



DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY
Tuesday 20240326

ट्यूबरक्लोसिस

देश में टीबी से हर साल लाखों लोगों की होती है मौत, जानिए इस रोग के लक्षण से बचाव तक सबकुछ (Amar Ujala: 20240326)

<https://www.amarujala.com/photo-gallery/lifestyle/fitness/world-tb-day-2024-know-tuberculosis-causes-symptoms-and-prevention-in-hindi-2024-03-19>

दुनियाभर में ट्यूबरक्लोसिस (टीबी) एक बड़ी समस्या रही है जिससे हर साल लाखों लोगों की मौत हो जाती है। भारत भी इस गंभीर स्वास्थ्य जोखिम से परेशान रहा है। एक आंकड़े के मुताबिक साल 2021 में टीबी से कुल 1.6 मिलियन (16 लाख) लोगों की मृत्यु हुई, दुनिया भर में टीबी रोग मौत का 13वां प्रमुख कारण है। भारत ने 2025 तक टीबी को खत्म करने का लक्ष्य बनाया था, हालांकि आंकड़े बताते हैं कि वास्तविक स्थिति, निर्धारित लक्ष्य से काफी दूर है।

विश्व स्वास्थ्य संगठन (डब्ल्यूएचओ) ने तपेदिक (टीबी) को दुनिया के सबसे घातक संक्रामक रोगों में रखा है। साल 2022 में भारत में दर्ज किए गए टीबी के कुल मामलों की संख्या 21.42 लाख थी, जिनमें से अकेले तेलंगाना में 72,878 मामले दर्ज किए गए। वहीं राष्ट्रीय स्तर पर देश में साल 2022 में टीबी के कुल मामलों में 13 फीसदी की वृद्धि हुई है।

स्वास्थ्य विशेषज्ञ कहते हैं सभी लोगों को टीबी रोग को लेकर विशेष सावधानी बरतते रहना जरूरी है। बचाव के लिए आवश्यक है कि हमें इस रोग के लेकर सही जानकारी हो।

ट्यूबरक्लोसिस के बारे में जानिए

ट्यूबरक्लोसिस को गंभीर श्वसन रोग माना जाता है, ये बैक्टीरियल संक्रमण के कारण होने वाली समस्या है, जिसमें आपके फेफड़ों में संक्रमण हो जाता है। बीमारी से ग्रस्त व्यक्ति के खांसने-छींकने से निकली ड्रॉपलेट्स के संपर्क में आने के कारण दूसरे लोगों के भी संक्रमित होने का खतरा हो सकता है। भीड़-भाड़ वाली जगहों में टीबी के संक्रमण के फैलने का खतरा अधिक देखा जाता रहा है।

अभी तक मुख्यरूप से टीबी की समस्या में खांसी होने को प्रमुख लक्षण माना जाता रहा था, हालांकि हालिया रिपोर्ट्स में इसके लक्षणों में बड़ा बदलाव देखा जा रहा है।

टीबी रोगियों में कैसे होते हैं लक्षण?

टीबी के रोगाणुओं के फेफड़ों में बढ़ने से टीबी का संक्रमण होता है। प्रारंभिक संक्रमण की स्थिति में अधिकांश लोगों में कोई भी लक्षण नहीं दिखते हैं। कुछ लोगों में फ्लू जैसी समस्या विकसित हो जाती है, जिसके कारण हल्का बुखार, थकान और खांसी होती है। संक्रमण बढ़ने की स्थिति में खांसी के साथ बलगम आने, सांस लेने या खांसने के साथ दर्द होने, बुखार-ठंड लगने, रात में पसीना आने की समस्या देखी जाती रही है।

हालांकि एक हालिया शोध में वैज्ञानिकों ने बताया कि अधिकतर संक्रमितों में अब टीबी का प्रमुख लक्षण, यानी खांसी की समस्या ही नहीं देखी जा रही है।

किन लोगों में टीबी का खतरा अधिक

स्वास्थ्य विशेषज्ञ कहते हैं, किसी को भी टीबी का संक्रमण हो सकता है, लेकिन कुछ कारकों में इसका खतरा बढ़ जाता है। यदि आप किसी ऐसे व्यक्ति के अधिक संपर्क में रहते हैं जिसे टीबी रोग है तो इससे आपमें भी संक्रमण का खतरा विकसित हो सकता है। कमजोर प्रतिरक्षा प्रणाली से टीबी संक्रमण खतरा बढ़ जाता है।

प्रतिरक्षा प्रणाली की कमजोरी वाली स्थितियों जैसे डायबिटीज, फेफड़ों के रोग, किडनी की बीमारी, एचआईवी संक्रमितों या कैंसर के शिकार लोगों में भी खतरा अधिक देखा जाता रहा है।

टीबी से बचाव और इलाज

डॉक्टर कहते हैं, जिन लोगों में टीबी का परीक्षण किया गया है उन्हें दवाओं से लाभ मिल सकता है। टीबी की बीमारी को फैलने से रोकने के लिए आपको अन्य लोगों से दूरी बनाकर रखनी चाहिए। टीबी रोगियों को जितना हो सके अपने घर के सदस्यों से उचित दूरी बनाकर रखनी चाहिए।

टीबी के रोगाणु बंद स्थानों में अधिक आसानी से फैलते हैं। इसलिए जरूरी है कि आप जिस कमरे में रहते हैं वहां पर वेंटिलेशन की अच्छी व्यवस्था बनाए रखें। जब आपको अन्य लोगों के आसपास रहना हो तो मास्क पहनें। घर के अन्य सदस्यों को अपनी सुरक्षा के लिए मास्क पहनने की सलाह दी जाती है। दवाओं के माध्यम से टीबी को ठीक किया जा सकता है।

Human-to-animal transmission of viruses

Humans frequently spread viruses to wild and domestic animals, reveals study (The Tribune: 20240326)

<https://www.tribuneindia.com/news/health/humans-frequently-spread-viruses-to-wild-and-domestic-animals-reveals-study-604273>

Researchers use methodological tools to analyse nearly 12 million viral genomes

Humans frequently spread viruses to wild and domestic animals, increasing their risk of disease, finds a study, challenging the long-held theory that humans are a sink for viruses.

Humans have never been considered a source of virus, and human-to-animal transmission of viruses has received far less attention, revealed an analysis of viral genomes by researchers at the University College London.

“When animals catch viruses from humans, this can not only harm the animal and potentially pose a conservation threat to the species, but it may also cause new problems for humans by impacting food security if large numbers of livestock need to be culled to prevent an epidemic, as has been happening over recent years with the H5N1 bird flu strain,” said lead author Cedric Tan, a doctoral student at UCL’s Genetics Institute and Francis Crick Institute.

“Additionally, if a virus carried by humans infects a new animal species, the virus might continue to thrive even if eradicated among humans, or even evolve new adaptations before it winds up infecting humans again.

“Understanding how and why viruses evolve to jump into different hosts across the wider tree of life may help us figure out how new viral diseases emerge in humans and animals,” Tan said.

For the study, published in the journal Nature Ecology and Evolution, the team used methodological tools to analyse the nearly 12 million viral genomes.

Using the data, they also reconstructed the evolutionary histories and past host jumps of viruses across 32 viral families to search for viral genomes acquired mutations during host jumps.

The researchers found that “roughly twice as many host jumps were inferred to be from humans to other animals (known as anthroponosis) rather than the other way round. This pattern was consistent throughout most viral families considered. Additionally, they found even more animal-to-animal host jumps that did not involve humans.”

“We should consider humans just as one node in a vast network of hosts endlessly exchanging pathogens, rather than a sink for zoonotic bugs,” said co-author Professor Francois Balloux from UCL Genetics Institute.

**Attention Deficit Hyperactivity Disorder
Medication and psychosocial treatment can help children with ADHD, find researchers
(The Tribune: 20240326)**

<https://www.tribuneindia.com/news/health/medication-and-psychosocial-treatment-can-help-children-with-adhd-find-researchers-604272>

The findings, published in the journal *Pediatrics*, reveal the best-suited method to effectively diagnose and treat ADHD

Medication and psychosocial treatment together can help children with Attention Deficit Hyperactivity Disorder (ADHD)—a neurodevelopmental disorder—to get better, according to a review of studies, published on Monday.

Researchers led by those from the University of Southern California (USC) reviewed more than 23,000 publications on ADHD.

The results, published in two companion papers in the journal *Pediatrics*, reveal the best-suited method to effectively diagnose and treat ADHD.

The review also pointed out gaps in the research, including how best to monitor the condition's progression over time.

“Parents, teachers and providers need evidence-based information about ADHD. We included only the most robust studies in our review, which enables us to make strong evidence statements,” said Susanne Hempel, Professor of clinical population and public health sciences at the USC's Keck School of Medicine.

Currently ADHD is diagnosed using many tools, “including parent and teacher rating scales, patient self-reports, neuropsychological tests, EEG approaches, imaging, biomarkers, activity monitoring and observation.”

The team also rigorously tested many medications for ADHD, which include stimulants and non-stimulants, as well as psychosocial approaches, such as behaviour modification.

Cognitive training, neurofeedback, physical exercise, nutrition and supplements, parent support, and school interventions were the other non-drug treatments that the researchers analysed for the study.

“Medications have the strongest evidence for improving not only ADHD symptoms, but also other problems that often accompany ADHD, such as oppositional and disruptive behaviours,” said Bradley Peterson, Director, Institute for the Developing Mind at Children's Hospital Los Angeles (CHLA) and the lead author of the review.

“The overarching takeaway: ADHD is treatable. There are lots of studies that can show us that children absolutely can get better,” Hempel said.

The team said that the findings will help update the American Academy of Pediatrics's (AAP) clinical practice guidelines for ADHD, the team said.

Alzheimer's disease

Managing diabetes could help prevent dementia, reveals study (The Tribune: 20240326)

<https://www.tribuneindia.com/news/health/managing-diabetes-could-help-prevent-dementia-reveals-study-603997>

Indian-origin researcher finds that diabetes and Alzheimer's disease are strongly linked

An Indian-origin scientist in his research has found that reducing the risk of dementia in Alzheimer's is possible by keeping diabetes well controlled or avoiding it in the first place.

Narendra Kumar, an associate professor at the US-based Texas A&M University, who led the study published in the journal 'American Society for Biochemistry and Molecular Biology', found that diabetes and Alzheimer's disease are strongly linked.

"By taking preventative or amelioration measures for diabetes, we can prevent or at least significantly slow down the progression of the symptoms of dementia in Alzheimer's disease," he said.

Diabetes and Alzheimer's are two of the fastest-growing health concerns globally. Diabetes alters the body's ability to turn food into energy and affects an estimated one in 10 US adults. Alzheimer's is among the top 10 leading causes of death in the US, according to the study.

The researchers investigated how diet might affect the development of Alzheimer's in people with diabetes.

They discovered that a high-fat diet reduces the expression of a specific protein in the gut called Jak3. Mice without this protein showed a chain of inflammation from the intestine to the liver and then to the brain. As a result, the mice displayed Alzheimer's-like symptoms in the brain, along with cognitive impairment.

The researchers believe that the pathway from the gut to the brain involves the liver.

"Liver being the metaboliser for everything we eat, we think that the path from gut to the brain goes through the liver," Kumar said.

They have been studying the functions of Jak3 for a long time and have found that changes in the expression of Jak3 due to food can lead to leaky gut, resulting in chronic inflammation, diabetes, reduced brain ability to clear toxic substances, and dementia-like symptoms seen in Alzheimer's disease.

Breast cancer

Higher burden of breast cancer in Tamil Nadu, Telangana, Karnataka, Delhi: ICMR study (The Tribune: 20240326)

<https://www.tribuneindia.com/news/health/higher-burden-of-breast-cancer-in-tamil-nadu-telangana-karnataka-delhi-icmr-study-603996>

The burden of breast cancer among Indian women in 2016 was estimated to be at 515.4 DALYs per 1,00,000 women after age standardisation

Tamil Nadu, Telangana, Karnataka and Delhi had a higher burden of breast cancer than eastern and northeastern states, according to an ICMR study that also projected a “substantial rise” in the disease burden in India by 2025.

The study, published earlier this month, focused on India’s breast cancer burden at the state level from 2012 to 2016 in terms of years of life lost (YLLs), years lived with disability (YLDs), and disability-adjusted life years (DALYs), and to project the burden for 2025.

The burden of breast cancer among Indian women in 2016 was estimated to be at 515.4 DALYs per 1,00,000 women after age standardisation.

The burden metrics at the state level exhibited substantial heterogeneity.

“Tamil Nadu, Telangana, Karnataka and Delhi had a higher burden of breast cancer than states in the eastern and northeastern regions. The projection for 2025 indicates a substantial increase, reaching 5.6 million DALYs,” the Indian Council of Medical Research (ICMR) study said.

DALYs are a measure of overall disease burden, expressed as the number of years lost due to ill-health, disability or early death.

Rural women are less likely to develop breast cancer than their urban counterparts and age-standardised incidence rates are higher in urban and metro areas, with Hyderabad, Chennai, Bengaluru and Delhi topping the list among Indian cities.

According to the projections, the burden of female breast cancer in India in 2025 is expected to be 5.6 million DALYs. Premature deaths due to breast cancer (YLLs) would contribute 5.3 million DALYs to the total burden, with the remaining due to disability (YLDs).

This study examined the state-wise burden of female breast cancer in India in 2016 using data from 28 population-based cancer registries across the country under the National Cancer Registry Programme (NCRP).

In 2018, age-standardised breast cancer incidence among women in south central Asia was 25.9 per 1,00,000 women, according to a Global Cancer Observatory (GLOBOCAN) study.

According to a Global Burden of Diseases (GBD) study, the age-standardised breast cancer rate in south central Asia in 2016 was 21.6 per 1,00,000 women. These studies estimated the national and sub-national burdens using a wide range of data sources.

“However, our study only used data from population-based cancer registries under NCRP, which are mainly in urban areas. Rural women are less likely to develop breast cancer than their urban counterparts and age-standardised incidence rates are higher in urban and metro areas, with Hyderabad, Chennai, Bengaluru and Delhi as the leading Indian cities,” the researchers said.

Urban factors such as a sedentary lifestyle, high obesity rates, delayed age of marriage and childbirth and minimal breastfeeding have been attributed to a higher burden of breast cancer in urban areas.

“This is supported by our study’s findings, which indicate that urban registries such as Chennai, Bengaluru and Delhi had higher incidence rates than rural registries,” the researchers said.

Socioeconomic factors significantly shape the cancer burden, affecting access to health care, preventive measures and treatment outcomes.

Individuals with lower socioeconomic status encounter barriers to timely and quality health care, leading to delayed cancer detection, compounded by limited resources and health literacy, the study highlighted.

Occupational exposures and financial strain heighten cancer risks and impact treatment accessibility while geographical and psychosocial disparities further complicate the issue.

Research priorities may also inadvertently overlook cancers prevalent in lower socioeconomic groups.

Recognising and addressing these disparities is crucial for equitable cancer control, ensuring universal access to prevention, early detection and treatment, the study said.

“In India, the correlation between cancer prevalence and socioeconomic inequalities is evident, emphasising the need to reevaluate resource allocation and enhance access to health care and social support systems,” it said.

The increasing incidence of breast cancer in India underscores the urgent need for comprehensive awareness campaigns and screening programmes, it emphasised.

A significant concern is that a majority of women diagnosed with breast cancer in the country present with advanced stages or metastatic disease, suggesting a lack of awareness.

“India faces remarkably low rates of breast cancer screening, encompassing self-breast examination and mammography,” the study said.

Cardiology

Is there a heart attack prevention pill you need to take? (The Indian Express: 20240326)

<https://indianexpress.com/article/health-wellness/is-there-a-heart-attack-prevention-pill-you-need-to-take-9233657/>

Dr Nishith Chandra, Principal Director, Interventional Cardiology, Fortis Escorts Heart Institute, Delhi, on why aspirin is not the answer.

Many patients of mine ask me about the benefits of having baby aspirin, or a low-dose aspirin between 75 and 100 mg, for primary prevention of cardiovascular diseases. And I say you need none if you are able to control your hypertension, cholesterol and blood sugar well with lifestyle changes and specific medication addressing these comorbidities.

Increasingly research shows that the risks, usually raising the possibility of internal bleeding, far outweigh the benefits, which are very marginal compared to those who are not on a preventive dosage. Collating several studies together, several protocols on primary prevention have been changed over the last couple of years. Now aspirin is to be given only after occurrence of a heart attack or stroke to prevent a reoccurrence. Even that use we grade patient to patient.

How aspirin prevents clotting

Aspirin has blood-thinning properties that can reduce the likelihood of blood clots forming in stressed heart arteries laden with plaque. But these same properties can also cause ulcers and bleeding in the digestive tract. Studies now conclude that there is “no net benefit” of taking aspirin for primary prevention of heart disease in those 60 and older. People younger than 50 should not take aspirin for primary prevention at all.

Just last month, a review of data from three clinical trials, published in the medical journal *Circulation*, showed no statistical difference between the group that had aspirin as a prevention against heart disease and those who did not. The research examined the results from clinical trials involving more than 47,000 patients in 10 countries, including the US, the UK and Australia.

What are side effects of preventive aspirin use?

Baby aspirin slows down the clotting action of platelets, thinning the blood. But it is because of this function that it can sometimes make you bleed more easily. You may get nosebleeds, gum bleeds, and during injuries or cuts, the blood may take longer than normal to stop.

Data from a large clinical trial of healthy older adults, the results of which were published in *JAMA Network* last year, found higher rates of brain bleeds among those who took daily low-dose aspirin and no significant protection against stroke. Older people, who do not have a history of heart conditions or demonstrate any worrisome signs or symptoms of stroke, should be particularly cautious about taking aspirin, the study says as they are anyway more prone to falls and bleeding, which could be aggravated if they are on the drug.

What are better prevention strategies?

In an era where we control hypertension, blood sugar and high cholesterol better for primary prevention, aspirin may only be minimally beneficial with an increased bleeding risk. Of

course, one must emphasise the value of statins in reducing cholesterol and preventing a heart attack or stroke.

Cardiologists have already moved away from aspirin to clopidogrel, which has been found to be more effective in its preventive role and even among those who have undergone coronary stenting and successfully completed dual antiplatelet therapy, regardless of diabetes status.

Taking clopidogrel helps prevent blood clots if you have an increased risk of having them.

Don't self-medicate with aspirin in the hope of that becoming a preventive if you have not had any episode so far. Instead, take care of your co-morbidities first with lifestyle correction, diet, exercise and keeping markers like blood cholesterol and blood sugar in control. Always follow the cardiologist's advisory on which drug to take and for how long.

Genetics

Longer genes are associated with ageing: Study (Hindustan Times: 20240326)

<https://www.hindustantimes.com/lifestyle/health/longer-genes-are-associated-with-ageing-study-101711351979560.html>

The study shows that long genes may be the central cause of aging, since they become less active with age.

What causes our bodies to age? Four complementary research, including one from Northwestern Medicine, reached the same conclusion, long genes.

Conditions known to accelerate ageing decrease the activity of long genes.

In a recent study, the scientists describe their results and how they contribute to existing information about ageing.

Hindustan Times - your fastest source for breaking news! Read now.

"Long genes that become less active with age may be the central cause of ageing in our bodies," said co-corresponding author Thomas Stoeger, assistant professor of medicine in pulmonary and critical care at Northwestern University Feinberg School of Medicine and a member of the Potocsnak Longevity Institute. "Our finding advances the field by identifying a single phenomenon that connects most existing knowledge about ageing and makes this underlying phenomenon measurable."

The paper, which highlighted the shared findings of four international research groups, was published in Trends in Genetics on March 21. The groups are the first to conclude that most aspects of biological ageing relate to gene length.

Conditions known to accelerate ageing decrease the activity of long genes. This includes oxidative stress and UV irradiation. Conditions known to slow aging increase the activity of

long genes such as caloric restriction. Also, genes that are very short or very long encode for cellular processes known to change in aging such as the formation of cellular energy, protein synthesis and transmission of neural signals.

"The regulation of genes is one of the most central processes of life, and our four studies explain why the activity of long genes in particular change in ageing," Stoeger said. "In addition to ageing, we show that the same finding occurs in patients with Alzheimer's disease, an age-associated disease. Our findings help us rethink the causes of neurodegenerative diseases such as Alzheimer's disease. Because genes with neural function are unusually long, we hypothesize that the decreased activity of long gene cells fails to produce sufficient biomaterials to properly maintain neural function."

The trigger of ageing is a physical phenomenon related to the length of the genes and not to the specific genes involved or the function of those genes, the scientists report. The original findings were based on a mixture of molecular data from humans, mice, rats, killifish, *C. elegans*, *D. melanogaster* and experiments in mice. Previously scientific research sought to identify specific genes responsible for aging. This new view differs from prevailing biological approaches that study the effects of single genes.

Long genes simply have more potential sites that could be damaged. The scientists compare it to a road trip -- the longer the trip, the more likely that something will go wrong. And because the physiological roles of some cell types rely upon genes that are longer than those of other cell types, some cell types are more likely to be affected by DNA damage that accumulates as they age. During ageing, genes take damage as the strands of DNA that contain the genes break. This stops cells from reading the information and activating the information contained in the gene. The longer the gene, the more likely it is that at least one DNA damage site exists and stops the gene's activation.

Because neural cells are known to rely on particularly long genes and are slow or non-dividing, they are especially susceptible to the phenomenon. Many of the genes involved in brain loss during ageing and associated with Alzheimer's disease are exceptionally long. Pediatric cancer patients, who are cured by DNA-damaging chemotherapy, later suffer from premature ageing, including neurodegeneration.

Gallbladder Cancer

Are gallstones linked to an increased risk of Gallbladder Cancer (GBC)? Health expert answers (Hindustan Times: 20240326)

<https://www.hindustantimes.com/lifestyle/health/are-gallstones-linked-to-an-increased-risk-of-gallbladder-cancer-gbc-health-expert-answers-101711345393910.html>

While gallstones serve as a risk factor for GBC, will all individuals with gallstones develop gallbladder cancer? Here's what the health expert says

Gallstones have long been recognised as a significant factor associated with gallbladder cancer (GBC), particularly in regions like northern India where the incidence of both conditions is high but it involves a complex interplay of genetic predisposition, environmental factors and chronic inflammation. While gallstones serve as a risk factor for GBC, health experts reveal that it is essential to recognise that not all individuals with gallstones will develop cancer.

What are the factors associated with Gall Bladder Cancer?

In an interview with HT Lifestyle, Dr Shivendra Singh, Senior Consultant and Chief of GI Oncosurgery and Liver Transplant Services at Rajiv Gandhi Cancer Institute and Research Centre (RGCIRC), explained, "Gallstones are often detected during examinations for gallbladder cancer, and often, it remains a reason for misdiagnosis. Various studies in India have documented presence of gall stone in 70–90% of patients with GBC. The pathogenesis of GBC is influenced by various co-factors, including age, gender, socio-economic status, and comorbidities such as chronic infections with *Salmonella typhi* or *Helicobacter pylori*. Furthermore, environmental factors like exposure to pollutants, heavy metals, and dietary habits also play a role in carcinogenesis."

He shared, "It has been observed that middle aged women around 40 and above with a demographic profile, often referred to as "fat, fertile, female over forty" are generally the subset which is mostly affected with gall stone disease. Additionally, the type of gallstones prevalent in different regions also contributes to the varying incidence of GBC. For instance, in northern India, where cholesterol/mixed stones are predominant, the association with GBC may be more pronounced compared to regions like South India, where pigment stones are more common."

Should you opt for gallbladder removal due to fear of cancer?

Dr Shivendra Singh revealed, "It's important to note that gallbladder issues, including the presence of gallstones, do not always lead to gallbladder cancer. While gallstones are a known risk factor for cancer development, the majority of people with gallstones will not develop cancer. It's crucial not to generalize the need for gallbladder removal solely based on the presence of gallstones or fear of cancer. Each case should be evaluated individually, considering the patient's symptoms, medical history, and overall health."

He asserted, "It's essential to weigh the risks and benefits on an individual basis, considering factors such as age, overall health, and the presence of red flag symptoms. Regular screening and surveillance may be warranted for individuals with known risk factors, especially those with a family history of GBC or other biliary tract malignancies. A comprehensive understanding of the underlying mechanisms, coupled with personalised risk assessment, is crucial for effective prevention and management strategies. Chronic irritation caused by

gallstones has been linked to gallbladder cancer, presenting symptoms such as loss of appetite and stomach fullness. However, pain is uncommon in gallbladder cancer, typically occurring only during inflammation due to cholecystitis.”

Pointing out that gallbladder cancer may not show much symptoms as such because it spreads very fast, Dr Shivendra Singh said that patients may face certain discomfort and while symptoms can vary, there are some common signs to be aware of:

Warning signs include nausea, vomiting, weight loss, and discomfort in the right hypochondrium or lower right side of the chest wall.

In some cases, gallbladder problems can lead to jaundice, a condition characterized by yellowing of the skin and eyes. Jaundice occurs when bile flow from the liver is obstructed, often due to gallstones or inflammation of the gallbladder.

Some individuals may notice a lump or heaviness in the right upper abdomen. This sensation can be accompanied by discomfort or a feeling of fullness.

Vaccines

Why do so many contemporary vaccines have low durability? | Explained (The Hindu: 20240326)

<https://www.thehindu.com/sci-tech/science/why-do-so-many-contemporary-vaccines-have-low-durability-explained/article67990455.ece>

Barring a very few, most new-generation vaccines have a short duration of protection

A health worker administers a vaccine.

Once an individual has received a measles jab, they are usually considered protected against measles disease for their entire life. The measles vaccine is one of the most potent vaccines in our armamentarium today. But this is not the case with most other vaccines. One needs to take several boosters for a long protection. Why is this the case?

We recently published a review of 34 currently licensed vaccines for the duration of their protective immunity, and found that only five vaccines provide long-lasting protection spanning more than 20 years and only three provide lifelong protection. Of these 34 vaccines, 15 provide 5-20 years of protection, whereas a similar number of other shots offer short-term protection that lasts around five years or less.

Parkinson's disease

Coffee may help lower risk of Parkinson's disease: Study (New Kerala: 20240326)

<https://www.newkerala.com/news/2024/17979.htm>

Love your morning dose of coffee? Well, it may help you avoid the risk of Parkinson's disease, claims a study.

The study, published online in the April issue of the journal Neurology, included 1,84,024 people aged 35-70 years, who were followed up for a median duration of 13.1 years.

The findings showed that the highest coffee consumers had 37 per cent reduced risk of getting Parkinson's disease, compared to those who do not drink.

"This study demonstrates that the neuroprotection of coffee on Parkinson's disease is attributed to caffeine and its metabolites by detailed quantification of plasma caffeine and its metabolites years before diagnosis," said the researchers from Utrecht University in the Netherlands.

Further, drinking caffeinated coffee lowered risk of the neurodegenerative disease by 43 per cent. The team, however, found no association with decaffeinated coffee.

"Good news for coffee lovers. Caffeinated coffee consumption over a long-term has the potential to lower the risk of Parkinson's disease," Dr Sudhir Kumar, a neurologist at Indraprastha Apollo Hospitals in Hyderabad, wrote on X.

"Neuroprotective effect leading to lower risk of Parkinson's Disease was attributed to caffeine and metabolites such as theophylline and paraxanthine," he explained.

Colon cancer

Why are young people more prone to colon cancer in India? (New Kerala: 20240326)

<https://www.newkerala.com/news/2024/17955.htm>

India is seeing a significant rise in the number of colon or colorectal cancer in young adults, said doctors on Monday.

They blamed late diagnoses, lack of screening and Western diet that is more processed and calorie-rich food as the major reasons for the rise.

Speaking to IANS, Dr Rajeev Jayadevan, co-chairman of the National Indian Medical Association Covid Task Force, said that the majority of people in India get diagnosed with colorectal cancer in later stages. Lack of better screening facilities and awareness about the disease among the people are the key reasons, he said.

“Many people do not have access to testing facilities or specialist doctors who do such procedures. Unlike Western nations, we do not have organised screening programmes in India. In addition, people tend to ignore red flag symptoms such as bleeding while moving bowels or get misdiagnosed as haemorrhoids or ‘piles’ by their doctor. Sometimes they go to local indigenous practitioners initially. As a result, they often present late,” said Dr Rajeev, a Kochi-based gastroenterologist.

A 2023 study by the Delhi State Cancer Institute (DSCI) showed that from people above the age of 50, the incidence of colon cancer is now increasingly shifting to young adults between ages 31 to 40 years.

“Young onset colonic cancer is now seen to be on the rise in our country. In fact, some recent statistics have shown that almost one-third of colonic cancer which is affecting the country in India is seen in the younger age group,” Dr. Amit Maydeo, Chairman of Institute of Gastro Sciences, Sir HN Reliance Foundation Hospital, told IANS.

“And the main reason is that the youngsters are adopting more and more of a Western lifestyle and their food is also now a calorie-rich diet and more processed food,” he added. He also blamed habits like smoking and alcohol; obesity and inflammatory bowel disease as the reasons for the rise in colon cancer.

Dr Rajeev said that in developed nations colonoscopy has been the standard screening procedure. But in India, this is not widely accepted or practised.

“We are not doing enough to prevent colorectal cancer in India. Waiting for symptoms to appear is the wrong approach, as many cases have no symptoms until late stages,” he lamented.

Family history and eating non-vegetarian have long been known as major risk factors.

But Dr Rajeev told IANS that “contrary to popular belief, there are studies that show it is equally common among vegetarians. Although it is more likely to occur among someone with a family history of similar cancer, over 90 per cent of cases have no known family history. Hence if we only look at these subsets of people, we will be missing the vast majority of colorectal cancers. A change in approach and mindset is required.”

He also suggested offering “opportunistic screening colonoscopy to those who are interested in reducing their own individual risk of cancer,” starting from the age of 40.

How genetics combined with red meat consumption may raise colorectal cancer risk (Medical News Today: 20240326)

<https://www.medicalnewstoday.com/articles/how-genetics-combined-with-red-meat-consumption-may-raise-colorectal-cancer-risk>

Red meat is a known carcinogen. Now researchers say it raises colorectal cancer risk even higher for people with a genetic predisposition.

Previous research suggests that eating large amounts of red or processed meat can increase someone's risk for colorectal cancer.

Researchers are now interested in understanding how someone's genetics influence their colorectal cancer risk from eating red and processed meat.

A recent study identified two biomarkers associated with a higher risk for colorectal cancer from red meat consumption. Participants with these biomarkers had a higher risk for colorectal cancer when they consumed higher amounts of red meat.

Colorectal cancer is one of the more serious cancer subtypes.

It can be challenging to treat at more advanced stages, so researchers are continuing to look for ways to help prevent the disease.

One area of interest is how a person's genetics influence their chances of developing colorectal cancer and how these genetics influence modifiable risk factors.

A study published in *Cancer Epidemiology, Biomarkers & Prevention* identified two genetic variants that may increase a person's chances of developing colorectal cancer when they consume large amounts of red meat.

Researchers say people with these genetic variations may need to exercise extra caution when it comes to red meat consumption.

Genetics, red meat, and colorectal cancer

Colorectal cancer is the second leading cause of cancer death in the United States and researchers note that much of colorectal cancer risk is related to modifiable risk factors.

One significant risk factor is consuming large amounts of red or processed meat, although researchers are still seeking to understand all the reasons why this is a risk factor. Genetics also affect someone's risk for colorectal cancer.

Researchers in the new study wanted to look at the gene-environment interaction, which involves how genetics and environmental factors interact to affect people's cancer risk. They said they wanted to understand how particular genetics affected the risk for colorectal cancer from eating red or processed meat. They conducted a genome-wide gene-environment scan.

This analysis included data from a vast number of participants. Overall, researchers included data from 27 studies in their analysis. Researchers excluded participants who had advanced

cancer. In all, they studied 29,842 participants with colorectal cancer and 39,625 people without the disease.

Researchers looked at the consumption of red and processed meat among participants and performed genetic analyses. Researchers said they found that participants who were older, obese, and consumed more daily calories had a higher risk for colorectal cancer. They also found that people who consumed higher amounts of red meat, processed meat, or both had a higher risk for colorectal cancer.

Researchers were further able to identify two genetic variants that may change people's risk for colorectal cancer based on their red meat consumption. However, they did not find genetic variants that increased the risk related to processed meat consumption at a significant level.

Mariana Stern, PhD, a study author and an associate director for population science at the USC Norris Comprehensive Cancer Center in California, explained to Medical News Today:

“Our study pooled data from 27 different studies done across multiple countries. We investigated if the association between red meat intake and colorectal cancer risk differed depending on the genetic makeup of each participant. We found that there are two genetic variants that seem to influence the effect of red meat on colorectal cancer. Whereas everyone is at risk of colorectal cancer when red meat consumption is high, the increase in risk can be higher for people who carry specific genetic variants.”

Study limitations and continued research

This research did have certain limitations.

First, it focused on people with European ancestry, meaning future studies should include looking at more diverse genetics.

The data on meat consumption relied on participant reports, which introduces recall bias and misclassification risks. Other information, such as data on lifestyle, also relied on self-reporting.

Researchers further did not consider certain behavioral patterns such as exercise as confounders in their analysis.

Finally, researchers were limited by the limitations of the studies they chose to include in their analysis. For example, in the cohort studies, researchers collected data on risk factors in a specific time frame, which could have influenced results. Four studies did not report on total caloric intake, so these studies could not contribute that information to the final analysis. Dividing meat consumption into quantiles also doesn't account for everything regarding meat consumption.

Researchers also focused on the most common type of colorectal cancer, so the results may not be as applicable to more rare colorectal cancer types. More research may also be needed to explore the relationship between genetics and processed meat consumption.

Despite these limitations, experts say the results indicate that some people may need to be more cautious about consuming red meat. Stern noted the following:

“High consumption of red meat (more than 18 ounces per week or more than 3 regular servings per week) can increase colorectal cancer for everyone. Our findings suggest some people may have an even higher risk. If our findings are confirmed, these results could be used to identify people in the population who may want to adhere to current recommendations more tightly given their unique genetic predisposition.”

Colorectal cancer prevention

Regardless of non-modifiable risk factors, experts say people can take certain steps to reduce their chances of developing colorectal cancer. Specific lifestyle changes Trusted Source such as quitting smoking and changing diet may help.

Dr. Anton Bilchik, a surgical oncologist as well as the chief of medicine and director of the Gastrointestinal and Hepatobiliary Program at Providence Saint John’s Cancer Institute in California who was not involved in the study, noted that “Most of colorectal cancer is preventable through diet and lifestyle. Risk factors include obesity, smoking, processed food, red meat, and a sedentary lifestyle. Avoiding these risk factors at an early reduces the chances of getting colorectal cancer by as high as 70 percent.”

Doctors can discuss these modifiable risk factors with their patients, according to Dr. Babak Firoozi, a gastroenterologist at MemorialCare Orange Coast Medical Center in California who was not involved in the study.

“Based on previously published data, and further supported by this study, obesity, diabetes, alcohol and tobacco, consumption of red and processed meats, lack of exercise, and low fiber diet all contribute to developing colon cancer,” Firoozi told Medical News Today. These are modifiable risk factors and should be discussed with patients for cancer prevention and overall health.”

As research moves forward, Firoozi said doctors can also provide more precise guidance and more easily identify individuals who are more at risk for colorectal cancer. This can lead to better recommendations for colorectal cancer screening.

Currently, the Centers for Disease Control and Prevention recommends Trusted Source routine screening for colorectal cancer beginning when people are 45 years old. This allows for early detection of colorectal cancer. Some people may also benefit from genetic testing Trusted Source to better understand their risk for colorectal cancer.