



# DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY  
Tuesday 20201215

## Fresh national Covid cases

### **Fresh national Covid cases fall below 23,000 for first time in 5 months Recovery rate stands at over 95 per cent (The Tribune: 20201215)**

<https://www.tribuneindia.com/news/nation/fresh-national-covid-cases-fall-below-23-000-for-first-time-in-5-months-184614>

Fresh national Covid cases fall below 23,000 for first time in 5 months  
India's active Covid caseload stands at 3,39,820. Tribune file

India's daily Covid case count fell below 23,000 after a little over five months, while the national recovery rate stood at over 95 per cent, according to data updated by the Union Health Ministry on Tuesday.

The coronavirus caseload mounted to 99,06,165 with 22,065 infections being reported in a day, while the death toll rose to 1,43,709 with 354 new fatalities, the data updated at 8 am showed.

The number of people who have recuperated from the disease surged to 94,22,636 pushing the national recovery rate to 95.12 per cent, while the COVID-19 case fatality rate stands at 1.45 per cent.

The COVID-19 active caseload remained below four lakh for the eighth consecutive day.

There are 3,39,820 active coronavirus infections in the country which constitute 3.43 per cent of the total caseload, the data stated.

India's COVID-19 tally had crossed the 20-lakh mark on August 7; 30 lakh on August 23; 40 lakh on September 5. It went past 50 lakh on September 16; 60 lakh on September 28; 70 lakh on October 11; 80 lakh on October 29; and 90 lakh on November 20.

According to the Indian Council of Medical Research, 15,55,60,655 samples have been tested up to December 14, of which 9,93,665 were conducted on Monday.

The 354 new fatalities include 60 each from Delhi and Maharashtra, 43 from West Bengal, 24 from Kerala and 21 from Punjab.

The total 1,43,709 deaths reported so far in the country include 48,269 from Maharashtra, 11,954 from Karnataka, 11,909 from Tamil Nadu, 10,074 from Delhi, 9,100 from West Bengal, 8,083 from Uttar Pradesh, 7,059 from Andhra Pradesh, and 5,098 from Punjab.

The Health Ministry stressed that more than 70 per cent of the deaths occurred due to co-morbidities.

"Our figures are being reconciled with the Indian Council of Medical Research," the ministry said on its website, adding that state-wise distribution of figures is subject to further verification and reconciliation. PTI

## **Malnutrition**

### **Hunger study predicts 168,000 pandemic-linked child deaths 'An entire generation at stake' (The Tribune: 20201215)**

<https://www.tribuneindia.com/news/health/hunger-study-predicts-168-000-pandemic-linked-child-deaths-184257>

Economic fallout from the coronavirus pandemic has set back decades of progress against the most severe forms of malnutrition and is likely to kill 168,000 children before any global recovery takes hold, according to a study released Monday by 30 international organisations.

The study from the Standing Together for Nutrition Consortium draws on economic and nutrition data gathered this year as well as targeted phone surveys. Saskia Osendarp, who led the research, estimates an additional 11.9 million children — most in South Asia and sub-Saharan Africa — will suffer from stunting and wasting, the most severe forms of malnutrition.

Women who are pregnant now “will deliver children who are already malnourished at birth, and these children are disadvantaged from the very start,” said Osendarp, executive director of the Micronutrient Forum. “An entire generation is at stake.”

The fight against malnutrition had been an unheralded global success until the coronavirus pandemic struck.

“It may seem like it’s a problem that is always with us but the numbers were going down prior to COVID,” said Lawrence Haddad, executive director of the Global Alliance for Improved Nutrition.

“Ten years of progress eliminated in 9 to 10 months.” Before the pandemic, the number of stunted children declined globally each year, from 199.5 million in 2000 to 144 million in 2019.

The number of children suffering from wasting stood at 54 million in 2010 and had dropped to 47 million last year. It's expected to rise again to 2010 levels, according to the study.

The research was released at the start of a year-long effort to raise money against malnutrition.

Around USD 3 billion was announced, though some of that includes prior commitments. Pakistan, which has some of the world's most widespread malnutrition, pledged to spend USD 2.2 billion by 2025.

The consortium includes the World Bank, World Food Program, UNICEF and USAID as well as private health foundations and universities.

Haddad said the next step is holding governments accountable for their promises, especially those whose citizens suffer the most from malnutrition.

"A lot of hunger is about governance," he said. He added that the pandemic makes the benefits of nutrition clear, because malnutrition leaves the body vulnerable to all kinds of disease, including coronavirus. "Nutrition is everyone's best bet until the vaccine arrives." AP

## **COVID-19 vaccinations**

### **Canada's first COVID-19 vaccinations starting on Monday Country has so far reported 454,852 cases (The Tribune: 20201215)**

<https://www.tribuneindia.com/news/health/canadas-first-covid-19-vaccinations-starting-on-monday-184228>

Canada's first COVID-19 vaccinations starting on Monday  
UPS staff member checks Pfizer COVID-19 vaccines for shipping to Canada from the UPS Cologne Air Hub in Germany on December 11, 2020 in this image obtained from social media.  
Reuters

Canada's provinces of Quebec and Ontario are set to begin COVID-19 inoculations on Monday after some of the 30,000 doses of the Pfizer/BioNTech vaccine arrived over the weekend, making Canada one of the few Western nations to start vaccinations.

"The number of vaccinations that will take place today is probably pretty small," retired general Rick Hillier, who is in charge of Ontario's vaccine rollout, told the Canadian Broadcasting Corp. He said Toronto's University Health Network Hospital will be doing a "small number" on Monday.

The United States also could begin doling out doses of the vaccine on Monday after the UK started inoculations last week.

Prime Minister Justin Trudeau announced late on Sunday that a first batch had arrived.

Hard-hit Quebec is prioritising residents and staff in two care homes, a provincial Health Department spokeswoman said.

More than 80% of Canada's 13,350 pandemic deaths have been in such homes.

The vaccination campaign is set to begin on Monday, according to a statement from the province of Quebec.

Francine Dupuis, associate chief executive of the Montreal health network overseeing Maimonides Geriatric Center in Montreal, said if the vaccines arrive on schedule Monday morning, they "should be ready to go" at around 1 p.m. ET (1800 GMT) with the inoculations.

Maimonides saw 15 deaths in a recent outbreak, according to government data. Close to 300 of the facility's 327 residents should be vaccinated over the course of a week, depending on their health, said Lucie Tremblay, director of nursing for the network that manages Maimonides.

Several Maimonides residents welcomed the vaccine.

"It's an act of love to get vaccinated," said resident Rabbi Ronnie Cahana, speaking by Zoom. Cahana, who is a quadriplegic, said he was overjoyed to hear the vaccine was coming. "I was dancing up and down the halls, and I can't even walk." His daughter Kitra Cahana, who recently returned to Montreal from her home in the United States so she could be present if her father fell ill from COVID-19, said she hopes the vaccine ends her family's constant worry for his safety.

"I think it's hard to imagine the level of fear and worry that surrounds these homes," she said.

The first person to be vaccinated at the Centre d'hébergement Saint-Antoine in Quebec City, which has 229 residents, will be 89-year-old Gisèle Lévesque, according to a statement.

Canada's federal health authorities on Friday called for provinces to impose more restrictions as forecasts project the current second wave of the coronavirus will spread rapidly.

The country has so far reported 454,852 cases, with 6,011 new ones recorded on Saturday.

Maimonides resident Beverly Spanier said she hoped being inoculated would restore some of the freedoms lost during the pandemic.

AstraZeneca UK vaccine

**AstraZeneca UK vaccine trial drops sub-group with children: US trial register**

**A wide age spectrum in trials can help developers understand how their vaccines work in the larger population (The Tribune: 20201215)**

<https://www.tribuneindia.com/news/health/astrazeneca-uk-vaccine-trial-drops-sub-group-with-children-us-trial-register-184223>

AstraZeneca UK vaccine trial drops sub-group with children: US trial register  
AstraZeneca is developing the Covid-19 vaccine along with the University of Oxford. iStock

Drugmaker AstraZeneca has removed children from a mid-to-late stage trial of its COVID-19 vaccine in Britain, clinical trial registers in the United States showed on Monday.

The trial of more than 12,000 participants previously included children above the age of five with the consent of their parents. However, trial data under the US National Library of Medicine was updated on December 10 to remove the sub-group including children.

Other vaccine developers, including Pfizer, Johnson & Johnson and Moderna, are testing their hopefuls in children as young as 12 years to study how their vaccines work in a wider age group.

AstraZeneca, which is developing the vaccine along with the University of Oxford, did not immediately respond to a request for comment.

A wide age spectrum in trials can help developers understand how their vaccines work in the larger population, but the US Centers for Disease Control and Prevention said in October that kids might not be recommended for COVID-19 vaccination initially.

AstraZeneca's vaccine against the novel coronavirus produced a strong immune response in older adults, data published in November showed.

Once the frontrunner, AstraZeneca has now been overtaken by Pfizer and its German partner BioNTech as well as Moderna in the race to develop a COVID-19 vaccine. Reuters

## **First Covid vaccine in US**

### **New York nurse receives first Covid vaccine in US (Hindustan Times: 20201215)**

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

Nurse Sandra Lindsay being inoculated with the vaccine. REUTERS

: A nurse in New York became the first person in the United States to receive the coronavirus vaccine Monday.

Sandra Lindsay, a critical care nurse at the Long Island Jewish Medical Center, received the Pfizer-BioNTech shot live on television shortly before 9.30am (1430 GMT).

“First Vaccine Administered. Congratulations USA! Congratulations WORLD!” President Donald Trump tweeted.

Lindsay said the jab “didn’t feel any different from taking any other vaccine.”

“I feel great. I feel relieved,” she said. “I hope this marks the beginning of the end of the very painful time in our history.

“We’re in a pandemic so we all need to do our part,” Lindsay added. Governor Andrew Cuomo, watching the landmark moment via video-link, told Lindsay he hoped the vaccine would give her and other health care workers “a sense of security and safety.” P13

## **Covid-19: What you need to know today (Hindustan Times: 20201215)**

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

It’s been known for some time that Covid-19 affects people (or at least some people) the way autoimmune disorders do. Dispatch 140 on August 25 wrote about this, the challenges it posed, as well as the possible lines of treatment that became available if one were to respond to Covid-19 the way one would to other autoimmune disorders. Two recent papers, both from researchers at the Yale School of Medicine, shed more light on this. I was pointed in the direction of one by my colleague Binayak Dasgupta, who has made it his mission in recent months to keep track of the latest research on Covid-19, and then correspond with the authors to understand more; he is my go-to person in the newsroom when I want to discuss the science of just about anything to do with the viral infection – from testing to trajectory to vaccines. The other showed up on my radar. Both papers are pre-prints on medRxiv, and not peer-reviewed.

The first paper, titled “Diverse Functional Autoantibodies in patients with Covid-19”, is by Eric Y Wang, Tianyang Mao, Akiko Iwasaki, and others. Several autoimmune diseases are caused by autoantibodies, essentially antibodies that attack the host’s own organs and cells. These autoantibodies target self-antigens, proteins produced by the body as it goes about its normal activities or because of an infection. And when they target these, they also target the underlying cells, tissues or organs. The presence of autoantibodies, and the role played by them could explain why, in the case of some patients, Covid-19 targets several organs and systems (including the immune system), often with fatal consequences. This is what the researchers studied. Using a method called Rapid Extracellular Antigen Profiling, the researchers checked for autoantibodies in 194 Covid-19 patients. They found that “Covid-19 patients exhibit dramatic increases in autoantibody reactivities” when compared to uninfected people in the study, and that these autoantibodies “target a wide range of immune-related proteins”. They also found, using a mouse model (tests on mice) that “immune-targeting antibodies exacerbate

disease severity” and that the presence of autoantibodies that target “tissue-associated antigens” have a correlation with the severity of the disease.

Why is this important? One, it points (like all good studies do) to further avenues of research – in this case, the role of autoantibodies in the severity of Covid-19 infections. And two, it also points to possible therapies (or, at least, to the direction in which these may be found).

The second paper, titled “Post-infectious Inflammatory Disease in MIS-C features elevated cytotoxicity signatures and autoreactivity that correlates with severity”, is by Anjali Ramaswamy, Nina N Brodsky, Carrie L Lucas, and others. The researchers studied 15 children with MIS-C (multisystem inflammatory syndrome in children), an autoimmune disorder that can cause many body organs to become inflamed, and which is related to Covid-19. The researchers explain that the syndrome typically manifests itself in young people “who had a mild or asymptomatic Sars-CoV-2 infection roughly 4-6 weeks prior”. Screening for autoantibodies and using other techniques, the researchers concluded that a “prior Sars-Cov-2 infection causes lasting immune alterations that set the stage for development of an acute and life-threatening” inflammation in some older children.

Understanding the autoimmune aspects of Covid-19 – and because of papers such as these two, we now know more about these than we previously did – can help identify and address MIS-C and other syndromes (initially, for instance, when the first cases of MIS-C emerged, doctors believed they were seeing manifestations of Kawasaki Disease). It also adds to what we know of long-Covid – which was among the first signs that, at least in some cases, Sars-CoV-2 has the same impact as autoimmune diseases.

We may have come up with vaccines that effectively prevent Covid-19, but we are still learning about the disease.

## **High blood pressure**

### **High blood pressure at any age, no matter how long you have it, may speed cognitive decline (New Kerala: 20201215)**

<https://www.newkerala.com/news/2020/216119.htm>

High blood pressure appears to accelerate a decline in cognitive performance in middle-aged and older adults, according to new research.

The research was published today in Hypertension, an American Heart Association journal.

Nearly half of American adults have high blood pressure or hypertension. Having high blood pressure is a risk factor for cognitive decline, which includes such things as memory, verbal fluency, attention and concentration. Blood pressure of 120 mmHg - 129 mmHg systolic (the top number in a reading) or higher is considered elevated. Systolic pressure above 130 mmHg, or diastolic pressure (the bottom number) of 80 mmHg or higher is considered hypertension.

"We initially anticipated that the negative effects of hypertension on cognitive function would be more critical when hypertension started at a younger age, however, our results show similar accelerated cognitive performance decline whether hypertension started in middle age or at older ages," said study author Sandhi M. Barreto, M.D., M.Sc., PhD, professor of medicine at the Universidade Federal de Minas Gerais in Belo Horizonte, Brazil.

"We also found that effectively treating high blood pressure at any age in adulthood could reduce or prevent this acceleration. Collectively, the findings suggest hypertension needs to be prevented, diagnosed and effectively treated in adults of any age to preserve cognitive function."

Barreto and colleagues analyzed findings from an existing study that included blood pressure and cognitive health information for more than 7,000 adults in Brazil, whose average age was about 59 years old at the study's start. The study participants were followed for an average of nearly 4 years; testing included analysis of memory, verbal fluency and executive function, which includes attention, concentration and other factors associated with thinking and reasoning.

Their analysis found

- Systolic blood pressure between 121 and 139 mmHg or diastolic blood pressure between 81 and 89 mmHg with no antihypertensive medication use was associated with accelerated cognitive performance decline among middle-aged and older individuals.

- The speed of decline in cognition happened regardless of hypertension duration, meaning high blood pressure for any length of time, even a short duration, might impact a person's speed of cognitive decline. Adults with uncontrolled hypertension tended to experience notably faster declines in memory and global cognitive function than adults who had controlled hypertension.

"In addition to other proven benefits of blood pressure control, our results highlight the importance of diagnosing and controlling hypertension in patients of any age to prevent or slow down cognitive decline," Barreto said. "Our results also reinforce the need to maintain lower blood pressure levels throughout life, since even prehypertension levels were associated with cognitive decline."

According to Barreto, some of the study's limitations are the relatively short follow-up period and that the participants self-reported the hypertension diagnosis at baseline.

"Although the participants of our study are adults from Brazil, we believe that our findings are applicable to other regions. Previous studies have shown that similar unhealthy behaviours and risk factors, including hypertension, are common in the development of cardiovascular diseases in different populations across the globe," Barreto said.

## **Nutritional problems**

### **Short-term episodes of diarrhea could lead to long-term nutritional problems, study claims (New Kerala: 20201215)**

<https://www.newkerala.com/news/2020/215503.htm>

A study published in proceedings of the National Academy of Sciences reveals that the toxin produced by the Escherichia coli (E. coli) bacterium which causes diarrhoea could lead to long-term nutritional problems.

Researchers at Washington University School of Medicine in St. Louis have discovered that a toxin which leads to recurrent of short-term diarrhoea episodes could have other effects on the human digestive tract as it changes gene expression in the cells that line the inside of the gut, inducing them to manufacture a protein that the bacterium then uses to attach to the intestinal wall.

Senior author James M. Fleckenstein, MD, a professor of medicine and of molecular microbiology said, "There's more than meets the eye with this toxin. It is basically changing the surface of the intestine to benefit itself, probably ultimately to the detriment of the host,"

According to Fleckenstein, decades ago, people worked out how the toxin causes diarrhoea, but until recently, nobody really had the tools to delve into what else this toxin might be doing.

We're trying to put together the pieces of the puzzle to find out how toxin-producing E. coli might be driving malnutrition and other ripple effects of diarrhoea," added Fleckenstein.

Fleckenstein and first author Alaullah Sheikh, PhD, a postdoctoral researcher, study enterotoxigenic E. coli (ETEC), a toxin-producing strain of E. coli that is a common cause of severe, watery diarrhoea.

The bacterium's so-called heat-labile toxin causes ion channels on intestinal cells to open, triggering an outpouring of water and electrolytes into the digestive tract that is called diarrhoea.

Worldwide, young children still develop diarrhoea an average of three times a year, with the youngest and poorest children bearing the brunt of the caseload and of the long-term health consequences, says study.

Fleckenstein and Sheikh speculated that ETEC's heat-labile toxin might be doing more than just causing acute diarrhoea and dehydration. If so, it might explain the link between ETEC and malnutrition, stunting and other problems.

To find other ways the toxin affects the gut, the researchers grew human intestinal cells in a dish and treated the cells with the toxin. They found that the toxin activates a set of genes

known as CEACAMs. One in particular -- CEACAM6 -- codes for a protein that is normally in cells of the small intestine at low levels.

Further experiments revealed that the toxin causes cells to produce more CEACAM6 protein, which the bacteria then uses to attach to intestinal cells and deliver even more toxin. Moreover, using intestinal biopsy specimens from people in Bangladesh infected with ETEC, the researchers showed that CEACAM6 expression increases in the small intestine during natural infection.

"This is one of the first pieces of evidence that ETEC can change the intestinal surface. We don't yet know how long that lasts and what that means for people who are infected, but it stands to reason that damage to this part of the body could affect the ability to absorb nutrients," added Sheikh.

Fleckenstein, Sheikh and colleagues are continuing to study the link between ETEC and malnutrition, stunting and other health consequences.

"We are trying in the lab to understand the role of ETEC and its toxins as they relate to non-diarrheal effects of ETEC infection, particularly in young children in developing countries," Fleckenstein said.

## **Immunotherapy drugs**

### **Immunotherapy drugs are riskier for treatment of cancer patients, study suggests (New Kerala: 20201215)**

<https://www.newkerala.com/news/2020/215477.htm>

: A study published in the European Heart Journal, found that the risks of heart problems in cancer patients are higher if they are treated with immunotherapy drugs, which can even lead to death from heart attack.

The researchers from Department of Cardiology at Herlev og Gentofte Hospital, Hellerup, Denmark revealed that the patients diagnosed with either lung cancer or malignant melanoma (a type of skin cancer), are treated with immune checkpoint inhibitors such as a programmed cell death-1 (PD1) inhibitors or cytotoxic T-lymphocyte-associated protein-4 (CTLA-4) inhibitors.

The lead researcher of the study, Dr Maria D'Souza, a medical doctor and postdoctoral research fellow and her colleagues found that one year after starting treatment with immune checkpoint inhibitors, nearly 10% of 743 lung cancer patients on PD1 inhibitors (either pembrolizumab or nivolumab) experienced some sort of heart problem, ranging from heart failure, irregular heartbeat (arrhythmia), inflammation of the heart (myocarditis or pericarditis) or heart-related death, such as a heart attack.

The researchers found that patients treated with immune checkpoint inhibitors had a higher risk of heart problems compared to those who were not being treated in this way. Within six months of starting treatment, patients with lung cancer on PD1 inhibitors had double the risk of heart problems; malignant melanoma patients had a 4.3-fold increased risk if they were being treated with PD1 inhibitors and a nearly five-fold risk if they were receiving the CTLA-4 inhibitor.

After six months, the risk of heart problems increased slightly for lung cancer patients receiving PD1 inhibitors to a 2.3-fold risk. However, the risk was not statistically significant for melanoma patients on PD1 and decreased slightly to a 3.5-fold risk for those receiving the CTLA-4 inhibitor.

Dr D'Souza said "We believe this is the first study of this size, based on nationwide data on hospital admissions and drug administrations, to investigate the risk of heart problems in lung and melanoma patients treated with immune checkpoint inhibitors."

According to doctors, they were able to quantify the one-year absolute risks of heart problems in patients with lung cancer treated with PD1 inhibitors and in patients with malignant melanoma treated with either PD1 or CTLA-4 inhibitors.

The findings claimed that the risks were higher than previously estimated by drug safety studies, "We also found that in comparison to patients who were not receiving immune checkpoint inhibitors, those who were being treated with them were at greater risk of heart problems," said Dr D'Souza.

The study's results showed that increased risk of heart problems continued beyond the initial six months.

"Although these drugs will have been tested rigorously in randomised controlled clinical trials before being approved for clinical use, they may still have an impact on organs, causing both common and very rare side effects. Large scale epidemiological studies like ours may contribute to our knowledge on this with more accurate estimates of how often these side effects occur when the drugs are used for clinical treatment," Dr D'Souza stated.

The researchers say they need to find out more about the side effects of immune checkpoint inhibitor treatment, and they have launched an observational clinical study of patients receiving these drugs in order to monitor heart function.

As this was an observational study, treatment with immune checkpoint inhibitors, factors such as age, sex and time, clinical factors with cancer was not randomised.

Another limitation was that the study was not able to analyse reliably the risk of blood vessel problems, such as stroke, because these can take longer to develop than the average follow-up time in the study (164-326 days).

In an accompanying editorial, Dr Tomas Neilan, director of the cardio-oncology program at Massachusetts General Hospital (Boston, USA), and colleagues "Longer-term steps include broadening collaborations with our oncology and pharmaceutical partners, and expanded clinical research efforts in parallel and based on innovative basic experimental insights. These and other steps are needed to move this study forward so we can improve cardiovascular outcomes among our cancer patients treated with an ICI."

## **Antiepileptic drug**

### **Consuming antiepileptic drug in ALS can reduce motor neuron excitability New Kerala: 20201215)**

<https://www.newkerala.com/news/2020/215463.htm>

A new study suggests that the antiepileptic drug ezogabine reduced pathologic excitability of cortical and spinal motor neuron cells that are early signs of clinical dysfunction in people with amyotrophic lateral sclerosis (ALS).

The study was conducted by the Neurological Clinical Research Institute of Massachusetts General Hospital (MGH).

In addition to providing a clearer understanding of motor neuron excitability as an important disease pathway for ALS, the multi-site study, published in JAMA Neurology, involves the first clinical investigation of ALS (also known as Lou Gehrig's disease) using a drug identified through an induced pluripotent stem cell (iPSC) model.

"The stem cell approach allowed us to capture the hyperexcitability of motor neurons -- a prominent disease phenotype -- and to then show ezogabine was able to reduce it in people with ALS," said lead author Brian Wainger, MD, PhD, of the Healey Center for ALS at MGH.

"Our findings could have important implications for the field of ALS research both by demonstrating the effect of ezogabine on excitability in people with the disease and by showing that the metrics of cortical and spinal motor neuron excitability may be used as drug biomarkers in multi-site clinical trials," added Wainger.

ALS is a progressive neurodegenerative disorder that leads to the death of neurons in the brain and spinal cord that control speech, swallowing and limb movements.

Named after the famous baseball player Lou Gehrig, who was diagnosed with the disease in 1939, there are around 20,000 people in the US with ALS, and another 5,000 newly diagnosed cases each year.

Currently, there are three approved drugs in the US for treating ALS, each with limited benefit, creating an urgent need for new therapies that could change the course of the fatal disease.

The MGH study of ezogabine was not designed to assess the long-term effects of the drug on the neurodegenerative disorder, but rather to unravel the biological processes that go awry and identify novel molecular targets for drug intervention.

To that end, the ten-week, phase 2 study of 65 participants with ALS at 12 US sites investigated the feasibility of using neuron excitability metrics as predictors of disease progression.

"We demonstrated for the first time that these neurophysiological assays can be effectively deployed across multiple study sites, which is important in trials of diseases like ALS where investigators rely on many sites for recruitment," said Wainger.

"That finding could be useful in evaluating other drugs to treat ALS, or even for other diseases where motor neuron metrics could serve as key biomarkers," added Wainger.

Ezogabine (also known as retigabine) had been previously approved by the US Food and Drug Administration (FDA) for treating epilepsy with a unique mechanism of action facilitating potassium channels in cell membranes that play a central role in controlling neuron excitability, particularly important in the control of seizures.

Researchers from MGH's Neurological Clinical Research Institute began evaluating the drug's potential in the context of ALS, using transcranial magnetic stimulation (TMS) and threshold tracking nerve conduction studies (TTNCS) to measure the effects of ezogabine on motor neuron excitability. They learned that ezogabine did indeed calm the excitability of motor neurons.

"Further studies are needed to determine if the longer treatment will sustain the effects of reduced excitability and, if so, whether that may slow disease progression," said Wainger.

"Through our study, we've hopefully established a new research paradigm for using iPSC-based in vitro models for identifying novel disease targets and compounds, and rapidly repurposing drugs for clinical trials," added Wainger.

### **Vaccine (Hindustan: 20201215)**

[https://epaper.livehindustan.com/imageview\\_513046\\_87277878\\_4\\_1\\_15-12-2020\\_3\\_i\\_1\\_sf.html](https://epaper.livehindustan.com/imageview_513046_87277878_4_1_15-12-2020_3_i_1_sf.html)

# टीका लगने के बाद 30 मिनट तक नजर रखेंगे स्वास्थ्यकर्मी

नई दिल्ली | एजेसी

कोरोना का टीका लगने के बाद 30 मिनट तक उस व्यक्ति पर स्वास्थ्यकर्मी नजर रखेंगे। एक दिन में प्रत्येक सत्र में सिर्फ 100 से 200 लोगों को ही टीका लगाया जाएगा। कोरोना टीकाकरण के लिए केंद्र की ओर से राज्यों को भेजी गई गाइडलाइन में यह बातें कही गई हैं।

दिशा-निर्देशों के मुताबिक, कोविड वैक्सीन इंटेलिजेस नेटवर्क (को-विन) प्रणाली का इस्तेमाल टीकाकरण के लिए सूचीबद्ध लाभार्थियों का पता लगाने में किया जाएगा। जहां पर टीकाकरण होगा, वहां एक समय में केवल एक व्यक्ति को

**पहला चरण:** 30 करोड़ टीके

पहले चरण में 30 करोड़ को टीका लगेगा। 'को-विन' पर स्व पंजीकरण के लिए वोटर आईडी, आधार, पासपोर्ट व डीएल, पेंशन दस्तावेज समेत 12 फोटो पहचान दस्तावेजों का इस्तेमाल होगा।

अनुमति होगी। प्राथमिकता में रखे गए पहले से पंजीकृत लोग ही मौजूद होंगे

यह भी कहा गया है कि वैक्सीन की शीशियों को सूरज की रोशनी से बचाकर रखने की व्यवस्था की जाएगी। टीका लगवाने वाला शख्स जब वहां पहुंच जाएगा तभी शीशी को खोला जाएगा।

➤ **प्रमाण पत्र मिलेगा पेज 07**