



DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY
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Alzheimer's disease

Common drugs linked to increased risk of Alzheimer's disease (The Tribune: 2020907)

<https://www.tribuneindia.com/news/health/common-drugs-linked-to-increased-risk-of-alzheimers-disease-137376>

A class of drugs used for a broad array of conditions, from allergies and colds to hypertension, may be associated with an increased risk of cognitive decline, particularly in older adults at greater risk for Alzheimer's disease (AD), say researchers.

According to the study, published in the journal *Neurology*, anticholinergic drugs are widely used for dozens of conditions, minor and major.

Some of these medications require a prescription, while others can be purchased over the counter.

"This study suggests that reducing anticholinergic drug use before cognitive problems appear may be important for preventing future negative effects on memory and thinking skills," said study author Lisa Delano-Wood from the University of California San Diego in the US.

The researchers reported that cognitively normal study participants who were taking at least one anticholinergic drug at baseline were 47 per cent more likely to develop mild cognitive impairment (MCI), often a precursor to dementia such as AD.

For the findings, 688 adults were involved in the study, evenly divided by sex with an average age of 74. A None of the participants displayed cognitive or memory problems at the beginning of the study. Each reported whether they were taking anticholinergic drugs. One-third were taking such medications, with an average of 4.7 anticholinergic drugs per person. Participants were given annual comprehensive cognitive tests for up to 10 years.

The scientists also looked at whether participants had biomarkers for AD in their cerebrospinal fluid, such as certain types of proteins, or a well-known genetic risk factor for AD. They found that participants with AD biomarkers who were taking anticholinergic drugs were four times more likely to develop MCI than persons lacking biomarkers and not taking the drugs.

Similarly, persons at genetic risk for AD who took anticholinergic drugs were approximately 2.5 times more likely to develop MCI than those without genetic risk factors and who were not taking the drugs.

“We believe this interaction between anticholinergic drugs and Alzheimer’s risk biomarkers acts in a ‘double hit’ manner,” said lead author Alexandra Weigand. In the first hit, Alzheimer’s biomarkers indicate that pathology has started to accumulate in and degenerate a small region called the basal forebrain that produces the chemical acetylcholine, which promotes thinking and memory.

“In the second hit, anticholinergic drugs further deplete the brain’s store of acetylcholine. This combined effect most significantly impacts a person’s thinking and memory,” Weigand noted.

Zoonotic malarial parasite

AIIMS study finds zoonotic malarial parasite in acute febrile illnesses patients (The Tribune: 2020907)

<https://www.tribuneindia.com/news/health/aiims-study-finds-zoonotic-malarial-parasite-in-acute-febrile-illnesses-patients-137306>

A zoonotic disease is a disease that can be spread/jump from animals to humans and vice versa

AIIMS study finds zoonotic malarial parasite in acute febrile illnesses patients
Photo for representation

AIIMS researchers have sounded a note of caution after finding the presence of malarial parasite ‘Plasmodium knowlesi’ in the north Indian population while doing a study on patients with acute febrile illnesses (AFI) and pathogens causing them.

The presence of the zoonotically transmitted malaria parasite was found during the study of acute febrile illnesses and causative pathogens in certain patients admitted in AIIMS from July 2017 to September 2018.

The All Indian Institute of Medical Sciences (AIIMS) researchers from the Department of Biochemistry, along with clinicians from the Department of Medicine, were involved in the study on the pathogens causing severe fever.

A zoonotic disease is a disease that can be spread/jump from animals to humans and vice versa. It can be caused by viruses, bacteria, parasites, and fungi.

It is necessary to understand how zoonotic diseases spread and the way they infect humans, given the fact that the world is at present battling novel coronavirus that has emerged from bats.

Plasmodium knowlesi is a malaria parasite found in nature in long-tailed and pig-tailed macaques.

The team is led by Pragyaa Acharya, Associate Professor, Department of Biochemistry, and comprises Manish Soneja from the Department of Medicine, along with Rajendra Mandage, Atreyi Pramanik, Parul Kodan, Vinod Sinha, Shivam Pandey and RM Pandey.

“The major lesson from this study is that zoonotic parasites are all around us — therefore maintaining a clean environment and following specific guidelines for the prevention of these diseases are important,” Acharya told IANS.

“A major reason for zoonotic pathogens’ effect on our lives is because we are encroaching the space of their animal hosts — massive decline in forest cover and consequent depleted habitats,” Acharya added. “However, this pathogen is not commonly tested during diagnosis, possibly due to its low prevalence and absence of rapid diagnostic methods.”

The researchers said their study showed the presence of the zoonotic parasite in states of Uttar Pradesh, Haryana, and Delhi. An earlier study at AIIMS had shown its presence in the Andaman and Nicobar Islands.

According to the World Health Organisation, the parasite can give rise to daily fever spikes 9 to 12 days after the infection. Severe infection may lead to organ failure as well.

Acharya and her team also found that simultaneous pathogenic infections in patients with fever can occur, influencing the severity of disease.

The team found that malaria can exist with other co-infecting pathogens like dengue virus and bacterial species *Leptospira* and *Orientia Tsutsugamushi*.

In tropical countries like India, acute febrile illnesses comprise a group of infections with similar clinical presentations such as fever, malaise, body ache, chills, hepatic and renal dysfunction and CNS effects.

It is often difficult to distinguish between the causative agents of AFI, which can be bacterial, parasitic, or viral.

Therefore, these pathogens may infect individuals at the same time and lead to modulation of immune responses, change treatment outcomes, and affect disease severity. The correct diagnosis of the infective agent causing fever is thus very important to ensure the right treatment.

The study results ask us to be vigilant about the possibility of multiple pathogenic causes of fever and to maintain the habitats and ecosystems of animals, the AIIMS researchers added. IANS

Post-Covid-19 inflammatory syndrome severely damages children's hearts

Children with an aneurysm are at most risk, say researchers (The Tribune: 2020907)

<https://www.tribuneindia.com/news/health/post-covid-19-inflammatory-syndrome-severely-damages-childrens-hearts-137270>

Post-Covid-19 inflammatory syndrome severely damages children's hearts
Photo for representational purpose only.

An inflammatory syndrome in children, believed to be linked to COVID-19, could damage their heart to such an extent that some kids may need lifelong monitoring and interventions, according to a review of studies.

The research, published in the journal *EClinicalMedicine*, assessed more than 600 case studies of multisystem inflammatory syndrome in children (MIS-C), revealing that the condition can strike seemingly healthy children without warning three or four weeks after asymptomatic COVID-19 infections.

“According to the literature, children did not need to exhibit the classic upper respiratory symptoms of COVID-19 to develop MIS-C, which is frightening,” said study co-author Alvaro Moreira from The University of Texas Health Science Center at San Antonio in the US.

“Children might have no symptoms, no one knew they had the disease, and a few weeks later, they may develop this exaggerated inflammation in the body,” Moreira added.

In the study, the scientists reviewed 662 MIS-C cases reported worldwide between January 1 and July 25, and found that 71 per cent of the children were admitted to the intensive care unit (ICU).

They said 60 per cent of the kids exhibited an aggravated immune response with an average length of stay in the hospital of 7.9 days.

According to the scientists, all the 662 children had fever, and 73.7 per cent had abdominal pain or diarrhea, with 68.3 per cent suffering from vomiting.

They said 90 per cent had an echocardiogram (EKG) heart scan, which found that 54 per cent of the results were abnormal.

The study noted that more than a fifth of the children required mechanical ventilation, and 11 children died.

“This is a new childhood disease that is believed to be associated with SARS-CoV-2,” Moreira said.

“It can be lethal because it affects multiple organ systems. Whether it be the heart and the lungs, the gastrointestinal system or the neurologic system, it has so many different faces that initially it was challenging for clinicians to understand,” he added.

The researchers noted that the amount of inflammation in MIS-C surpasses two similar pediatric conditions showing aggravated immune response—Kawasaki disease and toxic shock syndrome.

“The saving grace is that treating these patients with therapies commonly used for Kawasaki—immunoglobulin and glucocorticosteroids—has been effective,” Moreira said.

The study found that most of the 662 children suffered cardiac involvement as indicated by marker molecules in the body such as troponin, which is used to diagnose heart attacks in adults.

“Almost 90 per cent of the children (581) underwent an echocardiogram because they had such a significant cardiac manifestation of the disease,” Moreira said.

The scientists found dilation of coronary blood vessels in the children—a phenomenon also seen in Kawasaki disease.

They also observed depressed ejection fraction—indicating a reduced ability for the heart to pump oxygenated blood to the tissues of the body.

Almost 10 per cent of children had an aneurysm of a coronary vessel, the study noted.

“This is a localized stretching or ballooning of the blood vessel that can be measured on an ultrasound of the heart,” Moreira said.

According to the researchers, children with an aneurysm are at the most risk of a future event.

“These are children who are going to require significant observation and follow-up with multiple ultrasounds to see if this is going to resolve or if this is something they will have for the rest of their lives,” Moreira said.

The researchers also found that almost half of patients who had MIS-C had an underlying medical condition, and of those, half of the individuals were obese or overweight.

“Generally, in both adults and children, we are seeing that patients who are obese will have a worse outcome,” Moreira said.

When compared to the initial COVID-19 infection, inflammatory markers in MIS-C were far more abnormal, the researchers said.

Citing an example of this abnormality, they said, the molecular marker troponin used in adults to diagnose heart attacks, was 50 times its normal level in children with MIS-C.

“Evidence suggests that children with MIS-C have immense inflammation and potential tissue injury to the heart, and we will need to follow these children closely to understand what implications they may have in the long term,” Moreira said. PTI

Vaccine

Uncertainty over long-term immune response has implications for vaccine efficacy: Experts (The Tribune: 2020907)

<https://www.tribuneindia.com/news/health/uncertainty-over-long-term-immune-response-has-implications-for-vaccine-efficacy-experts-136879>

Uncertainty over long-term immune response has implications for vaccine efficacy: Experts

Uncertainty over long-term immune response has implications for vaccine efficacy: Experts

The rapid spread of COVID-19 in communities across the globe and the resurgence (second wave) suggest the possible role of asymptomatic persons in its transmission, while the uncertainty over long-term immune response has potential implications for the efficacy of vaccines, experts have said.

The role of reduced use of non-pharmaceutical interventions in facilitating a second wave of COVID-19 as community engagement wanes requires further investigation, they said.

If strong supportive evidence becomes available about the possible role of asymptomatic persons in the transmission of coronavirus infection, continued use of masks and the use of other public health measures may be advocated, according to an editorial in the ICMR’s Indian Journal of Medical Research.

The editorial titled ‘The enigmatic COVID-19 pandemic’ has been penned by Rajesh Bhatia, former director of Communicable Diseases for WHO’s South-East Asia Regional Office, and Priya Abraham, director of ICMR-National Institute of Virology.

It said during the early phase of the pandemic, COVID-19 was presumed to be a non-relapsing disease.

“New studies suggest the possibility of repeated virologically confirmed infections. Confirmation of reactivation or re-infection and their epidemiological importance are awaited,” it said.

Serosurveillance is generally a sensitive tool to determine the extent of infection and immunity in the general population. Only a few field-based studies have generated serosurveillance data but with inconclusive inferences.

The editorial mentioned a recent seroprevalence study which showed that most of the population of Geneva, Switzerland, remained uninfected during this wave of the pandemic, despite the high prevalence of COVID-19 in the region.

“Such studies raise red flags on continuous susceptibility of the population to COVID-19 and inability of the virus to produce widespread immunity. It may contribute to a ‘second wave’ of cases.

“The role of reduced use of non-pharmaceutical interventions in facilitating a second wave as community engagement wanes, requires further investigation,” the experts said.

The uncertainty of long-term immune response has potential implications for the efficacy of vaccines. The real impact of vaccines on this pandemic will become evident only once it has been widely in use for a few months in different populations, they said.

As of now, vaccine is being considered as the ultimate intervention to contain the pandemic. The global race to make it available to the world has been accelerated.

Currently, there are about 165 different candidate vaccines for COVID-19 being developed around the world and several of these are in different phases of clinical trials.

Three vaccine candidates (inactivated, DNA based recombinant and ChAdOx1 nCoV-19 vaccine consisting of the replication-deficient simian adenovirus vector ChAdOx) are currently in early phases of human trials in India, the editorial said.

“Commercial production of COVID-19 vaccine and possible imports are likely to commence by the end of 2020,” it said.

Global procurement and distribution of vaccine to ensure its universal access has been planned by the WHO, Global Alliance for Vaccines and Immunizations (GAVI) and Coalition for Epidemic Preparedness Innovations.

India has developed a blueprint for efficient deployment of the vaccine, supported by IT-based vaccine tracker.

“Immunising the entire population, prioritizing high risk segments, assuring quality in logistics and undertaking post-vaccination surveillance for adverse effects and impact on disease burden shall be huge challenges for any health system,” it highlighted.

In the absence of specific antiviral drugs or vaccines, non-pharmaceutical interventions undertaken by the communities assumed critical importance in curtailing viral transmission. “Community engagement, especially of poor and illiterate, is always difficult to ensure”, it said.

The COVID-19 pandemic has attracted the entire focus and efforts of the health system. Usual health services to communities have become restricted because health facilities are overwhelmed with COVID-19 patients, it said.

People are also apprehensive about visiting health institutions for fear of contracting COVID-19. Important components of health services that have suffered most include health needs of children, women, elderly with noncommunicable diseases and management of other therapies (e.g. cancers, tuberculosis and HIV) and health emergencies.

The pandemic has pushed back progress made under the Millennium Development Goals and is hampering achievement of ambitious UN Sustainable Development Goals.

“It is still not clear as to how the global community will make up for the pandemic-induced setback to its critical operations of major disease elimination programmes such as for tuberculosis,” the editorial said.

Implementation of efficient public health actions is possible on the foundations of sound scientific knowledge of the characteristics of SARS-CoV-2.

“Despite extensive research on all aspects of COVID-19 pandemic, the world is still struggling with the origin of the virus, public health implications of the mutations in the viral genome, availability of a diagnostic test with better sensitivity and specificity, understanding the immune response to the virus, its pathobiology and clinical spectrum, and availability of safe and efficacious specific antiviral drugs and a vaccine.

“These unknowns have made it an enigmatic pandemic till now,” the editorial said. PTI

Arthritis drug

Arthritis drug may improve early stages of heart disease (The Tribune: 2020907)

<https://www.tribuneindia.com/news/health/arthritis-drug-may-improve-early-stages-of-heart-disease-136815>

Having rheumatoid arthritis is known to at least double the chances of developing cardiovascular disease

Arthritis drug may improve early stages of heart disease
Photo for representation

Drugs used to treat initial signs of rheumatoid arthritis (RA) can also improve the early stages of heart disease, according to a new study.

Having rheumatoid arthritis (RA) is known to at least double the chances of developing cardiovascular disease (CVD) because of links to atherosclerosis (a build-up of plaque inside the arteries), heart failure and strokes.

The study, published in the journal *Annals of the Rheumatic Diseases*, linked treatment of RA with improvements in vascular stiffness -- an indicator of CVD.

"Our research shows that even at the earliest stages of rheumatoid arthritis, there is increased vascular stiffness in people with no or minimal traditional CVD risk factors such as hypertension, high cholesterol or smoking," said study author Sven Plein from the University of Leeds in the UK.

For the study, the research team had set out to explore possible connections between the very earliest signs of RA and indicators of CVD. Detailed MRI heart scans were given to 82 patients with no known heart issues.

The scans revealed the presence of increased vascular stiffness in the aorta, which is a gradual loss of elasticity in the large arteries, compared to healthy people. There was also evidence of cardiac scarring and changes in the wall of the left ventricle (the heart's main pumping chamber), suggesting heart abnormalities had started before the RA diagnosis.

After their initial scans, the 82 patients were given one of two RA drug courses. After a year of treatment, further scans were then carried out on 71 of the patients. The scans revealed that the vascular stiffness of the aorta (the main artery) had improved during the RA therapy.

"The rheumatoid arthritis treatment improved vascular stiffness, regardless of how the patient responded to the RA medication and these improvements in vascular stiffness independently of response to RA treatment were unexpected," Plein said.

The research highlights the importance of commencing treatment of RA early to also lessen the risk of developing CVD.

"Identifying patients at the earliest stage of RA with most risk of CVD is important to inform management strategy," said study researcher Maya Buch.

"The benefits of RA treatment on CVD extend beyond traditional suppression of inflammation," Buch noted. —IANS

Covid-19 vaccine

How to decide who should get the Covid-19 vaccine first (The Tribune: 2020907)

<https://www.tribuneindia.com/news/health/how-to-decide-who-should-get-the-covid-19-vaccine-first-136733>

How to decide who should get the Covid-19 vaccine first
Photo for representation only.

At least 19 global health experts have proposed a new, three-phase plan for vaccine distribution -- called the Fair Priority Model -- which aims to reduce premature deaths and other irreversible health consequences from Covid-19.

"The idea of distributing vaccines by population appears to be an equitable strategy," said study lead author Ezekiel J. Emanuel from the University of Pennsylvania in the US.

"But the fact is that normally, we distribute things based on how severe there is suffering in a given place, and, in this case, we argue that the primary measure of suffering ought to be the number of premature deaths that a vaccine would prevent," Emanuel added.

In their proposal, the authors point to three fundamental values that must be considered when distributing a Covid-19 vaccine among countries: Benefiting people and limiting harm, prioritising the disadvantaged, and giving equal moral concern for all individuals.

The Fair Priority Model addresses these values by focusing on mitigating three types of harms caused by Covid-19: Death and permanent organ damage, indirect health consequences, such as health care system strain and stress, as well as economic destruction.

Of all of these dimensions, preventing death -- especially premature death -- is particularly urgent, the authors argued, which is the focus of Phase 1 of the Fair Priority Model.

Premature deaths from Covid-19 are determined in each country by calculating "standard expected years of life lost," a commonly-used global health metric.

In Phase 2, the authors proposed two metrics that capture overall economic improvement and the extent to which people would be spared from poverty.

And in Phase 3, countries with higher transmission rates are initially prioritised, but all countries should eventually receive sufficient vaccines to halt transmission -- which is projected to require that 60 to 70 per cent of the population be immune.

The authors also object to a plan that would prioritise countries according to the number of frontline health care workers, the proportion of the population over 65, and the number of people with comorbidities within each country.

They said that preferentially immunising health care workers -- who already have access to personal protective equipment (PPE) and other advanced infectious disease prevention methods -- likely would not substantially reduce harm in higher-income countries.

Similarly, focusing on vaccinating countries with older populations would not necessarily reduce the spread of the virus or minimise death.

Moreover, low and middle-income countries have fewer older residents and health care workers per capita than higher-income countries, the researchers said.

The authors conclude that this model is the best embodiment of the ethical values of limiting harms, benefiting the disadvantaged, and recognising equal concern for all people.

National nutrition mission -Healthcare experts

Healthcare experts call for urgent action to address COVID impact on national nutrition mission (The Tribune: 2020907)

<https://www.tribuneindia.com/news/health/healthcare-experts-call-for-urgent-action-to-address-covid-impact-on-national-nutrition-mission-136723>

The government is celebrating 'Poshan Maah' in September during awareness will be spread on issues related to malnutrition in children, pregnant women and lactating mothers

Healthcare experts call for urgent action to address COVID impact on national nutrition mission

Photo for representation

As the country marks 'Poshan Maah' this month, healthcare experts have called for urgent action to address the impact of COVID-19 on the national nutrition mission, saying the pandemic might affect the health of children and pregnant women the hardest as they are the most vulnerable to undernutrition.

The government is celebrating National Nutrition Month or 'Poshan Maah' in September during which several programmes to spread awareness on the issues related to malnutrition in children, pregnant women and lactating mothers will be organised.

The experts spoke to PTI and said this was a time when there was an urgency among all stakeholders to join forces. On one hand, food security needs to be ensured and on the other, correct nutrition feeding practices need to be promoted in the community, they said.

Adopting system strengthening and social behaviour change strategies together in a sustained effort and investment beyond the Poshan Maah would yield results, they added.

Sujeet Ranjan, executive director at the Coalition for Food and Nutrition Security (CFNS), said the spread of COVID-19 had impacted the health, nutrition, livelihoods and wellbeing of India's most vulnerable populations and it would have a lasting effect on people.

"One of the fallouts of the COVID-19 containment measures, including the closure of primary schools and Anganwadi centres, is that children in rural India now have to do without that one guaranteed meal, potentially worsening the child malnutrition problem in India," he said.

Even though the government had ordered state authorities to ensure the provision of take-home rations at the doorstep as well as a cash allowance during the lockdown, efforts to tackle acute malnutrition could still take a hit, he said. However, due to the barriers posed by the COVID crisis, there might be multifaceted repercussions on children, Ranjan added.

"We can understand that the possible impact would be on the number of meals per day and hence the quantity of food per meal as well. Ensuring diet diversity at the time of COVID also

remains a challenge as the main goal during this health crisis and the lockdown is the availability of basic food first. Therefore, the quality of the diet is also compromised,” he said.

He suggested that information technology could be leveraged for ensuring many services related to maternal and child health such as the use of mobile phones for counselling by frontline workers, use of remote health advisory and intervention services for getting all the necessary health information and guidance, strengthening mother and child tracking system, Poshan Helpline number for ensuring healthcare, immunisation services, and regular counselling through nutrition specialists.

Khan Amir Maroof, honorary secretary at Maternal Infant and Young Child Nutrition (MIYCN), Indian Association of Preventive and Social Medicine (IAPSM), said the health of children and pregnant women might be hit the hardest as they are the most vulnerable to undernutrition.

“The lack of availability of quantity and quality of food is a matter of concern. Both macro and micronutrient deficiencies will have their own effects. In short term, it will lead to malnutrition in terms of undernutrition (low weight for age), followed by higher chances of suffering from infectious diseases such as diarrhoea, acute respiratory infections,” he said.

Maroof said pregnant women were at a higher risk of undernutrition due to the increased nutrition requirement which is not being optimally met during this pandemic.

“This effect is intergenerational as the child to-be-born is at high risk of low birth weight or stillbirth. These effects put the family in a vicious loop of disease and undernutrition which is difficult to overcome without external support. For the whole country, this will mean a higher prevalence of malnutrition,” he added.

He said strategies to mitigate COVID’s impact on the health of children and pregnant women needed to be tailored to a local context and to the severity of the outbreak.

“Food security allowances whose provision exists under the midday meal scheme can be implemented, either by way of direct cash benefit transfer or food vouchers. Vouchers have an added benefit as compared to cash that we can ensure to some degree that it will be used for food only,” Maroof added.

Sebanti Ghosh, program director at Alive & Thrive India, said the pandemic had the potential to reverse the hard-earned gains in improving health and nutrition of pregnant women and young children as the pandemic and lockdown have adversely affected the delivery of essential health and nutrition services, resulting in reduced coverage of crucial services such as institutional delivery, immunisation, antenatal care, provision of micronutrient supplies to pregnant women, young children and adolescent girls.

“Early detection and treatment of severely acute malnourished children (SAM) must be prioritised and ensured,” she said.

Chandrakant Pandav, former head at Centre for Community Medicine at AIIMS, suggested that India could mitigate some of the effects of COVID-19.

“India’s nutrition journey is too important to be derailed by a crisis like COVID-19. There must be a clarion call for the nutrition community in India to rally strongly and to give continued attention to malnutrition in all its forms, generate relevant evidence and to support and engage all of society to urgently and adequately address malnutrition in the context of the COVID-19 pandemic. We have come too far to turn back now,” he added. PTI

Depression

Kids with social anxiety more likely to develop depression (The Tribune: 2020907)

<https://www.tribuneindia.com/news/health/kids-with-social-anxiety-more-likely-to-develop-depression-136388>

Kids with social anxiety more likely to develop depression

Dear Parents, read this carefully. Children suffering from social anxiety may be at particular risk for depression in the future, warn researchers.

“We already know from previous research that children with social anxiety symptoms are at high risk of developing depression, as are offspring of depressed mothers,” said study co-author Holly Kobezak from the Binghamton University in the US.

“Our findings take what is already known one step further by suggesting that the combination of these risk factors may be even more insidious than the presence of either risk factor alone,” Kobezak added.

The researchers invited approximately 250 eight- to 14-year-old children whose mothers either did or did not have a history of major depressive disorder (MDD) into their lab to complete questionnaires measuring social anxiety and depression symptoms.

Symptoms were reassessed at six-month intervals over a period of two years in order to capture changes in symptom levels over time as children progressed further into adolescence, which is a critical time period for the development of depression.

The results, published in the Journal of Adolescence, showed that high levels of social anxiety predicted increases in depression symptoms over time, but only among children of mothers with a history of MDD.

“This provides preliminary evidence that risk for the development of depression among children with social anxiety may be particularly high among children who are already at risk for depression based on a maternal history of the disorder,” Kobezak said.

The researchers hope that their findings will encourage others to explore the specific ways in which social anxiety symptoms and exposure to maternal depression may work together to increase risk of depression in children over time.

“An important point is that our findings provide insight into the circumstances that may put children at heightened risk of depression, but equally important is research that will help us understand why this may be true,” said Kobezak.

The researchers noted that future research could focus on disruptions in social functioning and interpersonal relations resulting from these experiences and whether this might be why these children are at such elevated risk. — IANS

WHO

We should see Covid vaccine rollout by mid-2021; WHO chief scientist (The Tribune: 2020907)

<https://www.tribuneindia.com/news/health/we-should-see-covid-vaccine-rollout-by-mid-2021-who-chief-scientist-136386>

We should see Covid vaccine rollout by mid-2021; WHO chief scientist
Photo for representational purpose only.

The World Health Organization is hopeful that a novel coronavirus vaccine will be ready internationally by mid-2021, its chief scientist said on Friday.

"Certainly by the middle of 2021, we should start to see some vaccines moving into countries and populations," Soumya Swaminathan said at a news briefing in Geneva. Reuters

Covid-19: What you need to know today (Hindustan Times: 2020907)

<https://epaper.hindustantimes.com/Home/ArticleView>

The beginning of the week is a good time to catch up — on numbers, science, trends, and the rare good news (if any) related to the coronavirus disease.

90,446: This is the number of Covid-19 cases recorded in India on Saturday, according to the HT dashboard. No country has crossed 80,000 cases a day. India will likely do fewer cases on Sunday — numbers fall off over the weekend in most parts of the world. India also overtook Brazil on Sunday to become the country with the second highest number of Covid-19 cases,

after the US (see page 1). And towards the end of last week, it overtook Mexico to become the one with the third highest number of Covid-19 fatalities. How high is that 90,446 number? According to worldometers.info, it is higher than the total number of cases seen by countries ranked 35 and lower in its listing. As testing increases, India could see a further rise in cases. Purely in terms of the trajectory of the pandemic's run, India is unique — but it isn't the kind of distinctiveness of which the country can be proud.

The mink: An earlier instalment of this column (Dispatch 49 on May 8) looked at the animals of the Covid-19 pandemic. One more can now be added to the list — the mink, a relative of the otter and the ferret that is widely farmed across Europe for its fur. There have been outbreaks in mink farms in the Netherlands, Spain, and in Utah in the US. According to a study published on pre-print server bioRxiv, and conducted by researchers from the Erasmus Medical Centre, Rotterdam, genomic studies showed that the workers at the farms passed on the coronavirus disease to minks, which then passed them back to other workers. Already, the Netherlands has moved forward a planned closure of the mink farms set for 2024 to March next year. And about time too — for years, activists have been trying to get governments around the world to do just this. The research from the Netherlands needs to be peer-reviewed, but it merits a much closer look — it suggests that the Sars-CoV-2 virus can jump from humans to animals (anthropozoonotic) and then from animals back to humans (zoonotic).

Tennis, anyone?: Anyone but poor Kristina Mladenovic. Days after she lost a match she should have won at the US Open and spoke of the “nightmare” she was living in and the “abominable way” in which players were being treated — Mladenovic was isolated because she was exposed to an infected player within the bio-bubble — she and her partner, the top seeds in the women's draw, were disqualified on Saturday. This was after the county where the players' hotel is located said its rules do not allow her to play in the tournament. The experience with so-called bio-bubbles in sport has been mostly positive. They would appear to have worked in cricket in England and the Caribbean, the Premier League, and also the NBA; but the US Open is clearly having all sorts of trouble with its own. It will be interesting to see how the Indian Premier League's bio-bubble works. As HT's sports desk wrote in a recent article: “What makes the IPL different from some of the other bio-bubbles is how spread out it is.” The report pointed out how self-contained the bio-bubbles for the cricket series in England, the Caribbean Premier League, and the NBA have been. In contrast, it said, “the IPL has eight teams camping in different hotels in Dubai and Abu Dhabi, and travelling every day for practice”.

The vaccine: The mathematical chances of a vaccine for Covid-19 being developed soon (another topic covered in an earlier instalment of this column, Dispatch 111 on July 22) became stronger through August. At the beginning of September, according to a report in Nature, there were 321 vaccine candidates, with 32 of them in clinical trials. In April, there were only 115 vaccine candidates. But the best news regarding vaccines came in a Friday report by the Wall Street Journal that said some leading vaccine makers were preparing a public pledge that would reaffirm their commitment to following the due process of clinical trials and “not seeking government approval” till they were convinced the vaccines were safe and effective. The companies named in the article include Pfizer, Johnson & Johnson and Moderna — and the pledge comes against the backdrop of vaccine development becoming increasingly political, leading to fears that governments could rush through with vaccines before they are ready, much like Russia has done with the Sputnik V.

ANIMAL-HUMAN-ANIMAL SPREAD

According to a study, genomic studies showed that workers at mink farms passed on the coronavirus disease to the animals, which then passed them back to other workers. The research, which suggests that the virus can jump from humans to animals and then from animals back to humans, merits a much closer look.

SPORTS IN TIMES OF A PANDEMIC

The experience with bio-bubbles in sport has been mostly positive. They would appear to have worked in cricket in England and the Caribbean, the Premier League, and also the NBA; but the US Open is clearly having all sorts of trouble with its own. It will be interesting to see how the Indian Premier League's bio-bubble works

A PLEDGE

The best news regarding vaccines came in a Friday report that said some leading vaccine makers were preparing a public pledge that would reaffirm their commitment to following the due process of clinical trials and "not seeking government approval" till they were convinced the vaccines were safe and effective.

Delhi New Cases (The Tribune: 2020907)

<http://onlinepaper.asianage.com/article/detailpage.aspx?id=15087863>

Delhi records over 3,000 Covid cases

AGE CORRESPONDENT
NEW DELHI, SEPT. 6

Delhi recorded 3,256 fresh coronavirus cases on Sunday, taking the tally to over 1.91 lakh, while the death toll mounted to 4567, authorities said.

Twenty-nine fatalities were recorded in the last 24 hours.

As many as 26,829 rapid antigen tests and 9,217 RTPCR/CBNAAT/TrueN at tests were conducted in the last 24 hours. The number of Containment zones stands at 1,076.

The total number of cases stands at 1,91,499, of which 1,65,973 patients have either been discharged, recovered or migrated. The number of active cases stands at 20,909.

According to official

▶ **THE TOTAL** number of cases stands at 1,91,499, of which 1,65,973 patients have either been discharged, recovered or migrated. The number of active cases stands at 20,909

data, there has been a rise of 80 per cent in the number of home isolation cases of Covid in the national capital in the last 16 days, and parallelly the containment zones count too has spiralled up to 976 over the same period.

Amid steady rise in fresh and active coronavirus cases in the last several days, the number of people in home isolation here on Saturday reached the five-figure mark again after over a month's time.

The number of home iso-

lation cases of Covid on September 5 stood at 10,514. The corresponding figure a day before was 9,822, according to the Delhi health department.

On August 21, the home isolation cases count was 5,818, so from that date, the rise is of 80 per cent in 16 days.

Parallelly, the number of containment zones too have multiplied from 589 on August 21 to 976 on September 5, according to official figures.

The Delhi government had been laying a lot of emphasis on home isolation, especially for asymptomatic patients as part of its Covid management strategy in the past several months.

Medical experts have flagged that asymptomatic patients who may not have

been tested, and roaming around in the open, could be one of the factors leading to rise in fresh cases in last one week or so.

Delhi recorded 2,973 fresh Covid cases on Saturday, the highest single-day spike in 71 days, as the tally in the city mounted to over 1.88 lakh, even as chief minister Arvind Kejriwal asserted that the situation in the city was completely under control.

This was the fifth successive day in September when over 2,000 new cases have been reported in a day. Also, over 38,000 tests were conducted on Saturday. Twenty-five fatalities were recorded in the last 24 hours, taking the death toll to 4,538, according to the bulletin issued by the Delhi health department on Saturday.

Viral infections'

Coronavirus | 'RT-PCR will remain the gold standard for all viral infections' (The Hindu: 2020907)

<https://www.thehindu.com/sci-tech/health/coronavirus-rt-pcr-will-remain-the-gold-standard-for-all-viral-infections/article31883236.ece>

A negative test on an antigen based assay is not reliable. Even if there is infection, there is a 50% chance that the antigen test will be negative, says Dr. P. Srinivasan, technical director at Neuberg Diagnostics.

Dr. P. Srinivasan, technical director at Neuberg Diagnostics and Chairman & Co-Founder of Be The Cure Registry and Jeenomix (Next Generation Sequencing HLA Laboratory) of Jeevan Stem Cell Foundation, Chennai, spoke to G. Ananthakrishnan on current testing options for the novel coronavirus SARS-CoV-2, when to think of taking the test, state of antibody testing.

What is happening currently with COVID-19 testing in Chennai and other places?

Testing goes on. I am involved with Neuberg [Diagnostic laboratories] and we do on an average about 200 tests a day. It is RT-PCR [Reverse Transcriptase-Polymerase Chain Reaction] which is the gold standard. Three different things have been floating around. We heard a lot of noise about the antibody test. Recently there is talk on the antigen test. RT-PCR will remain the gold standard for all viral infections. Even [with] RT-PCR one needs to understand... can it give a negative report when someone really has the infection? The answer is yes. One reason is when the test is done too early, when there is no viral material in the swab, and two, when the swab is not properly taken. One needs to remember, how long is the test valid?

The COVID PCR is not even like a one rupee note. The rupee note is the same after one week. The PCR test loses its validity the moment the test is done. You can still pick it up the next day and it could turn out to be positive.

The validity of a test is restricted to the day of testing. That is one disadvantage with it and the test is really expensive.

Now that we have crossed three months into the infection, what is the state of antibody tests using ELISA or other methods?

It all started with rapid testing [for antibodies], and any rapid test for any disease has its limitations. The same thing happened with HIV when it started. Now, of course, far more rugged, reliable rapid tests are available, but it took ten years. The antibody tests for COVID are like infection, you have an IgM and IgG, the M arrives around seven days or so after picking up the infection. The G appears a little later and remains longer.

The antibody kits that are available right now are all predominantly IgG, almost all, or it is a total kit, both for M and G. There is no point in using it to diagnose the disease. We are looking at picking up patients with active disease. Testing for an IgG does not make sense. But in a

population if you want to see, what percentage of the population is infected for epidemiological reasons, the antibody tests may be useful at this stage.

The antigen test - basically in a PCR we are looking at viral RNA and in the antigen test, what we call antigen is again viral protein. That is picked up by whatever technology we use. But if you clearly read the information on the antigen test, if it says positive, you can be hundred per cent sure that it is positive. However, if the test is negative, you need to follow it up with PCR. Because a negative test on an antigen based assay is not reliable. So if you look at sensitivity it is 50% to 80%, even if there is infection, there is a 50% chance that the antigen test will be negative. So if these people walk on the roads, they infect others.

Personally, I don't think the antigen test is suitable at this point to test people for infection until the sensitivity increases.

Could you walk us through the cost factor for testing? If you didn't get access to government testing, what are the costs involved?

I have no clue on the antigen and antibody testing because they are not suitable. When you come to RT-PCR, the charges are ₹3,000 per test. And honestly, I don't have my own lab, and if I did I would hesitate to offer the test and refer you to somebody else. The reason is that right from the beginning, there has been a lot going on about fixing the price.

What people forget is this. Even close to 100 days after the epidemic, RT-PCR kits are still being imported. Even though people are talking that it is made in India and it is cheaper. The cost of the test has not come down drastically. Availability has become easier, because of cargo flights.

The second thing, there are three processes involved. Collect your sample and put it in the fluid called the viral transport medium. That costs X. Then we have to extract it in the lab which costs Y. Then comes the PCR testing which costs Z. The X+Y+Z costs more than what people are talking about in the media right now.

And there is always the cost per reportable result. It is not like a pack of 20 biscuits that costs ten rupees and each biscuit is 50 paise. In any test, all the more in RT-PCR, if I say the kit can do 50 tests, it will come down to 48 due to positive and negative controls. Then there are 10% to 15% of tests that need to be repeated. When it is inconclusive or doubtful. It is therefore not X divided by 100 to arrive at the overall cost. The cost is probably X divided by 75 or 80. The cost which everybody says needs be below ₹3,000, or should be ₹2,500 or ₹2,200, I honestly think it is unreasonable. But to set the record straight, the test costs ₹3,000.

Why is it difficult to make our own tests and not import?

It is not difficult. Actually, a few companies have made them. Any start-up has its own problems and issues of sensitivity and specificity. Probably it will take another 100 days to provide the number of tests we are looking for. COVID has demonstrated something phenomenally good in health care. When pushed to the corner, we are capable of coming up with the best that is possible, at a cost that others cannot think of. On PCR kits, it will take some more time, it will happen, possibly in another 30 or 40 days.

So we can make them more affordable then?

It should become more affordable. The government should put a cap on the price at which companies can sell the kit. Essentially we are getting into a control raj, but it is required. They

are not capping the price of consumables. A pair of nitrile gloves is now being sold at double the price today. But the government wants to cap only the cost that the patient has to pay.

Those who have antibodies from infection, there is the view that they may be better placed to resume activity...

The ICMR study shows that, I think it is some 0.83% of the population that tested positive for IgG. That essentially means the majority of India is not infected. The bottomline is that if you need to test, you need to have symptoms. Wait three to four days with symptoms before you test. If you rush you may get a negative result.

Covid-19 anxiety

Identification key in treating kids with Covid-19 anxiety: Study (New Kerala: 2020907)

<https://www.newkerala.com/news/2020/158238.htm>

Researchers have revealed that early identification and treatment is vital to avoid long-term mental health consequences from Covid-19 among children and young people.

The study, published in the journal Behavioural and Cognitive Psychotherapy, highlights how health anxieties can be triggered by changes like returning to school and argue that young people need time to readjust to routine and to deal with emotions after such a prolonged period at home.

For some, ongoing concerns about health, triggered by the invisible threat posed by Covid-19, could interfere with life and parents and teachers need to be aware of signs such as excessive hand washing, and reassurance-seeking about health-related worries.

"Children are not immune to worries about their health, or the health of those around them. It is essential that we are able to recognise when normal concerns around Covid become more problematic," said study author Jo Daniels from the University of Bath in the UK.

Signs of stress in children may include tummy ache, sleeping problems and not engaging in normally enjoyable activities; for those particularly affected by health-related anxiety, "You might expect to see excessive hand-washing, exaggerated avoidance of touching objects for fear of picking up the virus, or repeated reassurance seeking from adults in addition to the usual signs of stress and worry," Daniels added.

According to the researchers, Children may not always be able to describe or verbalise their concerns clearly, so they are looking for marked changes in behaviour or worries that get in the way of living life to the full.

The team behind the study suggest health anxieties in children might be triggered by an immediate family member becoming ill, a shielding member of the household, or perhaps because of raised family tensions due to parental health-related worries.

In these scenarios, they advise parents and teachers to seek professional help where needed. Their guidance offers suggestions about how cognitive behavioural therapy (CBT), including CBT conducted online or by phone, can be an effective treatment option to address children and young people's health anxieties.

During the pandemic, the team have previously highlighted mental health vulnerabilities including health anxiety in adults, and loneliness in children and young people. They recommend that parents or teachers who notice that a child or young person is worried about health should offer them the opportunity to talk about their worries by gently listening to their concerns, and then encouraging them to find ways to gradually face and overcome their fears.

Simple interventions that may be helpful could include correcting misunderstandings surrounding covid and the necessary precautions, the study noted.

Post-Covid syndrome

Post-Covid syndrome severely damages children's hearts: Study (New Kerala: 2020907)

<https://www.newkerala.com/news/2020/158224.htm>

Multisystem inflammatory syndrome in children (MIS-C), believed to be linked to Covid-19, damages the heart to such an extent that some children will need lifelong monitoring and interventions, warn researchers.

According to the review, published in *EClinicalMedicine*, a journal of *The Lancet*, case studies also show MIS-C can strike seemingly healthy children without warning three or four weeks after asymptomatic infections.

"Children did not need to exhibit the classic upper respiratory symptoms of Covid-19 to develop MIS-C, which is frightening," said study author Alvaro Moreira from The University of Texas in the US.

"Children might have no symptoms, no one knew they had the disease, and a few weeks later, they may develop this exaggerated inflammation in the body," Moreira added.

For the findings, the research team reviewed 662 MIS-C cases reported worldwide between January 1 and July 25.

The researchers found that 71 per cent of the children were admitted to the intensive care unit (ICU) and at least 60 per cent presented with shock. According to the study, the average length of stay in the hospital was 7.9 days and 100 per cent had a fever, 73.7 per cent had abdominal pain or diarrhoea, and 68.3 per cent suffered from vomiting.

The findings also showed that 22.2 per cent of the children required mechanical ventilation and 4.4 per cent required extracorporeal membrane oxygenation (ECMO). Also, 11 children died.

"This is a new childhood disease that is believed to be associated with SARS-CoV-2," Moreira said.

"It can be lethal because it affects multiple organ systems. Whether it be the heart and the lungs, the gastrointestinal system or the neurologic system, it has so many different faces that initially it was challenging for clinicians to understand," Moreira added.

The amount of inflammation in MIS-C surpasses two similar pediatric conditions, Kawasaki disease and toxic shock syndrome.

"The saving grace is that treating these patients with therapies commonly used for Kawasaki - immunoglobulin and glucocorticosteroids - has been effective," D Moreira said.

Most of the 662 children suffered cardiac involvement as indicated by markers such as troponin, which is used with great accuracy in adults to diagnose heart attacks.

"Almost 90 per cent of the children (581) underwent an echocardiogram because they had such a significant cardiac manifestation of the disease," the researchers said.

The damage included dilation of coronary blood vessels, a phenomenon also seen in Kawasaki disease. Almost 10 per cent of children had an aneurysm of a coronary vessel.

Children with an aneurysm are at the most risk of a future event.

"Evidence suggests that children with MIS-C have immense inflammation and potential tissue injury to the heart, and we will need to follow these children closely to understand what implications they may have in the long term," the team noted.

Keto diets

Keto diets, intermittent fasting may affect cardiovascular health: Researchers (New Kerala: 2020907)

<https://www.newkerala.com/news/2020/158223.htm>

Researchers have found that Keto diets and intermittent fasting may affect cardiovascular health. But Mediterranean diets and whole food plant-based diets which include fruits, vegetables, legumes, nuts, and whole grains may prevent cardiovascular problems, they suggested.

"With diets like keto and intermittent fasting, social and popular media has been flooded with claims, promises and warnings that are at best unverified and at worst harmful to your health," said

Andrew Freeman, MD, director of cardiovascular prevention and wellness at National Jewish Health and co-author of the study said, "Diets recommended by health experts, such as plant-based and Mediterranean diets, have been extensively studied for safety and efficacy, and demonstrated conclusively to improve cardiovascular health."

Keto is a very low carbohydrate dietary approach that sends the body into ketosis, a metabolic state in which it has reduced access to glucose and is instead mostly fuelled by fat. While the limited study of the keto diet shows those who follow it initially lose weight, it tends not to be sustainable according to 12-month data. It is also unclear whether the weight loss is caused by ketosis or simply by calorie restriction.

Researchers also have concerns about the type and amount of fat consumed by those following a keto diet. While existing studies strictly controlled the type of fat and foods participants consumed, many who try keto consume high amounts of unhealthy saturated fat, which is associated with an increased risk of heart disease and high lipid levels in the blood. There is also evidence that eating a keto diet for an extended period of time may lead to stiffening of the arteries, and several studies found that those who eat a keto diet have a greater risk of death.

Keto does, however, show promise as a potential treatment for diabetes, with studies showing improved glucose levels, as well as lower fasting glucose and insulin levels in mice fed a keto diet. Further research is needed to confirm these benefits and assess risk before keto is clinically recommended.

Researchers are also optimistic about the potential health benefits of intermittent fasting but are concerned about possible pitfalls. There is a wide range of practices being called "intermittent fasting", with some fasting without food an entire day and others restricting meals to certain hours of the day. Experts also worry that the hunger-induced by fasting causes many people to overeat when it is time for meals, or make unhealthy choices that have adverse effects on their cardiovascular health.

A majority of the current evidence regarding the potential benefits of intermittent fasting come from animal studies, which have shown increased longevity, weight loss, decreased blood pressure, improved glucose tolerance and controlled lipid levels.

"The potential risks of intermittent fasting that require further study include effects of starvation and how it may impact organ function," Dr Freeman said. "It is particularly important for diabetics to speak with their doctor before trying intermittent fasting to discuss how to control their disease and the risk of hypoglycemia that may come with skipping regular meals."

While there is modest evidence regarding favourable effects of both dietary approaches, neither the keto nor intermittent fasting is recommended for the treatment or prevention of any condition until large, long-term studies can more definitively examine their impact. Instead, experts recommend diets that have been extensively studied and scientifically proven to prevent or even reverse cardiovascular issues, which include the Mediterranean diet, a whole food plant-based diet and the National Institutes of Health's Dietary Approaches to Stop Hypertension (DASH). All of these share a common foundation that includes fruits, vegetables, legumes, nuts and whole grains.

Sleeping patterns

Sleeping patterns of a person may help predict when Alzheimer's disease will begin: Study (New Kerala: 2020907)

<https://www.newkerala.com/news/2020/158153.htm>

By observing one's sleeping patterns, neuroscientists, to some extent can estimate a time frame for when Alzheimer's is most likely to strike in a person's lifetime, according to a recent study.

Their findings suggest one defence against this virulent form of dementia - for which no treatment currently exists - is deep, restorative sleep, and plenty of it.

The research was led by UC Berkeley neuroscientists Matthew Walker and Joseph Winer that was published in the journal Current Biology.

"We have found that the sleep you're having right now is almost like a crystal ball telling you when and how fast Alzheimer's pathology will develop in your brain," said Walker, a UC Berkeley professor of psychology and neuroscience and senior author of the paper. "The silver lining here is that there's something we can do about it," he added. "The brain washes itself during deep sleep, and so there may be a chance to turn back the clock by getting more sleep earlier in life."

Walker and fellow researchers matched the overnight sleep quality of 32 healthy older adults against the buildup in their brains of the toxic plaque known as beta-amyloid, a key player in the onset and progression of Alzheimer's, which destroys memory pathways and other brain functions and afflicts more than 40 million people worldwide.

Their findings show that the study participants who started out experiencing more fragmented sleep and less non-rapid eye movement (non-REM) slow-wave sleep were most likely to show an increase in beta-amyloid over the course of the study.

Although all participants remained healthy throughout the study period, the trajectory of their beta-amyloid growth correlated with baseline sleep quality. The researchers were able to forecast the increase in beta-amyloid plaques, which are thought to mark the beginning of Alzheimer's.

"Rather than waiting for someone to develop dementia many years down the road, we are able to assess how sleep quality predicts changes in beta-amyloid plaques across multiple timepoints. In doing so, we can measure how quickly this toxic protein accumulates in the brain over time, which can indicate the beginning of Alzheimer's disease," said Winer, the study's lead author and a PhD student in Walker's Center for Human Sleep Science at UC Berkeley.

In addition to predicting the time it is likely to take for the onset of Alzheimer's, the results reinforce the link between poor sleep and the disease, which is particularly critical in the face

of a tsunami of ageing baby boomers on the horizon. While previous studies have found that sleep cleanses the brain of beta-amyloid deposits, these new findings identify deep non-REM slow-wave sleep as the target of intervention against cognitive decline. And though genetic testing can predict one's inherent susceptibility to Alzheimer's, and blood tests offer a diagnostic tool, neither offers the potential for a lifestyle therapeutic intervention that sleep does, the researchers point out. "If deep, restorative sleep can slow down this disease, we should be making it a major priority," Winer said. "And if physicians know about this connection, they can ask their older patients about their sleep quality and suggest sleep as a prevention strategy."

The 32 healthy participants in their 60s, 70s and 80s who are enrolled in the sleep study are part of the Berkeley Aging Cohort Study headed by UC Berkeley public health professor William Jagust, also a co-author on this latest study. The study of healthy ageing was launched in 2005 with a grant from the National Institutes of Health.

For the experiment, each participant spent an eight-hour night of sleep in Walker's lab while undergoing polysomnography, a battery of tests that record brain waves, heart rate, blood-oxygen levels and other physiological measures of sleep quality.

Over the course of the multi-year study, the researchers periodically tracked the growth rate of the beta-amyloid protein in the participants' brains using positron emission tomography, or PET scans and compared the individuals' beta-amyloid levels to their sleep profiles.

Researchers focused on brain activity present during deep slow-wave sleep. They also assessed the study participants' sleep efficiency, which is defined as actual time spent asleep, as opposed to lying sleepless in bed.

The results supported their hypothesis that sleep quality is a biomarker and predictor of the disease down the road.

"We know there's a connection between people's sleep quality and what's going on in the brain, in terms of Alzheimer's disease. But what hasn't been tested before is whether your sleep right now predicts what's going to happen to you years later," Winer said. "And that's the question we had." And they got their answer "Measuring sleep effectively helps us travel into the future and estimate where your amyloid buildup will be," Walker said.

As for next steps, Walker and Winer are looking at how they can take the study participants who are at high risk of contracting Alzheimer's and implement methods that might boost the quality of their sleep.

"Our hope is that if we intervene, then in three or four years the buildup is no longer where we thought it would be because we improved their sleep," Winer said. "Indeed, if we can bend the arrow of Alzheimer's risk downward by improving sleep, it would be a significant and hopeful advance," Walker concluded.

COVID-19 antibodies

Study finds COVID-19 antibodies, virus can exist in children simultaneously (New Kerala: 2020907)

<https://www.newkerala.com/news/2020/158119.htm>

The COVID-19 virus and antibodies can coexist in young patients, finds Children's National Hospital researchers, who set out to improve the understanding of how long it takes paediatric patients with the virus to clear it from their systems and at what point they start to make antibodies that work against the coronavirus.

The study has been published in the Journal of Pediatrics.

"With most viruses, when you start to detect antibodies, you won't detect the virus anymore. But with COVID-19, we're seeing both," said Burak Bahar, M.D., lead author of the study and director of Laboratory Informatics at Children's National. "This means children still have the potential to transmit the virus even if antibodies are detected," added Bahar.

She adds that the next phase of research will be to test if the virus that is present alongside the antibodies can be transmitted to other people. It also remains unknown if antibodies correlate with immunity, and how long antibodies and potential protection from reinfection last.

The study also assessed the timing of viral clearance and immunologic response. It found the median time from viral positivity to negativity when the virus can no longer be detected, was 25 days. The median time to seropositivity, or the presence of antibodies in the blood, was 18 days, while the median time to reach adequate levels of neutralising antibodies was 36 days. Neutralizing antibodies are important in potentially protecting a person from re-infection of the same virus. This study used a retrospective analysis of 6,369 children tested for SARS-CoV-2, the virus that causes COVID-19, and 215 patients who underwent antibody testing at Children's National between March 13, 2020, and June 21, 2020.

Out of the 215 patients, 33 had co-testing for both the virus and antibodies during their disease course. Nine of the 33 showed the presence of antibodies in their blood while also later testing positive for the virus.

Also of note, researchers found patients 6 through 15 years old took a longer time to clear the virus (median of 32 days) compared to patients 16 through 22 years old (median of 18 days). Females in the 6-15 age group also took longer to clear the virus than males (median of 44 days for females compared to a median of 25.5 days for males).

Although there is emerging data regarding this timing in adults with COVID-19, there is far less data when it comes to the pediatric population. The findings being gathered by Children's National researchers and scientists around the world are critical to helping understand the unique impact on children and their role in viral transmission.

"The takeaway here is that we can't let our guard down just because a child has antibodies or is no longer showing symptoms. The continued role of good hygiene and social distancing remains critical," said Dr Bahar.

Constipation and Loose Motion Remedy (Navbharat Times: 2020907)

Constipation And Loose Motion Remedy: कब्ज हो या लूज मोशन, दोनों समस्याओं को दूर करता है यह सूखा मेवा

<https://navbharattimes.indiatimes.com/lifestyle/health/home-remedy-to-control-loose-motions-and-to-get-rid-off-constipation-in-hindi/articleshow/77971172.cms>

कोई कब्ज से परेशान रहता है तो किसी को बार-बार होनेवाले लूज मोशन ने परेशान कर रखा है। यहां जानें, इन दोनों ही समस्याओं से बचने का आसान तरीका...

chironji-1

यदि आप कब्ज की समस्या से जूझ रहे हैं, तब भी सेहत खराब होती है और लूज मोशन से जूझ रहे हैं तो कमजोरी से हालत खराब होती है। इन दोनों ही स्थितियों से बचने में चिरौंजी आपके लिए बहुत अधिक लाभकारी हो सकती है। बस आपको पता होना चाहिए कि किस समस्या में इस सूखे मेवे का उपयोग कैसे करना है...

कब्ज की समस्या से निजात दिलाए

-चिरौंजी एक ऐसा मेवा है, जो बहुत छोटे-छोटे दाल के दानों की तरह होता है। लेकिन ये दाने प्राकृतिक गुणों से भरपूर तेल से युक्त होते हैं। यही कारण है कि चिरौंजी खाने से कब्ज की समस्या में बहुत जल्दी लाभ मिलता है।

-क्योंकि चिरौंजी हमारे पाचनतंत्र में जमा गंदगी और विकारों को दूर करते हुए हमारी आंतों की अंदरूनी त्वचा की मरम्मत करती है और आंतों की आंतरिक दीवारों को चिकनाहट देती है। जिससे कब्ज की समस्या में राहत मिलती है।

Most Unhealthy Breakfast: नाश्ते में इन्हें बिल्कुल ना खाएं, सेहत के लिए सबसे खराब होते हैं ये 5 फूड

constipation

कब्ज से हमेशा के लिए राहत पाने का घरेलू तरीका

लूज मोशन (दस्त) दूर करने में कारगर

-चिरौंजी जहां कब्ज से राहत दिलाती है, वहीं इसका तेल दस्त यानी लूज मोशन की समस्या को दूर करने का एक प्रभावी उपाय है।

-यदि किसी को लूज मोशन की समस्या अक्सर रहती हो तो उसे चिरौंजी के तेल में बनी खिचड़ी, दलिया, ओट्स इत्यादि खिलाने चाहिए। इससे दस्त की समस्या तो दूर होगी ही। मोशन स्मूद होंगे और शारीरिक कमजोरी दूर होगी।

How To Control Uric Acid: यूरिक एसिड बढ़ गया है तो खाने में शामिल करें ये चीजें

आज के समय में चिरौंजी के लाभ

-फिलहाल हर तरफ केवल एक ही चिंता है कि कोरोना वायरस के संक्रमण से कैसे बचा जाए। तो आपको बता दें कि इस चिंता को दूर करने में भी चिरौंजी बहुत अधिक सहायक सिद्ध होगी। क्योंकि चिरौंजी हमारी रोग प्रतिरोधक क्षमता बढ़ाने का कार्य करती है।

milk-9

दस्त की समस्या से छुटकारा कैसे पाएं

-नियमित रूप से चिरौंजी का उपयोग किया जा सकता है। आप चिरौंजी को पीसकर दूध में मिलाकर उपयोग कर सकते हैं। ओट्स, दलिया, खीर या सब्जी में भी इसका उपयोग किया जा सकता है। यह शारीरिक कमजोरी दूर करने का एक सिद्ध उपाय है।

Herbal Oils To Prevent Mosquito Bites: ये 6 हर्बल ऑइल त्वचा के रोगों को दूर करते हैं और मच्छरों के काटने से बचाते हैं

विटमिन्स का खजाना

-चिरौंजी में विटमिन-बी1, विटमिन-बी2 और विटमिन-सी पाए जाते हैं। ये सभी विटमिन्स हमारी नसों को मजबूत करने, शरीर की रोग प्रतिरोधक क्षमता बढ़ाने और रक्त संचार को सुचारू रूप से बनाए रखने के लिए बहुत जरूरी होते हैं।

Pollution (Hindustan: 2020907)

https://epaper.livehindustan.com/imageview_298275_87493914_4_1_07-09-2020_3_i_1_sf.html

भारत में प्रदूषण से हर वर्ष 10 लाख मौत: डब्ल्यूएचओ

नई दिल्ली | विशेष संवाददाता

चिंताजनक

विश्व स्वास्थ्य संगठन के सार्वजनिक स्वास्थ्य, पर्यावरण और सामाजिक निर्धारण के निदेशक डॉ. मारिया नीरा ने कहा कि भारत में हर साल प्रदूषण से दस लाख से अधिक मौत होती हैं। डॉक्टर्स फॉर क्लीन एयर ऑनलाइन कॉन्क्लेव में उन्होंने यह बात कही। इसमें दो हजार डॉक्टरों ने शिरकत की।

नीरा ने कहा कि स्वास्थ्य पेशेवर के रूप में मैंने पहली बार देखा है कि वायु प्रदूषण हमारे शरीर, फेफड़ों और हमारे

- जीवाश्म ईंधन जलाने से हवा पर प्रतिकूल असर पड़ रहा
- वायु प्रदूषण हमारे शरीर, फेफड़ों और दिमाग पर असर डालता है

दिमाग पर कितना असर डालता है। उन्होंने कहा कि जीवाश्म ईंधन के जलने से उत्पन्न प्रदूषित हवा शरीर के लगभग सभी प्रमुख अंगों को प्रभावित करती है, जो दस लाख से ज्यादा भारतीयों की मौत का कारण बनती है।

Corona Infection

कोरोना संक्रमित मरीजों का दोबारा संक्रमित हो जाना महामारी से लड़ाई के लिए नई चुनौती (Dainik Gagan: 2020907)

<https://www.jagran.com/editorial/apnibaat-corona-infected-patients-become-infected-again-new-challenge-to-fight-epidemic-jagran-special-20718058.html>

कोरोना संक्रमित मरीजों का दोबारा संक्रमित हो जाना महामारी से लड़ाई के लिए नई चुनौती दोबारा संक्रमण का दौर चल निकला तो आइसोलेशन बेड आइस्यू और वेंटिलेटर्स की भारी कमी पड़ सकती है। यह महामारी पर काबू पाने की समयावधि को बढ़ा भी सकता है।

अनंत मित्तला तेलंगाना में कोरोना संक्रमण के दो मरीजों का स्वस्थ घोषित होने के बाद दोबारा संक्रमित हो जाना महामारी से लड़ाई के लिए नई चुनौती है। इससे पहले हांगकांग और चीन में भी कोविड के संक्रमण से स्वस्थ घोषित कुछ लोगों में दोबारा महामारी की छूत पकड़ में आई है। ऐसे में आर्थिक परेशानी का दंश डोल रहे भारत के लिए दोबारा संक्रमण की सूचना बेहद चिंताजनक है। इससे जहां हमारी इलाज संबंधी व्यवस्था लड़खड़ा सकती है, वहीं महामारी पर काबू पाने की समय-सीमा तथा अर्थव्यवस्था को उसके घातक असर से उबारने की तैयारियों पर गहरा असर पड़ेगा।

तेलंगाना के दो मरीजों के दोबारा संक्रमित होने के मामले में डॉक्टरों का अनुमान है कि पहली बार संक्रमण के बाद जिस व्यक्ति में पर्याप्त मात्र में एंटीबॉडीज यानी प्रतिरोधक विकसित नहीं हो पाते, वे दोबारा संक्रमित हो सकते हैं। इस बीच रोजाना 40,000 लोगों के टेस्ट को तैयार दिल्ली सरकार संक्रमण की दर करीब 3,000 प्रतिदिन होने के लिए पड़ोसी राज्यों को जिम्मेदार ठहरा रही है। उसके अनुसार दिल्ली के अस्पतालों में भर्ती महामारी संक्रमितों में एक-तिहाई बाहर के हैं।

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शिक्षा के क्षेत्र में समूचे देश के लिए नीतिगत दस्तावेज बनाने के बजाय जमीनी स्तर पर बदलावों की आवश्यकता शिक्षा के क्षेत्र में समूचे देश के लिए नीतिगत दस्तावेज बनाने के बजाय जमीनी स्तर पर बदलावों की आवश्यकता यह भी पढ़ें

हालांकि दिल्ली में नाबालिगों के सबसे ज्यादा संख्या में संक्रमित होने का तथ्य इन दलीलों पर पानी फेर रहा है। मुंबई के सीरो सर्वेक्षण में संक्रमण के निशान पर मध्य वर्ग को आंका गया है। दिल्ली का सीरो सर्वेक्षण 29 फीसद आबादी में एंटीबॉडी पैदा होने की बात कर रहा है, मगर उनमें सबसे अधिक 34.7 फीसद पांच से 17 साल के बच्चे हैं। बच्चे अब घर से बाहर खेलने जा रहे हैं, जिससे वे संक्रमित हो रहे हैं।

Coronavirus India News: कोरोना महामारी से डरने से ज्यादा लड़ने की जरूरत

Coronavirus India News: कोरोना महामारी से डरने से ज्यादा लड़ने की जरूरत

यह भी पढ़ें

देश में लोगों को दोबारा छूत लगने का सिलसिला शुरू होने से चिंता बढ़ना स्वाभाविक है। इससे हर्ड इम्युनिटी यानी सामुदायिक संक्रमण के जरिये बचाव के सिद्धांत पर भी सवाल उठ रहे हैं। हालांकि हर्ड इम्युनिटी विकसित होने के प्रमाण दिल्ली और मुंबई में सीरो सर्वेक्षण के दोनों दौर में स्पष्ट परिलक्षित हुए हैं, मगर इसके असर की नए सिरे से जांच करनी होगी।

यूपी में योगी सरकार की सोच और इच्छाशक्ति के बूते अयोध्या लिखेगी बदलाव की कहानी

यूपी में योगी सरकार की सोच और इच्छाशक्ति के बूते अयोध्या लिखेगी बदलाव की कहानी

यह भी पढ़ें

बहरहाल दोबारा संक्रमण के मामलों को विश्व स्वास्थ्य संगठन ने अत्यंत संवेदनशील बताया है। दोबारा संक्रमण फैलना भारत के लिए चिंताजनक इसलिए भी है, क्योंकि सात महीने लंबे महामारी काल में हम अब तक 4.8 करोड़ यानी करीब साढ़े चार फीसद आबादी का ही टेस्ट करा पाए हैं। महामारी से दुनिया में मारे जा चुके आठ लाख लोगों के मुकाबले हमारी मृत्यु दर वैश्विक औसत से कम (1.75 फीसद) है, पर दोबारा संक्रमण इसे कई गुना बढ़ा सकता है। भारत में विशाल आबादी व संकुचित बस्तियों के कारण लोगों से मास्क लगाने व दो गज की दूरी रखने पर अमल कराना मुश्किल हो रहा है, इसलिए स्वास्थ्य विशेषज्ञ महामारी के घटने का समय तय नहीं कर पा रहे।

जिन नेताओं ने अपनी पूरी जिंदगी कांग्रेस की सेवा में खपा दी, अब उनकी नीयत पर ही संदेह किया जा रहा है
जिन नेताओं ने अपनी पूरी जिंदगी कांग्रेस की सेवा में खपा दी, अब उनकी नीयत पर ही संदेह किया जा रहा है
यह भी पढ़ें

इंडियन काउंसिल फॉर मेडिकल रिसर्च के मुखिया डॉ. बलराम भार्गव का यह बयान कि भारत में गैर-जिम्मेदार लोग महामारी का प्रकोप बढ़ा रहे हैं, इसी बेचारगी का इजहार है। ऐसे में क्या हम मान लें कि अगले साल फरवरी में भारत में रोजाना करीब तीन लाख लोगों के संक्रमित होने की अमेरिकी संस्था एमआइटी की आशंका के फलीभूत होने के आसार हैं? एमआइटी ने उक्त आशंका भारत की आबादी, उपलब्ध स्वास्थ्य सुविधाओं, लोगों की आदतों और जुलाई में संक्रमण के स्वभाव के सम्मिलित विश्लेषण से लगाया है।

कृषि अवसंरचना कोष से ग्रामीण इलाकों में भंडारण सुविधाएं होंगी विकसित, उपज की रूकेगी बर्बादी
कृषि अवसंरचना कोष से ग्रामीण इलाकों में भंडारण सुविधाएं होंगी विकसित, उपज की रूकेगी बर्बादी
यह भी पढ़ें

विश्व स्वास्थ्य संगठन प्रमुख भी महामारी पर काबू पाने में दो साल लगने का अनुमान जता रहे हैं। दोबारा छूत के मामले आने से अनिश्चितता और बढ़ गई। दोबारा संक्रमण का दौर चल निकला तो आइसोलेशन बेड, आइसीयू और वेंटिलेटर्स की भारी कमी पड़ सकती है। यह महामारी पर काबू पाने की समयावधि को बढ़ा भी सकता है।