new hope for effective treatments and improved quality of life.Read More

CLOVES Syndrome: Expert insights on a rare genetic condition

CLOVES syndrome, an acronym for Congenital Lipomatous Overgrowth, Vascular malformations, Epidermal nevi, and Skeletal/Spinal abnormalities, is a rare genetic disorder characterized by a wide array of congenital anomalies. This complex condition often presents significant challenges for affected individuals and their families due to its diverse and severe symptoms.

Clinical manifestations

CLOVES syndrome is marked by a spectrum of physical anomalies and overgrowth conditions that can vary significantly among individuals.

Common features include:

Congenital lipomatous overgrowth: Excessive growth of fatty tissue is often one of the first noticeable signs. This can lead to asymmetrical body enlargement, particularly affecting the trunk and limbs.

Vascular malformations: These include venous malformations, capillary malformations, and lymphatic anomalies. Venous malformations are typically compressible and can cause swelling and discomfort.

Epidermal nevi: These are benign skin growths that can appear as warty patches or thickened skin and are often distributed asymmetrically on the body.

Skeletal/spinal abnormalities: Many patients suffer from significant skeletal issues such as scoliosis (abnormal curvature of the spine), spinal dysraphism (defective closure of the neural tube), and tethered cord syndrome, where the spinal cord is abnormally attached within the spinal column.

Diagnosis and management

Diagnosing CLOVES syndrome typically involves a combination of clinical evaluation and genetic testing to identify PIK3CA mutations. Imaging studies such as MRI and CT scans are essential for assessing the extent of vascular malformations and skeletal abnormalities.

The root cause of CLOVES syndrome lies in somatic mutations in the PIK3CA gene, which encodes the phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha. This gene plays a critical role in cell growth, proliferation, and survival.
A thorough Genetic work up identifies the gene and its mutation that leads to the clinical manifestations.

Pre-test counselling by a trained professional like a Clinical geneticist helps in choosing the right genetic test to identify the root cause of the disease. Once the disease causing gene is identified, post-test counselling helps the patient and the family to better understand the disorder and the clinician can plan a better monitoring and treatment protocol for the affected individual. With advances in genetic testing, prenatal diagnosis can help in preventing the disorder recurrence.

Management of CLOVES syndrome is multidisciplinary, involving specialists in genetics, dermatology, orthopedics, neurology, and vascular surgery. Treatment is primarily symptomatic and supportive, focusing on managing individual symptoms and complications. The treatment protocols can be tailored according to the patients condition.
Recent advancements in targeted therapies offer hope for more effective treatments. For example, drugs that inhibit the PI3K-AKT pathway, which is overactive in CLOVES syndrome, are currently under investigation and may provide more specific and less invasive treatment options in the future.

CLOVES syndrome is a challenging and multifaceted disorder requiring comprehensive care and ongoing research to better understand its mechanisms and improve treatment options. Awareness and early diagnosis are crucial for managing the condition and enhancing the quality of life for those affected. With advances in genetic research and targeted therapies, there is hope for more effective interventions and support for individuals with CLOVES syndrome.

Lung cancer (THE TIMES OF INDIA: 20240805)

https://timesofindia.indiatimes.com/life-style/health-fitness/health-news/lung-cancer-the-facts-about-lung-cleansing-and-cancer-prevention/articleshow/112260478.cms

Lung cancer: The facts about lung cleansing and cancer prevention

World Lung Cancer Day 2024 highlighted the need to debunk myths about lung cleansing and its role in preventing cancer. Despite claims, there is limited evidence supporting lung cleansing as a cancer preventive. Effective strategies include avoiding smoking, reducing exposure to carcinogens, maintaining a healthy lifestyle, and undergoing regular screenings, as emphasized by Dr. Niti Krishna Raizada.Read More
Lung cancer: The facts about lung cleansing and cancer prevention

As we observe World Lung Cancer Day 2024, it's essential to address various myths and facts about lung health, particularly the concept of lung cleansing and its purported role in preventing lung cancer. Lung cancer remains one of the leading causes of cancer-

related deaths globally, emphasizing the need for accurate information and effective prevention strategies.

Understanding lung cleansing

Lung cleansing, or lung detoxification, refers to various methods and practices aimed at clearing the lungs of pollutants, toxins, and mucus.

Proponents of lung cleansing suggest that it can improve respiratory function, enhance lung capacity, and reduce the risk of respiratory illnesses. Common lung cleansing techniques include:

Steam therapy: Inhaling water vapor to open airways and help the lungs drain mucus.
Controlled coughing: Techniques to expel excess mucus from the lungs.
Postural drainage: Positions that use gravity to help drain mucus from the lungs.
Chest percussion: Light tapping on the chest to dislodge mucus from the lungs.
Exercise: Physical activity to improve overall lung health and capacity.
Dietary changes: Consuming antioxidant-rich foods to support lung health.

Can lung cleansing prevent lung cancer?

While the idea of lung cleansing is appealing, it's crucial to examine the scientific evidence regarding its effectiveness in preventing lung cancer.

Lack of scientific evidence: There is limited scientific evidence to support the claim that lung cleansing can prevent lung cancer. Most studies focus on the benefits of these practices for individuals with chronic respiratory conditions, such as chronic obstructive pulmonary disease (COPD) and asthma, rather than cancer prevention.

Role of environmental factors: Lung cancer is primarily caused by environmental factors such as smoking, exposure to second-hand smoke, radon gas, asbestos, and air pollution. While lung cleansing may help improve respiratory health in some individuals, it cannot eliminate the risk factors associated with lung cancer.

Genetic predisposition: Genetics also play a significant role in lung cancer risk. Some individuals may develop lung cancer despite minimal exposure to known risk factors due to genetic susceptibility.

Certain yoga practices: Yoga like Anulom-Vilom Pranayama, Kapalbharti etc are extremely good for lung health or even for general fitness, but role in lung cancer is not clear.

Effective strategies for lung cancer prevention

Instead of relying on unproven methods like lung cleansing, individuals can take several evidence-based steps to reduce their risk of developing lung cancer:

Avoid smoking: The most effective way to prevent lung cancer is to avoid smoking and exposure to secondhand smoke. Quitting smoking at any age significantly reduces the risk of lung cancer.

Reduce exposure to carcinogens: Minimize exposure to known carcinogens such as radon gas, asbestos, and industrial pollutants. Regularly test homes for radon and ensure proper ventilation in workplaces where hazardous materials are present.
Maintain a healthy lifestyle: Adopt a healthy lifestyle that includes a balanced diet rich in fruits and vegetables, regular exercise, and maintaining a healthy weight. These measures can enhance overall health and reduce cancer risk.

Regular screening: High-risk individuals, such as long-term smokers and those with a family history of lung cancer, should undergo regular screenings using low-dose computed tomography (LDCT). Early detection significantly improves treatment outcomes.

Vaccinations: Ensure vaccinations for respiratory infections such as influenza and pneumonia are up to date, as chronic respiratory infections can weaken lung health.
While the concept of lung cleansing might offer some benefits for individuals with specific respiratory conditions, it should not be viewed as a preventive measure for lung cancer. The most effective strategies for reducing lung cancer risk remain avoiding smoking, reducing exposure to environmental carcinogens, maintaining a healthy lifestyle, and undergoing regular screenings. This World Lung Cancer Day, let's focus on proven methods to protect our lung health and promote awareness about the realities of lung cancer prevention.

Lung Cancer (THE TIMES OF INDIA: 20240805)

https://timesofindia.indiatimes.com/life-style/health-fitness/health-news/6-myths-about-lung-cancer-debunking-common-misconceptions/articleshow/112260340.cms

6 myths about lung cancer: Debunking common misconceptions

On Lung Cancer Day, prominent myths like 'only smokers get lung cancer' and 'lung cancer is always fatal' are debunked. These misconceptions mask the fact that non-smokers and younger individuals can also be diagnosed. Early detection, new treatments, and comprehensive care offer hope and improved survival rates for patients.Read More

6 myths about lung cancer: Debunking common misconceptions
Lung cancer is one of the most prevalent and deadly forms of cancer worldwide (globally the most common cancer), yet it is surrounded by many myths and misconceptions. On this Lung Cancer Day, it's important to shed light on the truths about this disease. Here are six common myths about lung cancer, debunked.
Myth 1: Only smokers get lung cancer
Fact: While smoking is the leading cause of lung cancer, it is not the only cause.

Approximately 10-20% of people diagnosed with lung cancer have never smoked. Other factors, such as exposure to radon gas, asbestos, air pollution, and genetic predispositions, can also contribute to the development of lung cancer. Non-smokers who live with smokers are also at risk due to second-hand smoke.

Myth 2: Lung cancer is always fatal
Fact: Lung cancer is indeed serious and has a high mortality rate, but it is not always fatal. Early detection and advances in treatment have significantly improved survival rates. If lung cancer is detected at an early stage, the five-year survival rate can be as high as 56%. New treatments, including targeted therapies and immunotherapies, have also improved outcomes for many patients with advanced lung cancer & being improvised each day.
112221564

Myth 3: Only older adults get lung cancer
Fact: While lung cancer is more common in older adults, it can affect people of all ages. Increasingly, lung cancer is being diagnosed in younger individuals, including those in their 30s and 40s. Factors such as genetic mutations and environmental exposures play a role in the development of lung cancer in younger people.

Myth 4: Lung cancer symptoms are easy to recognize
Fact: Lung cancer symptoms can be subtle and easily mistaken for other common illnesses. Symptoms like a persistent cough, shortness of breath, chest pain, and fatigue are often attributed to less serious conditions, which can delay diagnosis. Some people may not experience any symptoms until the cancer is in an advanced stage. Regular screenings, especially for high-risk individuals, are crucial for early detection.

Myth 5: Lung cancer only affects the lungs
Fact: Lung cancer can spread beyond the lungs to other parts of the body, including the brain, bones, liver, and adrenal glands. This process is known as metastasis. The spread of cancer can cause additional symptoms and complicate treatment. Comprehensive care that addresses both the primary tumor and any metastases is essential for effective management of the disease.

Myth 6: There is no hope for lung cancer patients
Fact: There is always hope for lung cancer patients. Advances in medical research and treatment have led to new therapies that improve quality of life and survival rates. Personalized medicine, which tailors treatment based on the genetic profile of the cancer, has shown promising results. Additionally, support networks and palliative care play a vital role in providing emotional and physical support to patients and their families.

Dispelling these myths is crucial for raising awareness about lung cancer and promoting early detection and treatment. Understanding that lung cancer can affect anyone, not just smokers or older adults, highlights the importance of regular screenings and staying informed about the risks and symptoms. Medical advancements are continuously improving outcomes, offering hope to those diagnosed with this challenging disease. This Lung Cancer Day, let's commit to spreading the truth and supporting those affected by lung cancer.

Brain Blood Vessels (Medical News Todays: 20240805)

https://www.medicalnewstoday.com/articles/how-aging-brain-blood-vessels-may-affect-cognitive-decline#Do-these-findings-in-mice-apply-to-humans?

Research in mice shows how aging brain blood vessels may affect brain health

Researchers are trying to find out exactly how aging blood vessels in the brain contribute to cognitive decline. Image credit: michellegibson/Getty Images.
Aging is associated with blood flow changes in the brain.

These changes may be linked to an increased risk of neurodegenerative conditions.
A new mouse study maps how these changes vary throughout different brain regions.
The authors hope that their results will improve our understanding of how and why neurodegenerative conditions begin.

Using a mouse model, a group of scientists recently explored vascular changes in the aging brain. For the first time, they investigated how these changes play out across the entire brain.

The study, which appears in Nature CommunicationsTrusted Source, finds that the deepest sections of the brain are most significantly affected.

They also note that regions of the brain involved in Alzheimer's are particularly susceptible to age-related changes in vascular function, which may help explain why cell death occurs in these areas.

How do aging blood vessels affect brain health?
Dementia, Parkinson's, and other neurodegenerative conditions are still very challenging to treat, and they have no cure. Many questions about their origin remain unclear.

One factor that binds them together is that they are all caused by the death of neurons, or brain cells. For this reason, much of the existing research focuses on how and why this cell death plays out.

However, the brain's vascular system may be a primary reason for this neuronal death.

As the authors of the new study point out, diseases that impact blood vessels, like stroke, atherosclerosis, and type 2 diabetes, all increase the risk of vascular dementia.

Impaired blood transport in the brain can mean that cells do not get the energy they need, and metabolic waste may not be carried away. This, too, can cause brain cell death.

“It is becoming increasingly recognized that disruption to the brain’s vasculature may precede the neuronal damage associated with neurodegenerative disease and other types of dementia,” the authors write.

Because the largest risk factor for neurodegenerative conditions is age, understanding how blood vessels change as we grow old may provide vital clues into how these conditions begin.

What happens as blood vessels in the brain age?
Previous research in this vein mostly focuses on the larger vessels of the brain in specific brain regions. In contrast, the latest study also investigates micro-vessels and examines the whole brain.

Thanks to recent advances in technology, scientists can now view the entire vascular network of a mouse brain in 3D. The scientists found a number of distinct changes in the brain’s vascular system during aging.

For instance, there was a significant reduction in vascular length density. This is a measure of the length of blood vessels compared with the area they are in.

So, a reduction in vascular length density means there are likely to be sections of tissue that are not well served by blood vessels. Similarly, there was less branching of blood vessels, which would have the same effect.

Why do brain blood vessels become more meandering with age?
The scientists also noted changes in arterioles, which are small blood vessels that branch off larger arteries. Some arterioles supply blood to the outer layer of the brain, these are called surface arterioles.

From these surface arterioles, so-called penetrating arterioles branch off to head into the deepest layers of the brain. These, the scientists found, were increasingly tortuous and meandering with age. They explain that this impairs blood flow “by increasing flow resistance.”

Medical News Today spoke with José Morales, MD, a vascular neurologist and neurointerventional surgeon at Pacific Neuroscience Institute in Santa Monica, CA. We asked Morales, who was not involved in the study, why blood vessels may become more torturous over time.

He told us:

“I speculate the decreased branching may contribute to this phenomenon by increasing resistance within the flow circuit, but shear stress on the artery over time would also be a contributing factor.”

We also contacted Mustali Dohadwala, MD, the sole practitioner of Heartsafe LLC in North Andover, MA. He told us that "compromise in the integrity of the endothelial lining" may also be a cause, which could be due to inflammation among other reasons.

It may also be because the blood vessels have a reduced ability to constrict and relax, explained Dohadwala, who was not involved in the study.

Because penetrating arterioles were more affected than surface arterioles, this means that deeper parts of the brain may be more likely to experience reduced oxygen and nutrient supply.

The scientists noted other changes, too: The radius of these blood vessels — how wide they are — grew significantly, particularly in micro-vessels. They also became more "leaky."

The changes above were most pronounced deeper within the brain, particularly the deepest cortical layer, known as layer 6Trusted Source. This layer is important for regulating sleep. The authors suggest that this might help explain why sleep often becomes dysregulated with age.

Another factor for cell death in Alzheimer's?
Because the scientists studied the whole brains of the animals, they could zero in on regions where changes were more pronounced.

One such region is the basal forebrain, which sends neuronal projections widely throughout the brain. In this brain area, vascular density was particularly reduced. There was also a marked reduction in cells called pericytesTrusted Source.

Pericytes are multipurpose support cells present in intervals along the length of blood vessels. Among other roles, they promote the formation of new blood vessels, help maintain the blood-brain barrier, and control blood flow.

Some neurons in this region are particularly sensitive, and in Alzheimer's disease, their degeneration is responsible for memory loss.

The authors suggest that vascular changes in the basal forebrain may help explain the cell death associated with Alzheimer's disease.

Another brain area that is significantly impacted by aging is the entorhinal cortex. In this region, they measured significantly reduced vascular length and, again, fewer pericytes.

The entorhinal cortex also plays a part in Alzheimer's disease.

Changes in oxygen delivery may also play a role in the aging brain
Finally, the researchers investigated oxygen delivery to the brain. They found that red blood cells' oxygen-carrying capacity reduced with age.

At the same time, because of the reduced length and branching of blood vessels, brain tissue was more likely to receive inadequate levels of oxygen.

To compound the issue further, because aging brain cells are "hyperexcitable," they are more energy-hungry than brain cells in younger animals.

To summarize, red blood cells carry oxygen less well, there are fewer blood vessels, and older brain cells need more oxygen. These changes all work together to make the brain much more susceptible to hypoxia — a lack of oxygen.

Also, in younger brains, hypoxia normally triggers the formation of new blood vessels. In the aging brain, this response is impaired.

Overall, the authors conclude that the negative vascular effects of aging are most pronounced in the deepest layers of the brain. And that these changes may trigger compensatory responses, such as increasing the number of pericytes in the layers of the brain nearer the surface.

This, in turn, may cause blood flow to be redistributed toward the surface layers. Because oxygen delivery is less efficient in older age, these changes make deep cortical layers particularly vulnerable to cell death.

Do these findings in mice apply to humans?
As this study uses mice, we must be careful about extrapolating to humans. "Aging in mice may not accurately reflect aging in humans, given our different lifespans and divergent physiology," Morales told MNT.

However, he also explained that "While there will certainly be divergence between species, many of our cells share very similar genetic programming and physiological functioning."

"We have evidence to support this," he continued, "and can infer that many of the same molecular mechanisms that signal age-related changes are conserved evolutionarily."

This research brings us one small step closer to understanding how neurodegenerative conditions may begin. Because treatments are currently far from perfect, understanding the changes that drive these diseases may be the key to reversing them before symptoms arrive.

In the future, Morales hopes they will conduct similar studies in humans: "There are a number of novel, very high-resolution imaging modalities, such as hierarchal phase-contrast tomography and novel cell labeling 7T MRI techniques that could be potentially used in human longitudinal studies to corroborate key elements of these animal model findings."

Covid (The Tribune: 20240805)

https://www.medicalnewstoday.com/articles/excess-belly-arm-fat-may-increase-dementia-parkinsons-risk

New study highlights impact of 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 U.S. 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."

NIPAH VIRUS (The Tribune: 20240805)

https://www.tribuneindia.com/news/health/nipah-virus-detected-in-bat-samples-from-keralas-malappuram-district/

Nipah virus detected in bat samples from Kerala's Malappuram district

The presence of the Nipah virus has been detected in bat samples collected from Pandikkad in Kerala's Malappuram district, where the death of a 14-year-old boy due to the infection was reported on June 21.

According to Health Minister Veena George, antibodies were found in six out of 27 fruit bat samples collected within a 5 km radius.

The minister said that all tests of those on the contact list of the infected individual conducted as per Nipah protocol have been negative for the virus so far.

A total of 472 people are on the contact list, and 261 individuals who have completed the mandatory 21-day isolation period have been removed from the list, she added. PTI

Alzheimer’s (The Hindu: 20240805)

https://www.thehindu.com/sci-tech/health/what-is-the-new-alzheimers-blood-test/article68482512.ece

What is the new Alzheimer’s blood test?

According to statistics, one in five women and one in 10 men develop dementia due to AD (Alzheimer’s disease).

According to statistics, one in five women and one in 10 men develop dementia due to AD (Alzheimer's disease). | Photo Credit: Getty Images/iStockphoto

The story so far: Researchers have developed a new blood test to detect Alzheimer's disease that helps diagnose the disease even at the early stage of mild cognitive impairment. Scientists at Lund University in Sweden have shown that PrecivityAD2, a new blood test, is about 90% accurate in identifying AD in people experiencing cognitive symptoms. The paper 'Blood Biomarkers to Detect Alzheimer Disease in Primary Care and Secondary Care' by Sebastian Palmqvist et al was published in the July 28 edition of peer-reviewed journal JAMA.

According to statistics, one in five women and one in 10 men develop dementia due to AD (Alzheimer's disease). Individuals with cognitive symptoms are first seen in primary care, with a minority being referred to secondary care, authors of the article pointed out. Further they added that symptomatic AD is misdiagnosed in 25% to 35% of patients treated at even specialised clinics and likely even more patients treated in primary care.

LYME DISEASE (The Indian Express: 20240805)

HTTPS://INDIANEXPRESS.COM/ARTICLE/LIFESTYLE/HEALTH/THE-GROWING-THREAT-OF-LYME-DISEASE-THE-COMPLEX-ILLNESS-THATS-HARD-TO-DIAGNOSE-9493414/

The growing threat of Lyme disease: The complex illness that's hard to diagnose

The global spread of Lyme disease is being fueled by climate change, making diagnosis and treatment more challenging. Lyme disease is a bacterial infection caused by Borrelia burgdorferi, which is transmitted to humans through the bite of infected ticks.
These spider-like arachnids have evolved to secrete an anti-inflammatory substance that masks their feeding, allowing pathogens to enter the bloodstream undetected.
First identified in 1975 in Lyme, Connecticut, Lyme disease has become increasingly prevalent worldwide, posing a growing health concern.

According to Professor Jack Lambert, a leading expert in medicine at University College Dublin, Lyme disease is a multifaceted condition that can impact various bodily systems, including the central nervous system, musculoskeletal system, and organs such as the bladder and gut.
This can result in a diverse array of symptoms, highlighting the complexity of the disease, as reported by *BBC*.

Brian Fallon, director of the Lyme and Tick-Borne Diseases Research Center at Columbia University, observes that initial misdiagnoses were frequent, leading to a lingering skepticism about the legitimacy of patients' symptoms.
This has resulted in some healthcare providers questioning whether patients are exaggerating or imagining their illness, hindering effective treatment and care.

Diagnosing Lyme disease is challenging due to the overemphasis on the bullseye rash, which is not always a reliable indicator.

As Lambert said, “The bullseye rash is not always a bullseye. It can be elliptical, a solid rash, blistering, or a bruise. On dark skin, it doesn’t look like a bullseye at all.” This has led to frequent misdiagnoses, with doctors mistaking it for conditions like ringworm.
A personal account illustrates the challenges, where a patient was bitten by a tick and presented with an expanding rash, but was dismissed by multiple doctors due to the rash’s appearance.

Only after seeking treatment in the US was the patient diagnosed with Lyme disease and prescribed doxycycline, which initially provided relief but later led to a diagnosis of post-treatment Lyme disease syndrome when symptoms returned.
Documentary filmmaker Richard Wilson faced a similar diagnostic ordeal after being bitten by a tick in 2016.

Despite developing a rash, he was told it wasn’t Lyme disease because it didn’t look like a bullseye. Persistent symptoms and negative tests led to years of misdiagnoses.
Lambert draws a parallel with Covid-19, noting that some individuals still exhibit symptoms despite testing negative.

He emphasizes the need for better education, saying, “When it comes to Lyme disease, we seem to be lacking education at all levels in medical practice. Gaslighting is a major issue.”

Lyme disease is a significant public health concern, affecting approximately 476,000 individuals in the US each year, primarily through black-legged tick bites.
A 2022 review in the British Medical Journal Global Health suggests that globally, more than 10% of the population may be infected.

Despite this, diagnosing and treating Lyme disease remains difficult, particularly when symptoms persist after treatment.
According to Fallon, a subset of patients can develop a debilitating illness, sparking questions about the factors that influence recovery and why some individuals experience prolonged symptoms while others do not.
Treatment for chronic Lyme disease, lasting over six months, is a topic of debate. Antibiotics are the typical treatment, but herbal remedies are being considered.

Bottom of Form
Lambert asserts that antibiotics are the most effective treatment for Lyme infections, despite ongoing research into alternative methods.

Blood Pressure (Navbharat Times: 20240805)

https://navbharattimes.indiatimes.com/lifestyle/health/5-silent-sign-and-symptoms-of-high-blood-pressure-you-can-feel-in-the-morning/articleshow/112276955.cms

साइलेंट किलर है ये बीमारी, रोज लेती है 2500 लोगों की जान, दबे पांव आते हैं ये 5 लक्षण, समझ गए तो बचेगी जान

Blood Pressure Kiase Kam karein: ब्लड प्रेशर एक जानलेवा समस्या है जिसके लक्षणों का सही से पता नहीं चल पाता है, अगर जान प्यारी है, तो समय पर जांच कराएं और नीचे बताए संकेतों को नजरअंदाज न करें।

साइलेंट किलर है ये बीमारी, रोज लेती है 2500 लोगों की जान, दबे पांव आते हैं ये 5 लक्षण, समझ गए तो बचेगी जान

हाई ब्लड प्रेशर एक आम समस्या है जिससे बहुत लोग पीड़ित होते हैं। नॉर्मल ब्लड प्रेशर 120/80 mm Hg से कम होता है और 130/80 mm Hg या उससे अधिक की रेंज को हाई ब्लड प्रेशर कहा जाता है। 180/120 mm Hg से अधिक ब्लड प्रेशर को सबसे खतरनाक माना जाता है, इससे व्यक्ति की मौत हो सकती है।

विश्व स्वास्थ्य संगठन (WHO) के अनुसार, उच्च रक्तचाप या हाई ब्लड प्रेशर जिसे हाइपरटेंशन भी कहते हैं के कारण हर साल दुनिया भर में लगभग 75 लाख लोगों की मौत होती है, जो कुल मौतों का लगभग 12.8% है।

हाई ब्लड प्रेशर के लक्षण क्या हैं? हाइपरटेंशन को 'साइलेंट किलर' कहा जाता है और इसकी वजह यह है कि इसके लक्षणों का सही समय पर पता नहीं चल पाता है। एक्सपर्ट्स इससे बचने के लिए समय-समय जांच की सलाह देते हैं। आपको नीचे बताए लक्षणों पर नजर रखी चाहिए।

सुबह के लक्षणों को न करें नजरअंदाज

ऐसा माना जाता है कि सुबह का ब्लड प्रेशर आपके दिल के पूरे स्वास्थ्य की जानकारी दे सकता है. ब्लड प्रेशर पूरे दिन स्वाभाविक रूप से उतार-चढ़ाव करता रहता है। हालांकि बीपी का सुबह के समय हाई होना चिंता का कारण हो सकता है। बीपी में अक्सर कोई ध्यान देने योग्य लक्षण नहीं होते हैं, इसलिए अगर आपको जरा सा भी शक हो तो सुबह के समय बीपी जरूर चेक करें। यहां कुछ लक्षण बताए गए हैं, जो इस साइलेंट किलर के बारे में बता सकते हैं।

सुबह का चक्कर आना

जागने पर चक्कर आना कभी-कभी रक्तचाप में उतार-चढ़ाव के कारण हो सकता है। नींद लेने के बावजूद सुबह चक्कर आना अच्छा संकेत नहीं है, आप इसे नजरअंदाज न करें।

सुबह लगातार सिरदर्द होना

हाई ब्लड प्रेशर आपकी रक्त वाहिकाओं पर दबाव डाल सकता है, जिससे जागने पर सिरदर्द हो सकता है। इस लक्षण को आपको इग्नोर नहीं करना चाहिए।

नाक से खून बहना

आपकी नाक में नाजुक रक्त वाहिकाएं बढ़े हुए दबाव के कारण फट सकती हैं, जिससे अचानक नाक से खून बह सकता है। ऐसी स्थिति में तुरंत डॉक्टर के पास जाएं।

लगातार थकान

सुबह में लगातार थकान महसूस होना उच्च रक्तचाप का संकेत हो सकता है जो आपके ऊर्जा स्तर को प्रभावित करता है। अगर आपको अक्सर ऐसा होता है तो अस्पताल जाने में देर न करें।

बेचैनी होना

सुबह में आराम करने में कठिनाई या चिड़चाप महसूस होना सुबह के उच्च रक्तचाप से जुड़ा हो सकता है। रातभर अच्छी नींद लेने के बाद भी ऐसा महसूस होना अच्छी बात नहीं है।

Knee Replacement Surgery (Dainik Jagran: 20240805)

https://www.jagran.com/lifestyle/health-know-signs-when-to-consider-knee-replacement-surgery-kab-knee-replacement-surgery-karvani-chahiye-23771967.html

घुटनों के दर्द ने कर दिया है जीना दूभर, तो डॉक्टर से समझें कब Knee Replacement Surgery को चुनना ही है बेस्ट विकल्प

घुटनों का दर्द अनदेखा करना काफी भारी पड़ सकता है। अगर यह ज्यादा बढ़ जाए तो कई बार इनकी सर्जरी भी करवानी पड़ सकती है। हालांकि Knee Replacement Surgery करवाने से पहले कुछ लक्षणों पर गौर करना चाहिए इसके बाद ही इस फैसले को लेने में भलाई है। आइए डॉक्टर से जानें कब Knee Replacement Surgery एकमात्र विकल्प बन जाती है।

हर साल 4 अगस्त को नेशनल बोन एंड जॉइंट डे मनाया जाता है।

इस दिन हड्डियों और जोड़ों के अच्छे स्वास्थ्य के लिए लोगों को जागरूक किया जाता है।

घुटनों के दर्द के गंभीर मामले में Knee Replacement Surgery एक बेहतर विकल्प साबित हो सकती है।

लाइफस्टाइल डेस्क, नई दिल्ली। Knee Replacement Surgery: हर साल 4 अगस्त को नेशनल बोन एंड जॉइंट डे मनाया जाता है। इस दिन हड्डियों और जोड़ों के बेहतर स्वास्थ्य के लिए लोगों को जागरूक बनाया जाता है। हालांकि, हमारी आजकल की खराब लाइफस्टाइल की वजह से कमजोर हड्डियां और जोड़ों में दर्द की समस्या कम उम्र में ही शुरू हो जाती है। इसमें घुटनों का दर्द बेहद आम है, जिससे अक्सर बढ़ती उम्र के साथ लोग परेशान रहते हैं। ऐसे में कई बार समस्या इस हद तक भी पहुंच जाती है कि घुटनों की सर्जरी करवानी पड़ती है। इसे Knee Replacement Surgery कहा जाता है। ऐसे में यह समझना जरूरी है कि आपको कब इस सर्जरी के बारे में गंभीरता से सोचना चाहिए।

डॉ. गुरिंदर बेदी (फॉर्टिस अस्पताल, वसंत कुंज में ऑर्थोपेडिक्स विभाग के प्रमुख निदेशक) बताते हैं कि अब घुटने की पूरी रिप्लेसमेंट सर्जरी भी मुमकिन है। दुनियाभर में लाखों लोग इसका फायदा ले रहे हैं और घुटनों के दर्द से छुटकारा पाकर एक बेहतर जीवन जी रहे हैं। हालांकि, Knee Replacement Surgery करवाने की जरूरत हर व्यक्ति को नहीं है। जब आपको कुछ खास लक्षण नजर आने लग जाएं, तभी आपको अपने डॉक्टर से बातचीत करके ही Knee Replacement Surgery का विकल्प चुनना चाहिए।

यह भी पढ़ें: कम उम्र में ही जोड़ों के दर्द ने कर दिया है परेशान, तो इन 5 टिप्स से पाएं इससे राहत

कब करवानी चाहिए Knee Replacement Surgery?

कोई भी फिजिकल एक्टिविटी करते समय घुटनों में तेज दर्द होना।

घुटनों में दर्द की वजह से रोजमर्रा के काम, जैसे- नहाना, कपड़े बदलना, कार में बैठने या उतने में तकलीफ होना।

घुटनों के दर्द के लिए फिजियोथेरेपी, इन्जेक्शन, ब्रेसेज और सप्लीमेंट्स जैसे इलाज से भी आराम न मिलना।

घर से बाहर जाकर सामान लाने, सीढ़ियों पर चढ़ने जैसे छोटे-छोटे कामों में भी तकलीफ होना।

घुटनों के दर्द से राहत पाने के लिए अक्सर पेन किलर लेना।

घुटनों में अकड़न की वजह से काम न कर पाना।

संतुलन न बना पाना।

दर्द की वजह से सोने में तकलीफ।

इस दौरान इस बात का ख्याल रखना चाहिए कि सर्जरी की सफलता के बावजूद मरीज की ठीक होने के लिए दृढ़ता और विश्वास बेहद जरूरी है।