



DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY
Friday 20210108

Pfizer vaccine

Pfizer study suggests vaccine works against virus variant (The Tribune: 20210108)

<https://www.tribuneindia.com/news/health/pfizer-study-suggests-vaccine-works-against-virus-variant-195494>

New research suggests that Pfizer's COVID-19 vaccine can protect against a mutation found in two contagious variants of the coronavirus that erupted in Britain and South Africa.

Those variants are causing global concern. They both share a common mutation called N501Y, a slight alteration on one spot of the spike protein that coats the virus. That change is believed to be the reason they can spread so easily.

Most of the vaccines being rolled out around the world train the body to recognize that spike protein and fight it. Pfizer teamed with researchers from the University of Texas Medical Branch in Galveston for laboratory tests to see if the mutation affected its vaccine's ability to do so.

They used blood samples from 20 people who received the vaccine, made by Pfizer and its German partner BioNTech, during a large study of the shots.

Antibodies from those vaccine recipients successfully fended off the virus in lab dishes, according to the study posted late Thursday on an online site for researchers.

The study is preliminary and has not yet been reviewed by experts, a key step for medical research.

But “it was a very reassuring finding that at least this mutation, which was one of the ones people are most concerned about, does not seem to be a problem” for the vaccine, said Pfizer chief scientific officer Dr Philip Dormitzer.

Viruses constantly undergo minor changes as they spread from person to person. Scientists have used these slight modifications to track how the coronavirus has moved around the globe since it was first detected in China about a year ago.

British scientists have said the variant found in the UK – which has become the dominant type in parts of England -- still seemed to be susceptible to vaccines. That mutant has now been found in the US and numerous other countries.

But the variant first discovered in South Africa has an additional mutation that has scientists on edge, one named E484K.

The Pfizer study found that the vaccine appeared to work against 15 additional possible virus mutations, but E484K wasn't among those tested. Dormitzer said it is next on the list.

Dr Anthony Fauci, the top US infectious disease expert, recently said vaccines are designed to recognize multiple parts of the spike protein, making it unlikely a single mutation could be enough to block them. But scientists around the world are conducting research with different vaccines to find out.

Dormitzer said if the virus eventually mutates enough that the vaccine needs adjusting – much like flu shots are adjusted most years – that tweaking the recipe wouldn't be difficult for his company's shot and similar ones. The vaccine is made with a piece of the virus genetic code, simple to switch, although it's not clear what kind of additional testing regulators would require to make such a change.

Dormitzer said this was only the beginning “of ongoing monitoring of virus changes to see if any of them might impact on vaccine coverage.” AP

Alcoholism

Enjoying pleasurable effects of alcohol may lead to disorder (The Tribune: 20210108)

<https://www.tribuneindia.com/news/health/enjoying-pleasurable-effects-of-alcohol-may-lead-to-disorder-195088>

'Having higher sensitivity to the rewarding effects of alcohol in the brain puts such individuals at higher risk for developing an addiction'

Enjoying pleasurable effects of alcohol may lead to disorder

Do you find drinking alcohol pleasurable? If so, you are more likely to develop an alcohol use disorder (AUD), a new study suggests.

The findings, published in the American Journal of Psychiatry, indicate that individuals developing an AUD are more likely to be sensitised to the effects of alcohol—that is, they experience a stronger positive response—rather than habituated to the substance with a lower level of response.

“These pleasurable alcohol effects grow in intensity over time, and do not dissipate, in people progressing in excessive drinking,” said lead author Andrea King, Professor at the University of Chicago in the US.

“This tells us that having a higher sensitivity to the rewarding effects of alcohol in the brain puts such individuals at higher risk for developing an addiction,” King added.

For the study, the team followed a cohort of 190 young adults in a laboratory-based binge drinking scenario at three regular intervals over the course of 10 years. When retested on their responses 10 years later, those who became alcoholics had the highest levels of alcohol stimulation, liking and wanting - and these were heightened compared to their baseline with no signs of tolerance to these pleasurable effects.

The study showed that higher sensitivity to the euphoric and rewarding effects of alcohol can predict who will go on to have an AUD as they progress through their 20s and 30s. “Our results support a theory called incentive-sensitisation,” said King.

“In response to a standard intoxicating dose of alcohol in the laboratory, ratings of wanting more alcohol increased substantially over the decade among the individuals who developed more severe AUD. Additionally, the hedonic response—essentially, how much a person liked the effects—remained elevated over this interval and didn’t go down at all. This has traditionally been the crux of the lore of addiction—that addicts don’t like the drug (alcohol) but can’t stop using it,”

Food and Nutrition

Intermittent fasting new fad among millennial, young adults in India (The Tribune: 20210108)

<https://www.tribuneindia.com/news/health/intermittent-fasting-new-fad-among-millennial-young-adults-in-india-195054>



Intermittent fasting shows an effective result and can easily fit into anybody's lifestyle

Intermittent fasting new fad among millennial, young adults in India

Photo for representation only. Source: iStock.

The concept of fasting in India isn't new and has been practised for centuries. It is one of the preferred ways to rid the body of all toxins and now, more and more millennials and young adults are joining the league looking for a fit lifestyle, health experts said on Thursday.

The most famous technique of losing weight among the Indian millennial and young adults is intermittent fasting, embraced in style by Twitter CEO Jack Dorsey.

Intermittent fasting is an eating pattern that cycles between periods of fasting and eating. It doesn't specify which foods you should eat but rather when you should eat them.

It generally falls into two categories—daily time-restricted feeding, which narrows eating times to 6-8 hours per day, and so-called 5:2 intermittent fasting, in which people limit themselves to one moderate-sized meal two days each week.

"In India, it's a normal religious belief on doing fasting. People do fast for their God and goddesses and follow some diet regime. And nowadays few types of diets are coming like intermittent fasting which is based on proven science and facts and some trials," Namita Nadar, Head Nutritionist, Fortis Hospital, Noida told IANS.

Several studies have shown that intermittent fasting may improve blood sugar regulation, increase resistance to stress and suppress inflammation.

"Intermittent fasting could be part of a healthy lifestyle," said Mark Mattson, Neuroscientist at Johns Hopkins Medicine in the US, who has studied the health impact of intermittent fasting for 25 years, and adopted it himself about 20 years ago.

"Evidence is also mounting that intermittent fasting can modify risk factors associated with obesity and diabetes," Mattson added in a paper published in The New England Journal of Medicine.

According to experts, when we fast, there are several things that happen in our body on the cellular and molecular level.

Like, our body adjusts hormone levels to make stored body fat more accessible and our cells also initiate important repair processes and change the expression of genes. So, they suggest that intermittent fasting should be done under proper guidance.

"Intermittent fasting helps in weight loss, it lowers blood sugar, blood pressure and cholesterol too. But, at the same time, intermittent fasting needs to be followed under the supervision of a nutritionist," suggests Ritika Samaddar, Chief Clinical Nutritionist, Regional Head, Dept of Clinical Nutrition and Dietetics, Max Healthcare, Delhi.

Intermittent fasting shows an effective result and can easily fit into anybody's lifestyle.

It involves eating only during an eight-hour window and fasting for the remaining 16 hours.

"One can repeat this cycle as frequently as they would like to. One can start with once or twice per week to every day, depending on the nutritional needs and personal preferences," the experts informed.

However, there are some side effects too like nausea, headaches, insomnia, hunger and fatigue.

Kidney disease

Indian-origin medic explores gum and kidney disease link in UK study (The Tribune: 20210108)

<https://www.tribuneindia.com/news/health/indian-origin-medic-explores-gum-and-kidney-disease-link-in-uk-study-194607>

Periodontitis – or gum disease – is a common, inflammatory disease which causes bleeding gums

Indian-origin medic explores gum and kidney disease link in UK study

An imbalance of the body's oxygen producing free radicals and its antioxidant cells could be the reason why gum disease and chronic kidney disease affect each other, a new study by an Indian-origin medic in the UK has found.

Periodontitis – or gum disease – is a common, inflammatory disease which causes bleeding gums, wobbly or drifting teeth and can eventually result in tooth loss.

Previous studies have shown a link between the severe oral inflammation caused by gum disease and chronic kidney disease (CKD), which demonstrated that those with worse inflammation of the gums have worse kidney function.

In the latest study led by Dr Praveen Sharma at the University of Birmingham, over 700 patients with chronic kidney disease were examined using detailed oral and full-body examinations including blood samples.

The aim was to test the hypothesis that periodontal inflammation and kidney function affect each other and to establish the underlying mechanism that may facilitate this.

“This is the first paper to quantify the causal effect of periodontitis on kidney function and vice-versa as well as the first to elucidate the pathways involved,” said Sharma, from the Periodontal Research Group at the university’s School of Dentistry.

“It showed that even a modest reduction in gum inflammation can benefit renal function. Given the relative ease of achieving a 10 per cent reduction in gum inflammation, through simple measures like correct brushing techniques and cleaning between the teeth, these results are very interesting,” he said.

Previous research has also shown that patients with CKD and periodontitis experience a drop in survival rates, similar in magnitude to if they had diabetes instead of gum inflammation, suggesting that gum inflammation may casually affect kidney function.

Results from the new study showed that just a 10 per cent increase in gum inflammation reduces kidney function by 3 per cent. In this group of patients, a 3 per cent worsening in kidney function would translate to an increase in the risk of kidney failure over a five-year period from 32-34 per cent.

Results also showed that a 10 per cent reduction in kidney function increases periodontal inflammation by 25 per cent.

In contrast to current beliefs that inflammation is the link between periodontitis and other systemic diseases, researchers found for the first time, that in this group of patients, the effect was caused by a biological process called “oxidative stress” – or, an imbalance between reactive oxygen species and the body’s antioxidant capacity which damages tissues on a cellular level.

“We hope that this research paves the way for further studies to see if improvements in kidney function, following periodontal care, translate to longer, healthier life for patients with chronic kidney disease. We would also hope that the hypothesis we have identified could be tested in other groups,” said Dr Sharma.

His paper, “Oxidative stress links periodontal inflammation and renal function”, has been published in the ‘Journal of Clinical Periodontology’.

The research was led by the Periodontal Research Group at the University of Birmingham’s School of Dentistry, in collaboration with University Hospital Birmingham, Aston University,

Boston University and Swansea University and funding from the Oral and Dental Research Trust and Kidney Research UK lending support. — PTI

Delhi's vaccine drive

Delhi's vaccine drive likely to start early next week: Officials (Hindustan Times: 20210108)

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

Refrigerators to store Covid-19 vaccines being unloaded on Thursday at Rajiv Gandhi Super Speciality Hospital, the Capital's central storage facility. Amal KS/HT PHOTO

The immunisation of health care and frontline workers in the Capital is likely to begin by Wednesday, with the first batch of vaccines expected to arrive in the city soon, according to multiple senior officials from the Delhi government involved in the vaccination drive.

Once the doses are available, the government will need a day or two to figure out the cold chain and logistics to start rolling it out, the officials said. The districts have long-listed 55 government and 105 private hospitals, each with over 100 health care workers, to receive the initial roll-out.

This includes hospitals such as AIIMS, Safdarjung, Lok Nayak, GTB, and Hindu Rao, among others. The list of private hospitals includes Max, Fortis, Apollo, BL Kapur, and Gangaram, among others. Vaccine to all the centres will be supplied by the Delhi government and will be free for the beneficiaries.

The list will be finalised on Friday during the meeting of the state steering committee under the National Expert Group on Vaccine Administration for Covid-19 (Negvac).

“It was thought that the roll-out should begin in hospitals first, as immediate emergency care will be close at hand if there are any adverse events. From what we have seen in the US and the UK, some people had allergic reactions, fever, joint pains, and rashes. We need to be prepared for all eventualities as we still do not know how the Indian population will react to the vaccines,” said a senior district official who asked not to be named.

Once the logistics are in place, the roll-out will happen simultaneously across all the selected centres, he said.

“The vaccines should be with us by Monday or Tuesday, after which we will need a couple of days to figure out the cold chain and other logistics to get it from the stores to the sites. Once that happens, the vaccine drives will start across all the selected centres,” said a second Delhi government official.

Even as these preparations are in full swing, the Union government is yet to sign procurement orders with the vaccine manufacturers with some negotiations on costs and paperwork still pending, according to a senior Union health ministry official who asked not to be named. Once that happens -- expected this week, according to officials -- systems are in place for the vaccine transport to start in a day or two.

India's drugs controller on Sunday granted restricted emergency approval to two companies for their Covid-19 vaccines.

The first vaccine to become available in Delhi will likely be the Oxford-AstraZeneca vaccine, called Covishield in India, and manufactured by Pune's Serum Institute of India. The other vaccine that has been granted approval for "restricted use in emergency situations" is Bharat Biotech's Cavoxin.

The first batches of the vaccines will be kept at Delhi's central storage facility at Rajiv Gandhi Super Speciality hospital in Tahirpur. The facility has been prepared and security tightened in anticipation of the vaccine doses coming in. "The two-floor utility block in the hospital was earmarked as Delhi's central store. Around 90 deep freezers were installed in the block to store the vaccine at the required temperatures. And CCTV cameras have been installed throughout the building to ensure that the doses remain safe. The police have also been contacted to provide additional security when the vaccines arrive. The vaccines are like gold at the moment," said a third official from the Delhi government health department.

He explained the transportation plan. The vaccines will be sent from the central stores -- apart from the Rajiv Gandhi hospital, there is another one in Civil Lines -- to the respective district stores. From there, they will be transported to 621 cold chain points in the city. From here, the vaccines will be carried by five-member teams to the vaccination sites in ice packs. All the vaccine sites have also been fitted with units to store vaccines at the right temperature.

"Both the vaccines that have been approved by the drug controller have a 0.5 ml intramuscular dose. They are also stored in the same 2 to 8 degree Celsius. The vaccinators have already been trained for the same and no additional training is required," said Dr Suneela Garg, professor of community medicine at Maulana Azad Medical College who is a part of the state task force.

Several dry runs have been conducted across the city to prepare vaccine sites over the past week, and dry runs at four sites set to happen on Friday.

"After approval to the two vaccines, Delhi Government is making all the arrangements. The health care workers, frontline workers, and people over 50 years of age, or below with co-morbidity will be injected in the first phase of the roll-out. Delhi has 3 lakh health care workers, and 6 lakh frontline workers. The vaccine will be first rolled out to these 9 lakh people," Delhi's health minister Satyendar Jain said on Thursday.

He said that the government will start with 500-600 vaccination sites, and gradually scale them up to a 1,000.

There are at least 4.2 million people above the age of 50 years in the city, as per the electoral rolls, and a list of those under 50 with comorbidities is being prepared by the government, HT reported on Wednesday.

No bird flu cases

No bird flu cases in city yet, sample collection ordered to check spread (Hindustan Times: 20210108)

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

With at least four states across India reporting the spread of avian influenza or bird flu, Delhi on Thursday launched a large-scale sample collection drive to prevent its spread in the city-state even as wholesale rates of chicken dropped by ₹15-20 in a day, poultry traders said.

In neighbouring Gautam Budh Nagar, the divisional forest department on Thursday has restricted access to certain areas of Okhla Bird Sanctuary and closed the Surajpur wetland to visitors as a preventive measure.

Thousands of birds have died in Kerala (mostly poultry), Himachal Pradesh (migratory birds), and Rajasthan and Madhya Pradesh (crows) since the start of the outbreak in December-end.

Deputy chief minister Manish Sisodia, who is also Delhi's development and animal husbandry minister, held a meeting on Thursday to review the situation. Soon after the meeting, Sisodia put out a statement that Delhi has not reported a single case of bird flu so far.

“Doctors of all 48 veterinary hospitals of the government's animal husbandry unit are continuously monitoring the situation across Delhi. Also, 11 rapid response teams have been formed which have been asked to regularly collect samples. So far, more than 100 samples have been collected and sent to the designated lab in Jalandhar, Punjab. The report is expected on Monday,” Sisodia said after the meeting.

He directed officials to keep a close watch on poultry birds being brought in from neighbouring states, and instructed them to keep a close watch on migratory bird spots, poultry markets, water bodies, zoos and other potential hot spots.

The sites from where samples are being collected include Ghazipur fish and poultry market, Shakti Sthal lake, Sanjay lake, Bhalswa horseshoe lake, Delhi zoo, and smaller water bodies in parks.

Traders said after the Central government issued advisories to states on Wednesday regarding bird flu, the impact was seen on Thursday — a drop in sales which also resulted in a price drop of ₹15-20 for a kilogram.

“In just a single day, the wholesale price of a kilogram of chicken in Delhi has reduced from ₹90 to ₹70-75. The number of trucks arriving at Ghazipur market on Thursdays is about 80,

and today, too, around 76 trucks arrived at the market. But people have stopped buying chicken even though there is not a single case of bird flu in the city as of now,” said Iqbal Qureshi, general secretary of Ghazipur wholesale poultry association.

Traders said the price of chicken would fall further if bird flu cases start emerging in Delhi. They insisted that chicken sold in Delhi are “100% safe” as these birds undergo medical checks before being brought to the Ghazipur wholesale market.

Bird sanctuaries closed

The divisional forest department, Gautam Budh Nagar, on Thursday restricted access to certain areas of Okhla Bird Sanctuary and closed the Surajpur wetland for visitors as a preventive measure against bird flu. Forest department officials also held an inspection at the Okhla Bird Sanctuary to check for any unusual death of avifauna and later issued a caution against bird flu.

600 supervisors at vaccine

600 supervisors at vaccine points for dry run today (Hindustan Times: 20210108)

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

After two dry runs of the Covid-19 vaccination process over the past week at select health centres, Delhi, along with other states and union territories, will conduct a full-fledged mock drill in all its 11 districts on Friday.

Senior health officials said over 600 officials, comprising a mix of physicians and district officers, will be appointed as supervisors at vaccination centres.

“The chief district medical officers (CDMOs) have been made the nodal officers for the centres in their respective districts. Once the actual vaccination process begins, Delhi will start with about 621 session centres where the Covid-19 vaccines will be administered to registered beneficiaries after verification. Each centre will have a supervisor. In most districts, these supervisors are doctors; in a few, officers appointed by the district administration will oversee the process,” a health official said, on condition of anonymity.

Dr Suneela Garg, public health expert and professor of excellence at Maulana Azad Medical College, Delhi, said apart from checking the vaccination process, a major reason for conducting a dry run in all districts is to check the efficiency of the Co-WIN mobile application.

“During the dry run, there will be several queries from the medical teams who have been trained for the exercise. The idea is to clear all possible doubts, check for problems and resolve them over the next few days,” she said.

On Thursday, a day before all 11 districts were to undergo the dry run, the respective nodal officers notified the health care centres where the mock drill would be held on Friday.

In the south district, 10 vaccination sites will hold the dry run. These include AIIMS Ansari Nagar, Safdarjung hospital, Phoenix hospital in Greater Kailash, Centre for Sight in Safdarjung and Focus Imaging and Research Centre Private Limited, Green Park.

The south-east district identified at least 19 facilities which include Apollo hospitals, Metropolis Healthcare Limited, Fortis hospital, Batra hospital, Holy Family hospital, Escorts hospital, Moochand Khairaiti Ram hospital and so on.

The north-west district will hold the dry run at 12 health care facilities such as Max and Fortis hospitals, Shalimar Bagh, Saroj hospital and so on.

The New Delhi district will conduct the dry run at four locations --in the northern railway central hospital, Primus hospital, MCD school in Rangpuri which has been linked to a government maternity and child care centre in the area and Fortis Vasant Kunj.

The first dry run was conducted at three select health care centres of Delhi on Sunday, while the second dry run happened at around 66 sites on Wednesday.

The Delhi government said all these centres will also be vaccination centres when the final immunisation drive is rolled out.

Flu in full flight

Flu in full flight: On the avian flu outbreak (Hindustan Times: 20210108)

<https://www.thehindu.com/opinion/editorial/flu-in-full-flight-the-hindu-editorial-on-the-avian-flu-outbreak/article33523043.ece>

The avian flu must be stopped before sustained transmission among humans

Just three months after India declared itself to be free of the avian influenza outbreak, the highly pathogenic avian influenza subtypes, H5N1 and H5N8, have been reported from a dozen epicentres in four States — Rajasthan, Madhya Pradesh, Himachal Pradesh and Kerala. In addition, thousands of poultry birds have died in Haryana, while Jharkhand and Gujarat, too, have sounded an alarm; the cause in these three States is still unknown. The two subtypes have targeted different birds — crows in Rajasthan and Madhya Pradesh, migratory birds in Himachal Pradesh, and poultry in Kerala. While tests have confirmed H5N1 for causing the deaths of over 2,000 migratory birds in Himachal Pradesh, H5N8 has been identified for killing thousands of poultry in Kerala, and hundreds of crows in Rajasthan and Madhya Pradesh. In a bid to stop the spread, as on Wednesday over 69,000 birds, including ducks and chickens, were culled in Alappuzha and Kottayam as per India's 2015 National Avian Influenza Plan. Other

States have been asked to be vigilant of any unusual deaths or disease outbreak signs amongst birds, particularly migratory ones. Migratory birds have been largely responsible for long-distance transmission of the virus into India during winter. It then spreads through local movement of residential birds and poultry. Movement of men and material from poultry farms too has been a cause for further spread. This is why States have been asked to strengthen biosecurity of poultry farms, disinfection and proper disposal of dead birds. With backyard rearing of poultry birds common, the task of elimination will be particularly difficult.

A recent European Food Safety Authority report says 561 avian influenza detections were made between August-December in 15 European countries and the U.K. The virus was predominantly found in wild birds, and a few in poultry and captive birds. H5N1 and H5N8 were two of three subtypes found in Europe. Genetic analysis helped confirm the spread from Asia to west-central Europe, suggesting a “persistent circulation of this virus strain, likely in wild birds in Asia”. While avian influenza virus crossing the species barrier and directly infecting humans happens occasionally, human-to-human spread has been rare. But mutations or genetic reassortment of an avian influenza A virus and a human influenza A virus in a person can create a new influenza A virus that could likely result in sustained transmission between humans, thus increasing the risk of a pandemic influenza. Hence, all efforts should be directed at stamping out the outbreaks in the affected States. It is also important to undertake genome sequencing of virus samples to track the evolution of the virus.

Smoking

Stop smoking to reduce risk of Covid symptoms (New Kerala: 20210108)

<https://www.newkerala.com/news/2021/3972.htm>

You smoke, you are at an increased risk of catching Covid-19 symptoms than non-smokers, a new study suggests.

The findings, published in the journal Thorax, showed that smokers were 29 per cent more likely to report more than five symptoms associated with Covid-19.

And 50 per cent more likely to report more than ten, including loss of smell, skipping meals, diarrhoea, fatigue, confusion or muscle pain.

"Our results clearly show that smokers are at increased risk of suffering from a wider range of Covid-19 symptoms than non-smokers," said the lead researcher, Mario Falchi from the King's College London.

For the study, the team analysed data from an app. Of the participants of the app, 11 per cent were smokers. This is a lower proportion than the overall UK population of 14.7 per cent.

While more than a third of users reported not feeling physically well during the period of study, current smokers were 14 per cent more likely to develop the classic triad of symptoms suggesting diagnosis of Covid-19 -- fever, persistent cough and shortness of breath -- compared to non-smokers.

Current smokers were also more likely to have a higher symptom burden than non-smokers.

Additionally, current smokers who tested positive for Sars-CoV-2 were more than twice as likely as non-smokers to attend hospital.

The researchers recommended that a smoking cessation strategy be included as an element to address Covid-19, as smoking increased both the likelihood of symptomatic disease and disease severity.

Reduction in smoking rates could also reduce the health system burden from other smoking-related conditions that require hospitalisation.

Covid

Covid can increase risk of death among acute heart failure patients (New Kerala: 20210108)

<https://www.newkerala.com/news/2021/4154.htm>

Patients with acute heart failure nearly double their risk of dying if they get Covid-19, researchers, including one of Indian-origin, said emphasising the need for patients with heart failure to take extra precautions.

"Our results support prioritising heart failure patients for Covid-19 vaccination once it is available," said the lead researcher Amardeep Dastidar, Consultant Interventional Cardiologist at North Bristol NHS Trust and Bristol Heart Institute, UK.

"In the meantime, heart failure patients of all ages should be considered a high-risk group and be advised to maintain social distance and wear a face mask to prevent infection," he added.

Heart failure refers to progressive weakening of the heart's pump function with symptoms of breathlessness, ankle swelling and fatigue. Sudden and severe worsening of symptoms is called acute heart failure -- this is a medical emergency and requires admission to hospital for intravenous medication and intensive monitoring.

For the study, the team examined referral rates for acute heart failure during the pandemic and 30-day mortality. The analysis included 283 patients with acute heart failure. Two-thirds of the patients had chronic heart failure and presented with acute deterioration.

There was a substantial, but statistically non-significant, drop in admissions for acute heart failure during the pandemic.

A total of 164 patients were admitted in the eight weeks before-Covid compared to 119 patients after-Covid - a 27 per cent reduction. The 30-day mortality rate of patients with acute heart failure nearly doubled during the pandemic. Some 11 per cent of patients in the before-Covid group died within 30 days compared to 21 per cent of the after-Covid group.

"This may suggest a direct interaction or susceptibility to worse outcomes for acute heart failure patients with superimposed Covid infection," the researcher said. "It is noteworthy that our region had very low rates of Covid infection during the study and yet a connection with higher mortality was still apparent," he added.

Vitamin D deficiencies

Human migration patterns are connected to Vitamin D deficiencies: Study (New Kerala: 20210108)

<https://www.newkerala.com/news/2021/3790.htm>

A new study in the Oxford Economic Papers found that people's ability to synthesize Vitamin D from sunlight declines with skin pigmentation, and unveiled the direct association of its deficiency with a higher risk of mortality.

According to the study, the migration flows in the last 500 years from high sunlight regions to low sunlight regions influence contemporary health outcomes in destination countries.

The researchers here noted that Vitamin D deficiency can cause a higher risk of mortality, from illnesses including cardiovascular disease, type 1 and type 2 diabetes, hypertension, and certain cancers. Recent research even finds that Vitamin D affects the severity of COVID-19.

Researchers here focused on groups from high sunlight regions that migrated to low sunlight regions between 1500 and at present. The resulting population shifts caused the risk of Vitamin D deficiency to rise substantially. The researchers explored the aggregate health consequences of such migration over a long historical perspective.

Researchers here constructed a measure that peroxide the risk of Vitamin D deficiency in a given population. The measure tracked the difference between sunlight intensity in the ancestral place of residence of the population, as well as the actual level of sunlight intensity at the place of current residence.

Using the difference between ancestor and ambient sunlight as a measure of the potential risk of Vitamin D deficiency, researchers then examined its explanatory power in relation to life expectancy around the world. Researchers found that a greater risk of Vitamin D deficiency is negatively correlated with life expectancy, all else equal.

Researchers here noted that at present, there is widespread awareness of the harmful effects of excessive exposure to sunlight, which leads people to try to prevent sunburn through methods like sunscreen and limited outdoor exposure.

Effective treatments for skin cancer are also widely available. People also spend more time indoors than their prehistoric ancestors, which lowers their exposure to sunlight. Consequently, the risk of premature death due to excessive sun exposure has decreased since prehistoric times.

However, the lower exposure times to sunlight increases the risk of Vitamin D deficiency, particularly in people with higher skin pigmentation, whose ancestors came from high sunlight regions.

Ultimately the researchers here concluded that a migration-induced imbalance between the intensity of skin pigmentation and ambient sunlight can both relate and explain present-day global health differences. Low sunlight regions that have received substantial immigration from high sunlight regions experience lower life expectancy than would have been the case in the absence of such migration flows.

"This research is important because it is the first research to document a link between an increased risk of Vitamin D deficiency and differences in life expectancy across countries and regions. It thus serves to highlight the potentially huge benefit in terms of additional life years of taking Vitamin D supplements, particularly during the autumn and winter" said author Dr. Thomas Barnebeck Andersen.

Gut disease

Gut disease linked to brain injury in premature infants: Study (New Kerala: 20210108)

<https://www.newkerala.com/news/2021/3748.htm>

Physicians have long known that necrotizing enterocolitis (NEC), a potentially lethal inflammatory condition that destroys a premature infant's intestinal lining, is often connected to the development of severe brain injury in those infants who survive. However, the means by which the diseased intestine 'communicates' its devastation to the newborn brain has remained largely unknown.

Now, working with mice, researchers at Johns Hopkins Medicine and the University of Lausanne in Switzerland have identified that missing link -- an immune system cell that they

say travels from the gut to the brain and attacks cells rather than protect them as it normally does.

The team's findings have been published in the journal *Science Translational Medicine*.

Seen in as many as 12% of infants weighing less than 3.5 pounds at birth, NEC is a rapidly progressing gastrointestinal emergency in which bacteria invade the wall of the colon and cause inflammation that can ultimately destroy healthy tissue at the site. If enough cells become necrotic (die) so that a hole is created in the intestinal wall, bacteria can enter the bloodstream and cause life-threatening sepsis.

Researchers at Johns Hopkins Medicine and the Fred Hutchinson Cancer Research Center found that animals with NEC make a protein called toll-like receptor 4 (TLR4) that binds to bacteria in the gut and precipitates the intestinal destruction. They also determined that TLR4 simultaneously activates immune cells in the brain known as microglia, leading to white matter loss, brain injury, and diminished cognitive function.

For this study, the researchers speculated that CD4+ T lymphocytes -- immune system cells also known as helper T cells -- might be the link. CD4+ T cells get their 'helper' nickname because they help another type of immune cell called a B lymphocyte (or B cell) respond to surface proteins -- antigens -- on cells infected by foreign invaders such as bacteria or viruses.

Activated by the CD4+ T cells, immature B cells become either plasma cells that produce antibodies to mark the infected cells for disposal from the body or memory cells that remember the antigen's biochemistry for a faster response to future invasions.

CD4+ T cells also send out chemical messengers that bring another type of T cell -- known as a killer T cell -- to the area so that the targeted infected cells can be removed. However, if this activity occurs in the wrong place or at the wrong time, the signals may inadvertently direct the killer T cells to attack healthy cells instead.

In the first of a series of experiments, the researchers induced NEC in infant mice and then examined their brains. As expected, the tissues showed a significant increase in CD4+ T cells as well as higher levels of a protein associated with the increased microglial activity.

In a follow-up test, the researchers showed that mice with NEC had a weakened blood-brain barrier -- the biological wall that normally prevents bacteria, viruses, and other hazardous materials circulating in the bloodstream from reaching the central nervous system.

Next, the researchers determined that accumulating CD4+ T cells were the cause of the brain injury seen with NEC. They did this first by biologically blocking the movement of the helper T cells into the brain and then in a separate experiment, neutralizing the T cells by binding them to a specially designed antibody. In both cases, microglial activity was subdued, and white matter in the brain was preserved.

To further define the role of CD4⁺ T cells in brain injury, the researchers harvested T cells from the brains of mice with NEC and injected them into the brains of mice bred to lack both T and B lymphocytes. Compared with control mice that did not receive any T cells, the mice that did receive the lymphocytes had higher levels of the chemical signals which attract killer T cells.

The researchers then sought to better define how the accumulating CD4⁺ T cells were destroying white matter actually, a fat called myelin that covers and protects neurons in the brain and facilitates communication between them. To do this, they used organoids, mouse brain cells grown in the laboratory to simulate the entire brain. Brain-derived CD4⁺ T cells from mice with NEC were added to these laboratory "mini-brains" and then examined for several weeks.

After adding IFN-gamma alone to the organoids, the researchers saw the same increased levels of inflammation and reduction of myelin that they had seen in mice with NEC. When they added an IFN-gamma neutralizing antibody, cytokine production was significantly reduced, inflammation was curtailed, and white matter was partially restored.

The researchers concluded that IFN-gamma directs the process leading to NEC-related brain injury. Their finding was confirmed when an examination of brain tissues from mice with NEC revealed higher levels of IFN-gamma than in tissues from mice without the disease.

Next, the researchers investigated whether CD4⁺ T cells could migrate from the gut to the brain of mice with NEC. To do this, they obtained CD4⁺ T cells from the intestines of infant mice with and without NEC. Both types of cells were injected into the brains of infant mice in two groups -- one set that could produce the protein Rag1 and one that could not. Rag1-deficient mice do not have mature T or B lymphocytes.

The Rag1-deficient mice that received gut-derived helper T cells from mice with NEC showed the same characteristics of brain injury seen in the previous experiments. T cells from both mice with and without NEC did not cause brain injury in mice with Rag1, nor did T cells from mice without NEC in Rag1-deficient mice. This showed that the gut-derived helper T cells from mice with NEC were the only ones that could cause brain injury.

In a second test, gut-derived T cells from mice with and without NEC were injected into the peritoneum -- the membrane lining the abdominal cavity -- of Rag1-deficient mice. Only the intestinal T cells from mice with NEC led to brain injury.

This finding was confirmed by genetically sequencing the same portions from both the brain-derived and gut-derived T lymphocytes from mice with and without NEC. The sequences of the helper T cells from mice with NEC, on average, were 25% genetically similar while the ones from mice without NEC were only 2% alike.

In a final experiment, the researchers blocked IFN-gamma alone. Doing so provided significant protection against the development of brain injury in mice with severe NEC. This suggests, the researchers say, a therapeutic approach that could benefit premature infants with the condition.

Based on these findings, researchers said measures for preventing this type of brain injury, including therapies to block the action of INF-gamma, may be possible.

Flu (Hindustan: 20210108)

https://epaper.livehindustan.com/imageview_559284_86374450_4_1_08-01-2021_3_i_1_sf.html

दहशत: यूपी-गुजरात में बर्ड फ्लू की दस्तक, कई राज्य अलर्ट पर

नई दिल्ली | विशेष संवाददाता

केंद्र सरकार की ओर से जारी परामर्श के बीच गुरुवार को उत्तर प्रदेश व गुजरात में भी बर्ड फ्लू ने दस्तक दे दी। हालांकि, दिल्ली बर्ड फ्लू ने दस्तक नहीं दी है। अब तक सात राज्यों में यह बीमारी फैल चुकी है। चार ने इसकी पुष्टि कर दी है। केंद्र व राज्य सरकारें इसे लेकर पूरी तरह से सतर्क हैं।

यही स्थिति बनी रही तो इस महामारी के पूरे देश में फैलने का खतरा पैदा हो

राज्यों को परामर्श जारी

पशुपालन विभाग ने परामर्श में राज्यों से बर्ड फ्लू का प्रसार को रोकने के लिए कार्य योजना लागू करने को कहा है। पक्षियों की असामान्य मौत तुरंत सूचना भेजने को कहा है।

सकता है। इसके साथ ही बर्ड फ्लू से जुड़ी तमाम घटनाक्रमों पर निगरानी के लिए दिल्ली एनसीआर में एक नियंत्रण कक्ष स्थापित किया है। राजस्थान, मध्य

सतर्कता बरतने के निर्देश

दिल्ली में कई इलाकों में हाई अलर्ट जारी किया गया है। इनमें पुरानी दिल्ली के इलाके व गीता कॉलोनी, जाफराबाद, आदि शामिल हैं।

➤ जांच के बाद प्रवेश पेज 04

प्रदेश, हिमाचल प्रदेश, हरियाणा व केरल में बर्ड फ्लू संक्रमण की पुष्टि हो चुकी है।

➤ केंद्रीय टीम पहुंची पेज 14

Infection (Hindustan: 20210108)

https://epaper.livehindustan.com/imageview_559284_86367868_4_1_08-01-2021_3_i_1_sf.html

दावा: येल, वाशिंगटन और स्टैनफोर्ड विश्वविद्यालयों के वैज्ञानिकों ने कहा-यह बेहतर विकल्प

संक्रमण रोकने में टीके की एक खुराक भी कारगर

नई दिल्ली | हिन्दुस्तान ब्यूरो

कोरोना वैक्सीन की एक खुराक भी बड़े स्तर पर संक्रमण रोकने में कारगर हो सकती है। दुनिया के शीर्ष वैज्ञानिकों का मानना है कि सीमित आबादी को टीके की दो खुराक देने से बेहतर है कि एक खुराक वाली वैक्सीन देकर ज्यादा से ज्यादा लोगों को बचाया जाए।

लंबा वक्त लगेगा: येल, वाशिंगटन और स्टैनफोर्ड विश्वविद्यालय के वैज्ञानिकों के शोध के मुताबिक, वर्तमान में 90



फीसदी से अधिक प्रभाव वाले टीकों को आपात मंजूरी दी गई है, उनकी निश्चित अवधि में दो खुराक लेनी होगी। इसमें लंबा समय लगेगा।

वैज्ञानिकों की सलाह: शोध

इस तरह निकाला निष्कर्ष

ताउम्र प्रभाव देने वाली टीके की एक खुराक दी गई। इसका प्रभाव 55% था, जबकि 95% प्रभाव वाले अन्य टीकों की दो खुराक देने की जरूरत थी। वहीं, छह माह तक रोगों से प्रतिरक्षा देने वाले एक खुराक के टीके का प्रभाव 75% तक आका गया।

करने वाले वैज्ञानिकों ने सलाह दी कि 75 प्रतिशत प्रभाविकता वाली एक खुराक लोगों को दें। इस आधार पर ज्यादा आबादी वाले देश अपने यहां बड़ी आबादी को कम समय में

आज देशव्यापी पूर्वाभ्यास

कोरोना टीकाकरण की तैयारियों को लेकर शुक्रवार को देश भर में पूर्वाभ्यास किया जाएगा। स्वास्थ्य मंत्री डॉ. हर्षवर्धन ने गुरुवार को राज्यों के स्वास्थ्य मंत्रियों के साथ वरुंचुअल बैठक कर तैयारियों का जायजा लिया। **ब्योरा पेज 17**

टीका पहुंचा सकेगे। यह कदम संक्रमण से कुछ हद तक लोगों को प्रतिरक्षा देगा। यह अध्ययन एनलस ऑफ इंटरनल मेडिसिन जर्नल में प्रकाशित हुआ है।

Health Care Services Hindustan: 20210108)

https://epaper.livehindustan.com/imageview_559286_86583536_4_1_08-01-2021_5_i_1_sf.html

संकट : बकाया वेतन न मिलने से नर्सिंग-पैरामेडिकलकर्मि हड़ताल पर गए, दोनों अस्पतालों में मरीजों की परेशानी बढ़ी

हिंदूराव-राजनबाबू अस्पताल में नर्सिंग सेवा टप

नई दिल्ली | वरिष्ठ संवाददाता

उत्तरी दिल्ली नगर निगम के दो अस्पतालों हिंदूराव और राजनबाबू टीबी अस्पताल में नर्सिंग कर्मचारी और पैरामेडिकल कर्मचारियों ने गुरुवार को हड़ताल का ऐलान कर दिया। कर्मचारियों का कहना है कि कई महीनों से बकाया वेतन न मिलने से उन्हें यह कदम उठाने को मजबूर होना पड़ा है। हड़ताल से दोनों अस्पतालों में भर्ती मरीजों को परेशानी का सामना करना पड़ रहा है।

हड़ताल की घोषणा के बाद देर शाम को कुछ समय के लिए इमरजेंसी में नए मरीजों को भर्ती रोक दी गई थी। दिल्ली के सबसे बड़े टीबी अस्पताल राजनबाबू टीबी अस्पताल में कर्मचारियों ने मरीजों को हड़ताल का ऐलान होने की जानकारी देकर कहा कि अब वे या तो अपने घर चले जाएं या किसी दूसरे अस्पताल में जाकर इलाज कराएं।

मजबूरी में उठाया कदम : नाराज नर्स कर्मचारियों का कहना था कि लगातार वेतन न मिलने से वे बुरी तरह परेशान हो गए हैं। ऐसे में मजबूर होकर हड़ताल पर जाना पड़ रहा है। हिंदूराव अस्पताल की नर्सिंग यूनिट की



बकाया वेतन की मांग को लेकर नई दिल्ली में गुरुवार को प्रदर्शन करते तीनों नगर-निगमों के कर्मचारी। • एनबी

फेफड़े में पानी भर, मरीज गुहार लगाता रहा

राजन बाबू टीबी अस्पताल में भर्ती 32 वर्षीय मरीज सुधांत (बदला नाम) पल्मनरी एडिमा से पीड़ित है। तीन दिन पहले ही वे अस्पताल के न्यू पीसी वार्ड में भर्ती हुए हैं। गुरुवार को हड़ताल के ऐलान के बाद उन्हें कहा मीजुद कर्मचारियों ने घर जाने के लिए कहा जबकि मरीज की हालत गंभीर है। खबर लिखे जाने तक मरीज कर्मचारियों से उसे न निकालने की गुहार लगाता रहा। मामले की जानकारी मीडिया में आने पर अधिकारी बात करने से बचते रहे। अस्पताल के उप चिकित्सा अधीक्षक ने छुट्टी पर होने की बात कही वहीं चिकित्सा अधीक्षक ने फोन और मैसेज जा जवाब तक नहीं दिया।

ओर जारी पत्र में लिखा गया है कि सभी वार्डों, इमरजेंसी से नर्स कर्मचारियों ने

अपनी सेवाएं बंद कर दी हैं। गौरतलब है कि वेतन न मिलने से

इन कर्मियों को काफी परेशानी का सामना करना पड़ रहा है।

नगर निगमों के हजारों कर्मि भी हड़ताल पर गए

नई दिल्ली | प्रमुख संवाददाता

एक माह का वेतन शीघ्र जारी होगा : महापौर

दिल्ली की तीनों नगर निगमों की करीब 35 यूनिट के हजारों कर्मचारी वेतन की मांग को लेकर गुरुवार से अनिश्चितकालीन कामबंद हड़ताल पर चले गए। उपराज्यपाल आवास पर धरना देने जा रहे कर्मचारियों को पुलिस ने सिविल लाइंस जॉन के कार्यालय परिसर से आगे नहीं बढ़ने दिया। पुलिस ने 11 प्रदर्शनकारियों को हिरासत में लेकर देर शाम उन्हें छोड़ दिया।

तीनों निगमों की कनेक्ट्रेशन ऑफ एम्प्लोयी एम्प्लाइज यूनिट्स के वैनर तले तमाम यूनिट के पदाधिकारी य सदस्य सुबह नौ बजे से सिविल लाइंस जॉन के कार्यालय परिसर में जुटने लगे थे। करीब साढ़े दस बजे प्रदर्शनकारी नारेबाजी करते हुए उपराज्यपाल आवास की ओर बढ़ने लगे। लेकिन, निगम कार्यालय के मुख्य गेट पर पुलिसकर्मियों ने उन्हें रोक लिया। इसके बाद यूनिट

उत्तरी निगम के महापौर जयकाश ने सफाई कर्मचारियों के साथ वार्ता में हड़ताल पर न जाने की अपील की। उन्होंने एक माह का वेतन शुक्रवार तक जारी करने का आवास दिया। महापौर ने जब रात्रय विभाग के अधिकारी से मोबाइल पर पर बात कराई, तब कर्मचारी हड़ताल में शामिल न होने के लिए माने।

के नेताओं ने परिसर में ही प्रदर्शनकारियों को संबोधित किया और पांच माह से वेतन न मिलने की बात कही।

ज्ञापन सीपा: दोपहर में तीनों निगमों का प्रतिनिधिमंडल उपराज्यपाल अनिल बैजल के आवास पर पहुंचा। प्रतिनिधिमंडल ने वेतन, पेंशन, कर्षणामूलक आधार पर काम कर रहे कर्मचारियों को नियमित करने सहित अन्य मांगों को लेकर ज्ञापन सीपा।

https://epaper.livehindustan.com/imageview_559287_86353508_4_1_08-01-2021_6_i_1_sf.html

आज फिर परखी जाएगी टीकाकरण की तैयारी



नई दिल्ली | वरिष्ठ संवाददाता

दिल्ली में कोरोना टीकाकरण के पहले शुक्रवार को एक बार फिर बड़े पैमाने पर पूर्वाभ्यास जाएगा। दिल्ली के सभी 11 जिलों में लगभग 10-10 केंद्रों पर पूर्वाभ्यास होगा।

इस दौरान वैक्सीन के टीका केंद्र तक पहुंचने से लेकर मरीजों को दवाई

राज्य में 51 लाख लोगों को वैक्सीन मिलेगी

दिल्ली में सरकार की ओर से 51 लाख लोगों का रजिस्ट्रेशन किया गया है, जिन्हें पहले चरण में वैक्सीन लगाई जाएगी। पहले चरण में लगभग 13 लाख बुजुर्ग, 9 लाख स्वास्थ्यकर्मी और बाकी फ्रंट लाइन कार्यकर्ताओं को कोरोना का टीका लगाया जाएगा।

लगाने तक की व्यवस्था की जाएगी। दिल्ली सरकार के स्वास्थ्य विभाग की ओर से सभी केंद्रों की सूची जारी कर दी गई है। हर केंद्र पर पूरी टीम और सुरक्षा बलों को तैनात कर टीका लगाने की तैयारियों को परखा जाएगा।



हिन्दुस्तान हेल्पलाइन

- 1. हम 6 मई को अमेरिका से दिल्ली आएं, हमें यहां वैक्सीन कैसे मिलेगी ? - एचडी सिंह**
जवाब : आम लोगों के लिए अभी पंजीकरण शुरू नहीं हुआ है।
- 2. कोविन एप प्ले स्टोर पर कब आएगा? - सुरेंद्र कुमार वर्मा**
जवाब : इसके जल्द आने की उम्मीद है।
- 3. एक महीने पहले मुझे किडनी प्रत्यारोपण हुआ है। क्या मुझे वैक्सीन लगवाना चाहिए? - रोहित**

जवाब : प्रतिरोधक क्षमता कम होने से वैक्सीन का प्रभाव उम्मीद से कम हो सकता है। बावजूद इसके वैक्सीन लगवाना उचित रहेगा।

4. भारत बायोटेक की वैक्सीन का ट्रायल दो दिन पहले तक एम्स में चल रहा था। ऐसे में ट्रायल पूरा हुए बगैर क्या यह ठगी है? अंकिता
जवाब : यह सुरक्षित है और डरने की कोई बात नहीं है। एम्स में 80 से 85 साल के पूर्व डॉक्टरों ने भी परीक्षण में इसकी डोज ली है।

अगर आपके मन में टीके से संबंधित कोई सवाल है तो आप हमें helpdesk@hindustan.com पर ईमेल का सकते हैं।