



DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DA
Wednesday 2020805

Pandemic

Don't get coronared! (The Tribune: 2020805)

<https://www.tribuneindia.com/news/health/dont-get-coronared-122364>

With pressure running high and temperature flaring up so easily in the time of Covid-19, it's important not to ruffle sentiments the wrong way

The pandemic has upped the fear and discomfort of being crowded together in an elevator or a superstore. When navigating through a crowded place one does naturally get thrown into panic. Heated arguments and brawls are becoming a common sight. Though the 'what if' mania puts one in an unfriendly zone, the answer, however, does not lie in reactive behaviour but in being proactive. It is just a matter of being mindfully alert.

Choose your words wisely

Any callous public behaviour can have serious repercussions. Politeness should rule right now, even when others aren't doing as they should. Assertiveness is the way. Remember, it's all about patience and kindness. Watch your tone when instructing others, and choose your words wisely. You can't be too polite, but do be firm with those without a mask or those not adhering to social distancing norms. Avoid giving guidance to others, unless someone is really haplessly seeking your help. People have more elevated negative thoughts and challenges, so avoid taking the risk of ruffling sentiments the wrong way.

Get organised

You can display controlled behaviour only when you feel safe yourself. These are the times when we need to be organised while stepping out of our homes. You could invest in a sturdy basket to carry your groceries. Washable gloves along with a homemade mask are the quintessential accessories. Make sure your mask is securely tied and does not keep slipping off and distracts you. If it does, you are bound to get flustered.

While in the queue

Quetiquette is an unthinkable attribute, to us as a community. Waiting patiently for our turn does not come too easily to us. Avoid any unnecessary delays with your transaction at the billing counter to shorten the wait for others. A combination of cash and digital exchange is a good idea. A quick revision of rules of using elevators and escalators is important. In the elevator, avoid using your foot to hit the button. This would certainly be un-elegant and unhygienic. Others around you would be offended. You could wear gloves that you could dispose or wash. Operating the button with your knuckle or elbow is doable, though a bit clumsy. Try and avoid talking in the elevator. Don't get into the elevator if it is overcrowded. This also meets your consideration for others who might be in more need of the elevator ride. Avoid using the hand rail of the stairs and escalators. If you need support, carry a walking stick which is steady and sturdy. If you are closer to the control panel of the elevator, make sure you do not allow people to lean over to press the button. Firmly but politely say that you would be too glad to help.

COVID-19: Disposed PPE

COVID-19: Disposed PPE could be turned into biofuel, say Indian scientists The Tribune: 2020805

<https://www.tribuneindia.com/news/health/covid-19-disposed-ppe-could-be-turned-into-biofuel-say-indian-scientists-122054>

COVID-19: Disposed PPE could be turned into biofuel, say Indian scientists
File photo for representation.

Indian scientists have suggested a method to convert the plastic used in personal protective equipment (PPE) into renewable liquid fuels, an advance that could help mitigate the problem of dumped PPE, currently being disposed of at unprecedented levels due to the COVID-19 pandemic.

According to the study, published in the journal *Biofuels*, billions of items of disposable PPE can be converted from its plastic state into biofuels using a high-temperature chemical process called pyrolysis.

Sapna Jain, lead author of the study from The University of Petroleum and Energy Studies in Dehradun, Uttarakhand, noted in a statement that the transformation into biocrude—a type of synthetic fuel—“will not just prevent the severe after-effects to humankind and the environment but also produce a source of energy”.

“Presently, the world is focusing to combat COVID-19, however, we can foresee the issues of economic crisis and ecological imbalance also. We have to prepare ourselves to meet the challenges which are forcefully imposed by the COVID-19 pandemic, so as to maintain sustainability,” Jain said.

She said the disposal of PPE is a concern owing to its material—non-woven polypropylene (plastic)—adding that these are being designed for single use followed by disposal.

According to the researchers, when these plastic materials are discharged into the environment they end up in landfill or oceans, as their natural degradation is difficult at ambient temperature.

“They need decades to decompose. Recycling these polymers requires both physical methods and chemical methods,” Jain said.

She said the proposed strategy is a suggestive measure addressing the anticipated problem of disposal of PPE.

In the study, the scientists explored the current policies around the disposal of PPEs, their polypropylene content, and the feasibility of converting them into biofuel.

They focused on the structure of polypropylene, its suitability for PPE, why it poses an environmental threat, and methods of recycling the plastic material.

Based on their analysis, the scientists call for the PPE waste to be converted into fuel using pyrolysis—a chemical process for breaking down plastic at high temperature between 300 to 400 degree Celsius for an hour without oxygen.

T cells

Standard methods to assess T cells in patients may help unravel COVID-19 mysteries, scientists say The Tribune: 2020805

<https://www.tribuneindia.com/news/health/standard-methods-to-assess-t-cells-in-patients-may-help-unravel-covid-19-mysteries-scientists-say-122026>

According to immunologist Satyajit Rath, CD4 T cell responses also contribute anti-viral functions as well as causing tissue and organ damage

Standard methods to assess T cells in patients may help unravel COVID-19 mysteries, scientists say

Since immunity against the novel coronavirus is contributed by both the antibodies and cells of the immune system, simpler, standardised lab tests to assess the T cell response in COVID-19 patients may help unravel more mysteries about the disease, scientists say.

Immunologist Satyajit Rath noted that the two major components of immunity specific for any infection are the T cell responses, and those mediated by the immune system’s B cells along with the antibody proteins they produce.

“Antibody responses are easier to measure, especially on a large scale, and they have traditionally been the protective components of vaccine-induced immunity. Therefore, they always tend to be focused upon, as is true in the ongoing pandemic as well,” Rath, from the National Institute of Immunology (NII) in New Delhi, told PTI.

T cell responses, he added, while also “very important”, are “technically much harder to study, particularly in human communities.”

According to Rath, a subset CD8 T cells provide a major anti-viral immune function which may have a substantive role to play, especially in people whose antibody responses turn out to be short-lived.

Daniel Altmann, Professor of Immunology at the University College London in the UK, agreed with Rath.

“One of the best indicators of the importance of T cell immunity comes from reports of people who have made full recovery from COVID-19 despite the complete absence of antibodies,” he told PTI.

Another subset of the T cells — called CD4 T cells — help the B cell-antibody response become more efficient and long-lived, Rath noted, adding that these must be examined in order to understand the efficiency and longevity of antibody responses.

According to the NII immunologist, CD4 T cell responses also contribute anti-viral functions as well as causing tissue and organ damage.

“So, CD8 T cell responses can kill virus-infected cells of the body and limit virus growth. But in the process, a lot of cells of the body end up dead, and this can lead to organs being unable to function well, and hence illness. CD4 T cell responses, too, can and do cause inflammation,” Rath said.

Virologist Upasana Ray also noted that both T cell immunity and antibodies are important.

She said while a subset of T cells, called cytotoxic T cells, help in eliminating virus infected cells, antibodies are key chemical mediators in neutralising the virus entry process into cells.

“Since we are more equipped with antibody testing, it is desirable to have reliable T cell testing kits. This might also help to monitor T cell subsets that have different functions in immune system,” Ray, Senior Scientist at the CSIR-Indian Institute of Chemical Biology told PTI.

Altmann added that T cell analysis may reveal how long-term COVID-19 immunity was generated.

“It’s looking clearer that while antibodies are important, the tests are rather transient as their levels wane very fast. By contrast, T cell testing may offer an answer, decades from infection,” he explained.

Ray emphasised that one of the important reasons to study T cells is their depletion observed in severe COVID-19 cases.

For instance, a recent study published in the journal *Cell* assessed blood samples of 17 acute and 24 recovered COVID-19 patients, and found that severe infection with the virus resulted in a reduction of T cell count, as well as their function.

“COVID-19 has been associated with both reduction as well as functional exhaustion of T cells,” Ray said, adding that their lowered levels could be in parallel with the severity of the disease.

Based on published studies, Ray said, markers for the exhaustion of T cells such as the molecules PD-1 and Tim-3 can be detected more in severe COVID-19 cases.

“More such studies in non-severe, severe, and recovered individuals might help to understand the complex regulatory framework of T cell number and function correlations. This might also open novel directions for targeting this disease based on T cell biology,” she said.

According to Ray, studies analysing the complexity of T cells in COVID-19 patients, and targeting T cell exhaustion pathways can provide valuable insights about the disease.

“We need to know the magnitudes of CD4 and CD8 T cell responses separately. We need to know the viral targets of these T cells. We need to know the associations of these various parameters with the extent and kinds of illness. We need to know how these T cell responses behave over time,” Rath added.

While both antibody and T cell-mediated immunity is important, Ray said researchers are more equipped with antibody testing than for T cells.

Immunologist A R Anand from the Vision Research Foundation in Chennai said the estimation of T cell immune response was much more difficult than determining neutralising antibody levels.

“T cell response, in general, is difficult to study. Most of the widely available tests only seem to say whether there has been T cell activation or not. But we need to know how many virus-specific T cells are there, which is tricky to measure,” he told PTI.

Rath agreed that there is a need to develop standardised tests to assess the T cell response in COVID-19 patients across the severity spectrum. While some existing kits have been developed for evaluating the CD4 T cell response to bacterial infections, he said COVID-19 may need assessment of CD8 T cell as well.

“These may be more difficult to develop as commercial tests. So multiple tests may well be needed, and they will all need much validation,” Rath added. PTI

Vaccine: Novel coronavirus

Hope for vaccine: Novel coronavirus strains show little variability, study finds (The Tribune: 2020805)

<https://www.tribuneindia.com/news/health/hope-for-vaccine-novel-coronavirus-strains-show-little-variability-study-finds-122011>

Hope for vaccine: Novel coronavirus strains show little variability, study finds
Photo for representation only.

In some "good news" for scientists working on a viable vaccine for COVID-19, a latest study has found that the SARS-CoV-2 virus behind the disease shows little variability, despite having at least six strains

Published in the journal *Frontiers in Microbiology*, the "most extensive" study ever carried out on SARS-CoV-2 sequencing drew from the analysis of 48,635 coronavirus genomes, which were isolated by researchers in labs all over the world.

The researchers at the University of Bologna in Italy mapped the spread and the mutations of the virus during its journey to all continents.

The findings show that the novel coronavirus presents little variability, approximately seven mutations per sample.

Common influenza has a variability rate that is more than double, the researchers said.

"The SARS-CoV-2 coronavirus is presumably already optimised to affect human beings, and this explains its low evolutionary change," said Federico Giorgi, a researcher at University of Bologna, and coordinator of the study.

"This means that the treatments we are developing, including a vaccine, might be effective against all the virus strains," Giorgi said.

The researchers noted that currently there are six strains of the novel coronavirus.

The original one is the L strain, that appeared in Wuhan in December 2019. Its first mutation - the S strain -- appeared at the beginning of 2020, while, since mid-January, we have had strains V and G, they said.

To date strain G is the most widespread: it mutated into strains GR and GH at the end of February, according to the researchers.

"Strain G and its related strains GR and GH are by far the most widespread, representing 74 per cent of all gene sequences we analysed," said Giorgi.

"They present four mutations, two of which are able to change the sequence of the RNA polymerase and Spike proteins of the virus. This characteristic probably facilitates the spread of the virus," he said.

Besides the six main coronavirus strains, researchers identified some infrequent mutations that, they said, are not worrying at the moment but should be monitored. PTI

Virus

Virus effect on students a catastrophe, may hurt decades of progress: UN (Hindustan Times: 2020805)

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

Guterres said education initiatives must target “those at greatest risk of being left behind,” including youngsters in crises, minorities, and the displaced and disabled
HT Correspondent & Agencies

United Nations secretary-general Antonio Guterres warned on Tuesday that the world faces a “generational catastrophe” because of school closures amid the coronavirus disease (Covid-19) pandemic and said that getting students safely back to the classroom must be “a top priority”.

Guterres said that as of mid-July, schools were closed in some 160 countries, affecting more than 1 billion students, while at least 40 million children have missed out on pre-school.

This came on top of more than 250 million children already being out of school before the pandemic and only a quarter of secondary school students in developing countries leaving with basic skills, he said in a video statement.

“Now we face a generational catastrophe that could waste untold human potential, undermine decades of progress, and exacerbate entrenched inequalities,” said Guterres as he launched a UN “Save our Future” campaign.

“Once local transmission of Covid-19 is under control, getting students back into schools and learning institutions as safely as possible must be a top priority,” he said. “Consultation with parents, carers, teachers and young people is fundamental.”

Educationist and former University Grants Commission (UGC) member Dr Inder Mohan Kapahy said: “Covid-19 pandemic has caused an unprecedented existential crisis in the whole world, particularly in the developing nations. In India alone, a minimum of 30 million school students are adversely affected. In poorer countries, schools provide not only education but also nutrients, food and life skills. A conservative estimate is that disruption in school education may continue for at least four months more.”

According to a global projection covering 180 countries by the UN education agency UNESCO and partner organisations, some 23.8 million additional children and youths from pre-primary school to university level are at risk of dropping out or not having access to school next year due to the pandemic's economic impact.

“We are at a defining moment for the world's children and young people,” Guterres said in a video message and a 26-page policy briefing. “The decisions that governments and partners take now will have lasting impact on hundreds of millions of young people, and on the development prospects of countries for decades to come.”

According to the policy briefing, “the unparalleled education disruption” from the pandemic is far from over and as many as 100 countries have not yet announced a date for schools to reopen.

Guterres called for action in four key areas, the first being reopening schools. “Once local transmission of Covid-19 is under control,” he said, “getting students back into schools and learning institutions as safely as possible must be a top priority.”

Guterres said increasing financing for education must be given priority. Before the pandemic, low- and middle-income countries faced an education funding gap of \$1.5 trillion annually, he said, and the gap in education financing globally could increase by 30% because of the pandemic.

The secretary-general said education initiatives must target “those at greatest risk of being left behind”, including youngsters in crises, minorities, and the displaced and disabled. And these initiatives should urgently seek to bridge the digital divide that has become even more evident during the Covid-19 crisis, he said.

On a positive note, Guterres said the pandemic is providing “a generational opportunity to reimagine education” and leap forward to systems that deliver quality education.

Ameeta Mulla Wattal, principal of Delhi's Springdales School, said: “There is no doubt this is one of the greatest human crises that has taken place. And its largest impact has been felt on children — regular students, more so children in rural areas across the world because they have absolutely no access to education. So there is no doubt an entire aspect of learning that will be affected by the pandemic because there are these ages of learning that will face a gap at different levels because of the pandemic, whether it is the foundation, primary, middle level or another level.”

Educationist Meeta Sengupta said that the “continuity of learning” is the first step for bringing back students to classrooms whenever the schools reopen.

“We need to start working as a community to create a mesh network of the internet to make it available to the poor. There should be measures to raise funds for digital devices and internet connection to enable children from poor families to continue learning at their homes. The continuity should not break because once students step out of learning; coming back is very difficult. The relationship between students and schools should be continued,” she said.

Findings from a National Statistical Office survey on social consumption on education, conducted in 2017-18, show that India's gross enrolment ratio was 99.2 between primary and middle school education level. It is the ratio of the number of persons currently enrolled in a

particular level of education to the number of persons in the corresponding official age group. For example, the ratio of 99.2 in primary to middle school level means for every 100 persons in the age group of 6 to 13 years, there are 99.2 students enrolled in Classes 1 to 8. To be sure, this does not mean nearly everyone in the age group of 6 to 13 years is enrolled in school because some of the students in Classes 1 to 8 would be students from other age groups, particularly above the age of 13, who enrol at a age higher than the one recommended.

Covid-19: What you need to know today (Hindustan Times: 2020805)

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

Children in some of the Germany's provinces returned to school this week, the first in Europe to do so. The schools are ensuring social distancing, hand hygiene, and proper ventilation, although masks are not mandatory in classrooms in some regions (they are in others, and are also mandatory in the corridors). Deutsche Welle reported that "schools are considered low-risk", citing research by doctors at the University Clinic of Leipzig that showed that "fewer than 20" of the 2,600 students and teachers tested showed Covid-19 antibodies, an indication of past infections. The cup-half-empty way of looking at that finding (which, this writer believes, is the best approach to dealing with Covid-19; prepare first, and then take what comes your way) would be that students and teachers are vulnerable to infection given the low immunity in the study group, but Germany's management of the pandemic, thus far, has been exemplary, so I will hold my criticism.

There can also be no arguing with the fact that children will have to return to schools sooner than later. On Tuesday, United Nation secretary general Antonio Guterres said the world could face "a generational catastrophe that could waste untold human potential, undermine decades of progress, and exacerbate entrenched inequalities". Guterres said a billion students across 160 countries have been affected and that the "decisions governments and partners now take will have lasting impact on hundreds of millions of young people, and the development prospects of countries for decades to come" (see front page). The UN chief's reference to decisions is clearly about the reopening of schools and colleges – something that has challenged policymakers around the world, including in India where online learning disadvantages those students who are already disadvantaged, amplifying the divide between them and others, which the country can ill-afford.

But the risks of opening too early are significant.

Israel, for instance, opened schools in May, only to see a wave of cases which set off the country's second wave of infections, and caused school closures (and mass quarantines). The country is now making plans to open in fall for the school year; like many other countries, Israel has decided that not opening schools this year is not an option.

Still, the experience of Israel comes up in any discussion on school openings; indeed, in education and government circles, the country's hasty reopening of schools has become a cautionary tale.

Like Israel, the Australian state of Victoria reopened schools only when it looked like it had the pandemic well under control, but after a resurgence of cases – not linked to the schools, but the sharing of a cigarette lighter among guards at a facility where international travellers were being quarantined – the state finally decided, late last week, to close most schools again.

What does science say? The most authoritative research on the subject is a paper published in JAMA Pediatrics by doctors from the infectious diseases and pediatrics departments of the Ann and Robert H Lurie Children’s Hospital, Chicago, and from the Northwestern University Feinberg School of Medicine, Chicago. The study found that very young children (younger than five years), with even mild infections, have more of the viral RNA of the Sars-CoV-2 virus which causes Covid-19 in their nasopharynx (the upper part of the pharynx, between the nose and the mouth) than “older children and adults”... and that while the “infectious virus” itself wasn’t measured “pediatric studies [have] reported a correlation between higher nucleic acid levels and the ability to culture infectious virus”.

The study concluded that “young children can potentially be important drivers” of the infection’s spread in the “general population”. The study, which covered 145 patients, comes with caveats associated with any study of this size, but it pretty much rules out day-care or school for very young children. And more research is needed on older children and their role as potential super spreaders.

Yet, as Guterres pointed out on Tuesday, the alternative isn’t acceptable.

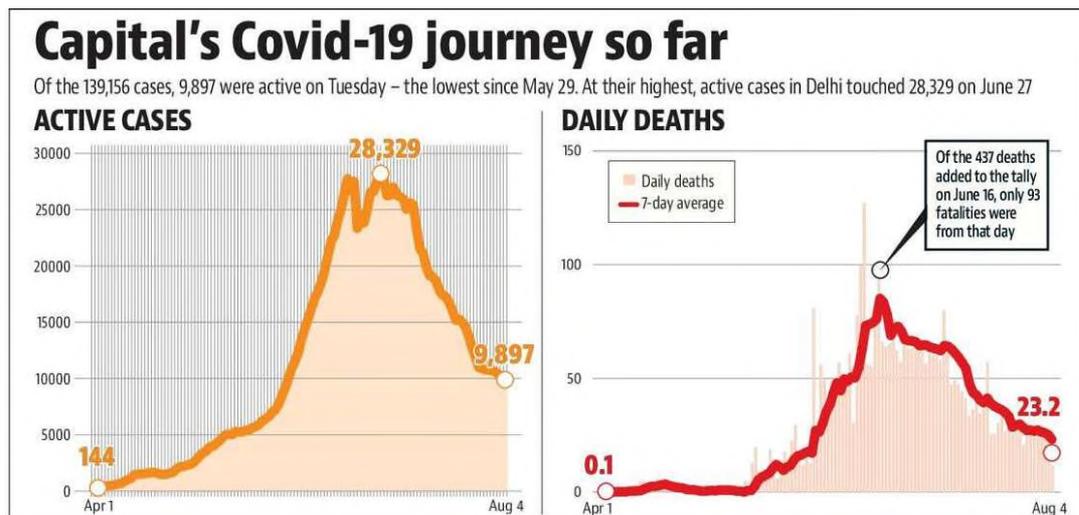
PS: India’s decision is made easier by the fact that Covid-19 cases are continuing to rise and spread across the country (India saw 1,852,668 cases cumulatively till Monday night, of which 584,674 were active), which pretty much rules out opening schools for now – although when the time comes to open them, it will be interesting to see how the country goes about it.

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Covid mode

month low; Kejriwal hails Delhi Covid model **LOW TESTING: Active cases drop below 10k after 67 days, but fewest tests since June 18; 12 deaths on Tuesday the lowest since May 27(Hindustan Times: 2020805)**

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



Active cases of the coronavirus disease (Covid-19) in Delhi dropped below the 10,000-mark for the first time in over two months on Tuesday, the same day that the number of daily deaths also touched a two-month low—two statistics that highlight the progress made by the Capital in its fight against the pandemic.

Delhi recorded 674 new Covid-19 cases on Tuesday, taking the total number of infections in the Capital to 139,156, according to the Delhi government's health bulletin. However, only 9,295 new tests were conducted in the day—the lowest number of daily tests in 47 days.

As of Tuesday, of the 139,156 total Covid-19 cases in Delhi, 9,897 were active. This was the first time since May 29 that active Covid-19 cases in Delhi dropped below 10,000. At their highest so far, active cases in Delhi touched 28,329 on June 27, but have been on a steady decline since.

Active cases—those still under treatment—is a crucial metric because it directly reflects the pressure on the health care system. It is calculated by subtracting the number of recovered patients and deaths from the total tally. "Active cases left in Delhi less than 10,000 today. Delhi is now at the 14th position in terms of active cases. No of deaths have come down to 12 today. I am proud of you, Delhiites. Your 'Delhi model' being discussed everywhere. But we should not get complacent and take all precautions," tweeted Delhi chief minister Arvind Kejriwal.

With 7.1% of its total caseload currently active, Delhi has the lowest number of active cases in the country. Across the country, active cases constitute 31.6% of all cases. The reducing number has also meant more free beds. "Since the number of active cases is low, the number of hospitalisations has also gone down," said Dr Suresh Kumar, medical director, Lok Nayak hospital.

On average, just over 2,900 patients have been admitted in hospitals over the last week.

DROP IN DAILY DEATHS

On Tuesday, 12 new deaths were reported in Delhi, taking the total number of fatalities due to Covid-19 to 4,033. This was the lowest number of daily deaths in Delhi in 70 days. Much like daily cases, new fatalities have been steadily declining in the Capital over the past month. In the week ending on August 4, 152 deaths were reported. This number was 191 for the week ending July 28 and 244 on the week ending July 21.

Delhi's biggest Covid-19 treatment facility—2,000 bed Lok Nayak hospital—has not recorded a single death for three days in a week. “The CM had tweeted when Lok Nayak hospital first reported no deaths on July 27. After that, no death was reported at the hospital for two more days. The number of deaths has reduced drastically; due to the availability of several treatment options,” said Dr Kumar.

The hospital had been reporting 10 to 15 deaths per day in June when Delhi had seen a surge in the number of cases and deaths due to Covid-19.

After the fifth consecutive day when daily testing dropped (it was 9,295 on Tuesday, 10,133 on Monday and 12,730 on Sunday, 18,154 on Saturday and 19,091 on Friday), the weekly average positivity rate of cases in the city has started rising again. In the week ending Tuesday, the city has a little over 15,000 tests a day, compared to nearly 18,000 the week before that.

Deputy chief minister Manish Sisodia said the low testing numbers were because of the long weekend which included Eid and Raksha Bandhan. “Testing will pick up [Wednesday] onwards,” he said.

The average positivity rate in Delhi had spiked to a point where nearly a third (31.4% on June 14) of all tests conducted were positive for Covid-19 around mid-June. Since then, this number has dropped almost daily, it touched a record low of 5.7% on July 30. However, after a week of relatively low testing, it has climbed to 6.7% for the week ending on Tuesday.

New Cases (The Asian Age: 2020805)

<http://onlinepaper.asianage.com/articledetailpage.aspx?id=15022634>

■ 674 fresh corona cases take city's tally to 1,39,156 Proud of Delhiites, says CM as active cases now less than 10K

AGE CORRESPONDENT
NEW DELHI, AUG. 4

The national capital has registered 675 new novel coronavirus cases in the last 24 hours, taking the tally to over 1.39 lakh while the death toll rose to 4,033 with 12 more deaths.

Chief minister Arvind Kejriwal tweeted, "Active cases left in Delhi less than 10,000 today. Delhi is now at 14th position in terms of active cases. No. of deaths have come down to 12 today. I am proud of you, Delhiites. Your 'Delhi Model' is being discussed everywhere. But we should not get complacent and take all precautions."

The three-figure count for the new Covid-19 cases was recorded for the second consecutive day when the total number of tests conducted was 9,295.

The number of active cases stood at 9,897. The total number of cases climbed to 1,39,156.

On Sunday, the daily case count had dipped to

LNJP records 'zero death' from Covid-19 on 2 days in a week

New Delhi, Aug. 4: LNJP Hospital, the Delhi government's biggest Covid treatment facility, did not report any death due to the disease on two days in a week, signalling improvement in the pandemic situation.

The 2,000-bed hospital's medical director Suresh Kumar said on Tuesday the number of people on ventilator at the facility has come down by nearly 25 per cent, compared to the figure a month ago.

Delhi chief minister Arvind Kejriwal tweeted on July 28 that LNJP Hospital had not reported any death on July 27, a feat, doctors said, recorded for the first time in the

961 and there were 15 deaths from the pathogen. On June 23, Delhi had reported the highest single-day spike of 3,947 cases till date.

South Korean ambassa-

last couple of months.

"After that day, on two more days, our hospital saw no death from Covid.... It is definitely a good sign for all of us who are fighting this situation," Mr Kumar told PTI.

Delhi recorded 805 fresh coronavirus cases on Monday, taking the tally in the city to over 1.38 lakh, while the death toll from the disease climbed to 4,021, authorities said.

Seventeen new fatalities were recorded, according to the Delhi health department bulletin released on Monday.

The active cases tally stood at 10,207, down from 10,356, on Sunday.

— PTI

dor H.E. Shin Bong-kil, on Tuesday, praised the Delhi Model of combating the Covid pandemic. Mr Kejriwal thanked the South Korean ambassador for his words of

appreciation on the Delhi model.

CM Kejriwal said he is happy that the Delhi model is being recognised across the globe and that all nations need to join hands to fight and defeat Covid-19.

In a video message, the South Korean ambassador said, "I am very impressed with the Delhi Model. Actually, Korean Model is 3T — test, trace, and treat. Delhi Model is test and home quarantine. It is a very effective and wise measure which has been made based on India's, particularly Delhi's, situation. I am very happy and I would like to congratulate the Delhi government that they made this achievement."

Thanking Mr Shin Bong-kil, CM Kejriwal tweeted, "Happy that our Delhi Model is being recognised across the globe. I want to thank South Korean ambassador H.E. Shin Bong-kil for his encouraging words. All nations coming together to defeat Covid is the need of the hour."

Blood test

Blood test can diagnose baby brain damage just hours after birth (New Kerala: 2020805)

<https://www.newkerala.com/news/2020/137878.htm>

Researchers, including one of Indian origin, have found that an early blood test could detect which babies deprived of oxygen at birth are at risk of serious neuro disabilities like cerebral palsy and epilepsy.

The prototype test looks for certain genes being switched on and off that are linked to long-term neurological issues. According to the study, published in the journal Scientific Reports, further investigation of these genes may provide new targets for treating brain damage before it becomes permanent.

"The results from blood tests will allow us to gain more insight into disease mechanisms that are responsible for brain injury and allow us to develop new therapeutic interventions or improve those which are already available," said senior author Sudhin Thayyil from the Imperial College London (ICL) in the UK.

The team behind the test, led by ICL, in collaboration with groups in India, Italy and the US, conducted the study in Indian hospitals, where there are around 0.5-1.0 million cases of birth asphyxia (oxygen deprivation) per year. Babies can suffer oxygen deprivation at birth for a number of reasons, including when the mother has too little oxygen in her blood, infection, or through complications with the umbilical cord during birth.

Following oxygen deprivation at birth, brain injury can develop over hours to months and affect different regions of the brain, resulting in a variety of potential neuro disabilities such as cerebral palsy, epilepsy, deafness or blindness. This makes it hard to determine which babies are most at risk of complications and to design interventions that can prevent the worst outcomes.

Now, in a preliminary study of 45 babies that experienced oxygen deprivation at birth, researchers have identified changes to a raft of genes in their blood that could identify those that go on to develop neuro disabilities.

The babies had their blood taken within six hours after birth and were followed up after 18 months to see which ones had developed neuro disabilities. The blood was examined with next-generation sequencing to determine any difference in gene expression - the 'switching on or off' of genes - between those babies that developed neuro disabilities and those that didn't.

The team found 855 genes were expressed differently between the two groups, with two showing the most significant difference. Examining these two genes in particular, and what processes their expression causes within cells, could lead to a deeper understanding of the causes of neuro disabilities prompted by oxygen deprivation, and potentially how to disrupt them, improving outcomes, the study said.

Health anxieties

Lockdown study reports surge in health anxieties around the world(New Kerala: 2020805)

<https://www.newkerala.com/news/2020/137825.htm>

London, Aug 4 : Coronavirus and the imposition of lockdown this year 'significantly raised' mental health challenges, particularly so for the most vulnerable groups, say researchers.

The study, published in the journal *American Psychologist*, draws on survey responses from over 800 people recruited online and via social media who answered questions over a ten-day period when the UK was in full lockdown.

Results suggest that a quarter of all participants revealed significantly elevated anxiety and depression, exacerbated by lockdown and isolation. Nearly 15 per cent reached clinical levels of health anxiety, which reflects that health-related anxiety has become distressing and is likely to be causing preoccupation and disruption to normal activities.

Health anxiety focusses on the fear of having or contracting a serious illness despite medical reassurance.

"The Covid-19 pandemic has caused global uncertainty which has had a direct, detrimental effect on so many people across the UK and around the world," said study lead author Hannah Rettie from the University of Bath in the UK. People have been unsure when they would see relatives again, job security has been rocked, there is an increased threat to many people's health and government guidance is continuously changing, leading to much uncertainty and anxiety.

"What our research focused in on is how some individuals have struggled to tolerate and adapt to these uncertainties - much more so than in normal times," Rettie said.

These results have important implications as we move to help people psychologically distressed by these challenging times in the weeks, months and years ahead.

Deeper analysis reveals that those in vulnerable groups report twice the rates of health-related anxiety than the general population. Those who identified themselves in these categories were on average more anxious and depressed, with anxiety and health anxiety specifically significantly higher than in non-vulnerable groups.

The findings showed that those who are in the vulnerable group are at risk both physically and psychologically. The average age of participants in the study was 38 years old, 22 per cent of whom had a pre-existing medical condition. The majority of respondents were female (80 per cent female 20 per cent male). The team who led the work hope their findings can help inform clinical practice in dealing with the mental health aftermath caused by these tumultuous past six months.

Meanwhile, another recent study, published in the journal *PLOS One*, revealed that Covid-19 pandemic is causing higher levels of depression, anxiety, suicidal tendencies and psychological trauma among adults.

Recently, Australian researchers also found rates of elevated psychological distress, including depression and anxiety symptoms, were found among adults during the peak of the Covid-19 outbreak in the country.

Artificial intelligence

Study finds artificial intelligence-enhanced ECGs may speed heart failure diagnosis, treatment (New Kerala: 2020805)

<https://www.newkerala.com/news/2020/137729.htm>

Washington D.C. , Aug 4: When people seek emergency care for shortness of breath, a routine electrocardiogram (ECG or EKG) enhanced by artificial intelligence (AI) is better than standard blood tests at determining if the cause is heart failure, according to new research.

The research was published in *Circulation Arrhythmia and Electrophysiology*, an American Heart Association journal.

"Determining why someone has shortness of breath is challenging for emergency department physicians, and this AI-enabled ECG provides a rapid and effective method to screen these patients for left ventricular systolic dysfunction," said Demilade Adedinsewo, M.D., M.P.H., lead author of the study and chief fellow in the division of cardiovascular medicine at Mayo Clinic in Jacksonville, Florida.

The left ventricle supplies most of the heart's pumping power, so it is larger than the other chambers and essential for normal function. In left ventricular systolic dysfunction (LVSD), the left ventricle is weakened and must work harder to maintain adequate blood flow to the body.

In a typical year, about 1.2 million people go to emergency departments because they are short of breath. This year, the numbers are far higher because difficulty breathing is one of the hallmark symptoms of a COVID-19 infection. When heart problems are suspected, patients in the emergency department usually have an ECG performed - a quick, 10-second recording of the heart's electrical activity.

"An abnormal ECG raises concern about underlying cardiac abnormalities but is not specific for heart failure," Adedinsewo said.

Emergency department physicians also rely on blood levels of natriuretic peptides. These biomarkers are elevated in the blood when heart failure is present. However, these biomarker levels are also affected by obesity, age, kidney disease, severe infection, high blood pressure in the vessels that bring blood to the lungs (pulmonary hypertension), abnormal heart rhythms and a specific heart failure medication.

To create the AI-enhanced ECG, Mayo Clinic researchers used data on thousands of patients to train computers to distinguish between the ECG patterns of people ultimately diagnosed with LVSD and those without LVSD. In about 10 seconds, standard ECG recordings can be analyzed with the resulting AI software application to identify likely LVSD.

In this study, researchers tested the accuracy of the AI-enhanced ECG to identify LVSD in emergency room patients with shortness of breath compared to the results of biomarker blood tests. They applied the AI-enhancement to the ECGs of 1,606 patients (average age 68, 47% female, 91% white) who had received an ECG and blood testing in the emergency department, later followed by definitive testing using an echocardiogram.

Researchers found

AI-enhanced ECG was better than standard blood tests in identifying which patients have severe LVSD (35% or less of blood in the heart pumped out with each contraction), with a performance measure of 0.89 vs. 0.80;

the AI-enhanced ECG was also good (performance measure 0.85) at identifying patients with less severe but abnormally low pumping ability (50% or less of the blood leaving the heart with each contraction); and

while several factors can influence blood test results, AI-enhanced ECG performed just as well in men and women and among patients in different age groups.

"AI-enhanced ECGs are quicker and outperform current standard-of-care tests. Our results suggest that high-risk cardiac patients can be identified quicker in the emergency department and provides an opportunity to link them early to appropriate cardiovascular care," Adedinsewo said.

AI-enhanced ECGs are not widely available. In May, the Food and Drug Administration granted emergency use authorization of the AI-enhanced ECG algorithm to screen for LVSD in people with confirmed or suspected COVID-19 disease.

The current study is limited by being a retrospective analysis of previous emergency department visits.

High altitude

Early to say high altitude can protect against Covid-19: Study (New Kerala: 2020805)

<https://www.newkerala.com/news/2020/137550.htm>

Despite recent reports of lower Covid-19 incidence among high-altitude populations, current data is insufficient to conclude that high altitude could protect against contracting the Coronavirus, say researchers.

"The reported lower incidence of Covid-19 among high-altitude residents is quite intriguing, but epidemiological observations presented so far from high-altitude regions are preliminary,"

said study researchers Matiram Pun from the University of Calgary and Erik Swenson from the University of Washington in the US.

According to the study, published in the journal *High Altitude Medicine and Biology*, there is currently little evidence supporting benefit of genetic or nongenomic adaptation to high-altitude hypoxia.

Environmental factors such as pollution, ambient temperature, humidity, and seasonal weather patterns at different latitudes may influence how severe the pandemic is and the incidence of infection in any part of the world.

In addition, recent epidemiological data have been used to propose that altitude of residence may not only influence those environmental features considered key to lesser viral transmission but also susceptibility to more severe forms of Covid-19 through hypoxic-hypobaric driven genomic or nongenomic adaptations specific to high-altitude populations.

In this review, the research team critically examined currently available scientific and epidemiological data pertaining to Covid-19 transmission in the attempt to determine whether living at high altitude and associated adaptations to hypobaric hypoxia might be protective as recent publications have claimed.

The researchers found that it is possible that early lockdown measures, media coverage, and preventive guidelines may have favourably worked in slowing the spread of the virus among high-altitude residents because the virus appeared later in mountainous regions.

Low population density, low traffic, or travel avoidance (from low-altitude population centres to high-altitude communities), and remoteness may have worked in tandem to further protect high-altitude residents.

It is also likely to take many days in some mountainous regions of developing countries to reach destinations, which may have provided sufficient isolation time in some cases.

However, cases of Covid-19 identified in the Qinghai-Tibet high-altitude plateau were related to contact with persons who had travelled from the Wuhan, the epicentre of Covid-19.

Aggressive implementation of preventive measures that target social isolation has helped to nullify sustained local transmission in Qinghai-Tibet high-altitude region, the team said.

Therefore, it might be easier to prevent community transmission at high altitude with travel restriction alone.

"The data regarding virus transmission should be carefully interpreted and any current observations regarding high altitude-related differences in incidence, prevalence, and morbidity/mortality of Covid-19 must be considered speculative," the authors wrote.

"We should avoid reaching the conclusion that any community has innate protection from Covid-19 in the absence of robust evidence," they concluded.

Antibiotic resistance

Children's National Hospital sounds alarm for antibiotic resistance in meningitis cases (New Kerala: 2020805)

<https://www.newkerala.com/news/2020/136987.htm>

: Researchers from the Children's National Hospital write in a case report that recent meningitis cases (inflammation of the membranes (meninges) surrounding the brain and spinal cord) at the hospital raises serious concerns about antibiotic resistance in the common bacterium that caused it.

Their findings could change laboratory and clinical practice across the US and potentially around the globe. The findings of the study were published in the Journal of the Pediatric Infectious Disease Society.

Neisseria meningitidis is the leading cause of bacterial meningitis in adolescents and an important cause of disease in younger children as well, say case report authors Gillian Taormina, DO, a third-year fellow in Pediatric Infectious Diseases at Children's National, who was on service for this recent case and Joseph Campos, Ph.D., D(ABMM), FAAM, director of the Microbiology Laboratory and the Infectious Diseases Molecular Diagnostics Laboratory at Children's National.

As standard clinical practice in the US, they explain, patients who are thought to have this infection are typically treated first with the broad-spectrum antibiotic ceftriaxone while they wait for a microbiology lab to identify the causative organism from blood or cerebrospinal fluid samples. Once the organism is identified as *N. meningitidis*, patients are typically treated with penicillin or ampicillin, antibiotics with a narrower spectrum of activity that's less likely to lead to ceftriaxone resistance. Family members and other close contacts are often prophylactically treated with an antibiotic called ciprofloxacin.

Because *N. meningitidis* has historically been sensitive to these antibiotics, most laboratories do not perform tests to confirm drug susceptibility, Dr Campos says. But the protocol at Children's National is to screen these isolates for penicillin and ampicillin resistance with a rapid 5-minute test. The isolate from Dr Taormina's five-month-old patient -- a previously healthy infant from Maryland who came to the Children's National emergency room after six days of fever and congestion -- yielded surprising results. *N. meningitidis* grown from the patient's blood was positive for beta-lactamase, an enzyme that destroys the active component in the family of antibiotics that includes penicillin and ampicillin. This isolate was also found resistant to ciprofloxacin.

"The lab used a rapid test and after just a few minutes, it was positive," Dr Campos says. "We did it again to make sure it was accurate, and the results were reproducible. That's when we knew we needed to share this finding with the public health authorities."

Dr Campos, Dr Taormina and their colleagues sent samples of the antibiotic-resistant bacteria first to Washington, Public Health Laboratory and the Maryland Department of Health and later to the Centers for Disease Control and Prevention (CDC). When the CDC asked other state laboratories to send their own *N. meningitidis* samples to be tested, 33 were positive for beta-lactamase. And like the bacterium isolated from Dr Taormina's patient, 11 of these were also resistant to ciprofloxacin.

"These bacteria wouldn't have been susceptible to the common antibiotics that we would normally use for this infection," Dr Taormina says, "so it's entirely possible that the infections caused by these bacteria could have been treated inappropriately if doctors used the standard protocol."

Dr Taormina says that her patient cleared his infection after staying on ceftriaxone, the original antibiotic he'd been prescribed, for the recommended seven days. His six family members and close contacts were prophylactically treated with rifampin instead of ciprofloxacin.

Although this case had a positive outcome, Dr Campos says it raises the alarm for other *N. meningitidis* infections in the US, where antibiotic resistance is a growing concern. The danger is even higher in other countries, where the vaccine that children in the US commonly receive for *N. meningitidis* at age 11 isn't available.

In the meantime, Drs. Taormina and Campos say their case highlights the need for the appropriate use of antibiotics, known as antibiotic stewardship, which is only possible with close partnerships between infectious disease doctors and microbiology laboratories.

"Our lab and the infectious diseases service at Children's National interact every day on cases like this to make sure we're doing the best job we can in diagnosing and managing infections," says Dr Campos. "We're a team."

Re-engineering antibodies

Re-engineering antibodies for COVID-19(New Kerala: 2020805)

<https://www.newkerala.com/news/2020/136848.htm>

With millions of COVID-19 cases reported across the globe, people are turning to antibody tests to find out whether they have been exposed to the coronavirus that causes the disease.

Antibody tests look for the presence of antibodies, which are specific proteins made in response to infections. Antibodies are disease specific. For example, measles antibodies will protect you from getting measles if you are exposed to it again, but they won't protect you from getting mumps if you are exposed to mumps.

"Antibodies are important because they prevent infection and heal patients affected by diseases," said Victor Padilla-Sanchez, a researcher at The Catholic University of America in Washington D.C.

"If we have antibodies, we are immune to disease, as long as they are in your system, you are protected. If you don't have antibodies, then infection proceeds and the pandemic continues," added Sanchez.

This form of foreign-antibody-based protection is called passive immunity -- short-term immunity provided when a person is given antibodies to a disease rather than producing these antibodies through their own immune system.

"We're at the initial steps of this now, and this is where I'm hoping my work might help," Padilla-Sanchez said.

Padilla-Sanchez specializes in viruses. Specifically, he uses computer models to understand the structure of viruses on the molecular level and uses this information to try to figure out how the virus functions.

Severe acute respiratory syndrome (SARS) was the first new infectious disease identified in the 21st century. This respiratory illness originated in the Guangdong province of China in November 2002. The World Health Organization identified this new coronavirus (SARS-CoV) as the agent that caused the outbreak.

Now we're in the middle of yet another new coronavirus (SARS-CoV-2), which emerged in Wuhan, China in 2019. COVID-19, the disease caused by SARS-CoV-2, has become a rapidly spreading pandemic that has reached most countries in the world. As of July 2020, COVID-19 has infected more than 15.5 million people worldwide with more than 630,000 deaths.

To date, there are not any vaccines or therapeutics to fight the illness.

Since both illnesses (SARS-CoV and SARS-CoV-2) share the same spike protein, the entry key that allows the virus into the human cells, Padilla-Sanchez's idea was to take the antibodies found in the first outbreak in 2002 -- 80R and m396 -- and reengineer them to fit the current COVID-19 virus.

A June 2020 study in the online journal, Research Ideas and Outcomes, describes efforts by Padilla-Sanchez to unravel this problem using computer simulation. He discovered that sequence differences prevent 80R and m396 from binding to COVID-19.

"Understanding why 80R and m396 did not bind to the SARS-CoV-2 spike protein could pave the way to engineering new antibodies that are effective," Padilla-Sanchez said. "Mutated versions of the 80r and m396 antibodies can be produced and administered as a therapeutic to fight the disease and prevent infection."

His docking experiments showed that amino acid substitutions in 80R and m396 should increase binding interactions between the antibodies and SARS-CoV-2, providing new antibodies to neutralize the virus.

"Now, I need to prove it in the lab," he said.

For his research, Padilla-Sanchez relied on supercomputing resources allocated through the Extreme Science and Engineering Discovery Environment (XSEDE). XSEDE is a single virtual system funded by the National Science Foundation used by scientists to interactively share computing resources, data, and expertise.

The XSEDE-allocated Stampede2 and Bridges systems at the Texas Advanced Computing Center (TACC) and Pittsburgh Supercomputer Center supported the docking experiments, macromolecular assemblies, and large-scale analysis and visualization.

"XSEDE resources were essential to this research," Padilla-Sanchez said.

He ran the docking experiments on Stampede2 using the Rosetta software suite, which includes algorithms for computational modeling and analysis of protein structures. The software virtually binds the proteins then provides a score for each binding experiment.

"If you find a good docking position, then you can recommend that this new, mutated antibody should go to production," said Sanchez.

TACC's Frontera supercomputer, the 8th most powerful supercomputer in the world and the fastest supercomputer on a university campus, also provided vital help to Padilla-Sanchez. He used the Chimera software on Frontera to generate extremely high-resolution visualizations. From there, he transferred the work to Bridges because of its large memory nodes.

"Frontera has great performance when importing a lot of big data. We're usually able to look at just protein interactions, but with Frontera and Bridges, we were able to study full infection processes in the computer," he said. Padilla-Sanchez's findings will be tested in a wet lab. Upon successful completion of that stage, his work can proceed to human trials.

Currently, various labs across the world are already testing vaccines.

"If we don't find a vaccine in the near term we still have passive immunity, which can prevent infection for several months as long as you have the antibodies," Padilla-Sanchez said. "Of course, a vaccine is the best outcome. However, passive immunity may be a fast track in providing relief for the pandemic," said Padilla-Sanchez.

Heart disease

Young women with polycystic ovary syndrome have higher risk of heart disease (New Kerala: 2020805)

<https://www.newkerala.com/news/2020/136772.htm>

Sophia Antipolis [France], August 3: Women in their 30s and 40s with a common condition affecting how the ovaries work are more likely to get heart disease suggests a new study.

The study has been published in the *European Journal of Preventive Cardiology*, a journal of the European Society of Cardiology (ESC).¹

"Polycystic ovary syndrome isn't a life sentence - there are many ways to stay heart healthy. Small changes add up, like eating more fruits and vegetables and doing more exercise," said study author Dr. Clare Oliver-Williams of the University of Cambridge, UK.

It is estimated that 6-20 percent of women of reproductive age have polycystic ovary syndrome (PCOS). Features of the condition include multiple cysts (fluid-filled sacs) on the ovaries, irregular periods, excess body hair or hair loss from the head due to high levels of male hormones, and difficulty becoming pregnant.

Women with PCOS are more likely to be overweight or obese, have diabetes, and have high blood pressure - all risk factors for heart disease and stroke.

This study examined whether this risky profile translates into a greater likelihood of developing cardiovascular disease - and, for the first time, whether that persists across the lifespan.

"Some PCOS symptoms are only present during the reproductive years, so it's possible that the raised chance of heart disease might disappear later in life," said Dr. Oliver-Williams.

The study included 60,574 women receiving treatment to help them get pregnant, such as in vitro fertilisation (IVF), from 1994 to 2015. Of those, 6,149 (10.2 percent) had PCOS. The researchers used medical records to follow the women for nine years. During that period, 2,925 (4.8 percent) women developed cardiovascular disease.

Overall, women with PCOS were at 19 percent higher risk of developing cardiovascular disease than women who did not have PCOS.

When divided into age groups, women with PCOS aged 50 and over did not have a higher risk of developing cardiovascular risk compared to their peers without PCOS.

Women in their 30s and 40s with PCOS were at greater risk of cardiovascular disease compared to those without PCOS. The evidence in those under 30 was less clear; this is likely because there were insufficient women of that age in the dataset to identify the risk.

"Heart health appears to be a particular problem for young women with PCOS. This may be because they are more likely to be overweight and have high blood pressure and diabetes compared to their peers," said Dr. Oliver-Williams.

"Previous studies have suggested that these differences diminish with age. In other words, as women without PCOS get older, they increasingly become overweight and develop high blood pressure and diabetes. In a negative sense, they catch up to their peers with PCOS," added Williams.

"PCOS can be a distressing condition. Not just because it can affect fertility. The physical effects can cause anxiety and depression. There's so much pressure on young women to achieve what we're told is the physical ideal. It takes age and time to embrace yourself and getting support from others is a vital step, so reach out if you need it," she added.

"Knowledge is power and being aware of the heart risks means women with PCOS can do something about it. Women with PCOS have been dealt a tough hand but this is about how these women play their cards. There are fantastic PCOS support groups where they can find out what has helped others with PCOS lose weight, get more exercise, and have a healthier diet," said Dr. Oliver-Williams.

She noted that the study only included Scandinavian women taking fertility treatment and caution is needed when extending the findings to other groups.

Alzheimer's disease

Renegade protein interrupts brain cell function in Alzheimer's disease, study reveals (New Kerala: 2020805)

<https://www.newkerala.com/news/2020/136604.htm>

Washington D.C. , August 2 : Dozens of molecules may tangle up with rogue bundles of tau, a protein that normally gives nerve fiber structure to cause brain cell damage that contributes to neurodegenerative diseases, according to a recent study.

Neuroscientists have previously found that tau can become toxic when extra chemical molecules accumulate with its structure in the brain, causing it to form tangles of protein that destroy surrounding tissue.

Led by researchers from NYU Grossman School of Medicine, the new study analysed the makeup of such tangles and found 12 proteins that they say have not before been tied to both tau and Alzheimer's disease.

They also uncovered several dozen other proteins that appear in the latest stages of the disease as well as in the earliest phases of dementia.

"Our findings expand our understanding of the molecular interactions that drive Alzheimer's and other brain-damaging diseases related to misbehaving tau proteins," says study co-lead author Eleanor Drummond, PhD, a research assistant professor in the Department of Neurology at NYU Langone Health.

"Now that we have better insight into possible 'key players' in neurodegeneration, we may have clearer targets for potential therapies," says co-lead author Geoffrey Pires, a doctoral student in neurology at NYU Langone.

An estimated 5 million Americans are living with Alzheimer's, a progressive disease that affects mostly those over 65 and interferes with memory, language, and decision making. Currently, there are no effective treatments or prevention strategies for Alzheimer's. Experts have long linked it to a buildup of extra phosphate molecules on tau proteins. However, how these tangles damage neurons and what other proteins are involved in the development of Alzheimer's signature bundles have been poorly understood, says Drummond.

The new study, publishing online in the journal *Brain*, provides what Drummond and her colleagues say is the largest overview to date of proteins present in these tau tangles.

For the investigation, the research team analysed donated brain tissue samples from 12 men and women with Alzheimer's disease. After separating the tau knots from the surrounding tissue, the researchers examined the bundles to identify the many proteins tangled within.

According to the findings, the tangles were composed of 542 different proteins in total, some of which are involved in essential processes within cells, such as energy production (vacuolar-ATPase subunit ATP6V0D1), the reading of genetic material (RNA binding protein HNRNPA1), and cell breakdown and digestion (PSMC 1 through 5). These results provide clues to how the tangles lead to neuron death, says Drummond.

"Alzheimer's has been studied for over a century, so it is eye-opening that we are still uncovering dozens of proteins that we had no idea are associated with the disease," says study senior author Thomas Wisniewski, MD, the Gerald J. and Dorothy R. Friedman Professor in the Department of Neurology at NYU Langone.

Wisniewski, also a professor in the departments of Pathology and Psychiatry at NYU Langone, plans next to investigate the newly identified proteins in tissue samples of people with other tau-linked neurodegenerative diseases, such as Pick's disease and chronic traumatic encephalopathy, as well as other forms of dementia.

COVID Patient (Hindustan 2020805)

https://epaper.livehindustan.com/imageview_234507_54071988_4_1_05-08-2020_5_i_1_sf.html

कोविड के सक्रिय मरीज दस हजार से कम हुए

सुकून

नई दिल्ली | वरिष्ठ संवाददाता

स्वास्थ्य विभाग की ओर से मंगलवार को जारी आंकड़ों के मुताबिक दिल्ली में अब 9897 कोरोना संक्रमित मरीज रह गए हैं। मंगलवार को 674 नए संक्रमण के मामले सामने आए, जबकि 972 मरीज स्वस्थ होकर अपने घर लौट गए। वहीं कोरोना से 12 लोगों की मौत हो गई। 12 मई के बाद मौत का यह आंकड़ा सबसे कम है।

दिल्ली में मंगवार तक कोरोना से 4033 लोगों की मौत हो चुकी है। जबकि कुल संक्रमित मरीजों की



सक्रिय केस के मामले में अब दिल्ली 14वें स्थान पर है। हर जगह दिल्ली मॉडल की चर्चा हो रही है, लेकिन हमें सभी सावधनियां बरतनी होंगी। -अरविंद केजरीवाल

संख्यया 139156 तक पहुंच चुकी है। वहीं 125226 मरीज स्वास्थ्य लाभ लेकर अपने घर लौट चुके हैं।

मंगलवार को 2954 संक्रमित विभिन्न कोरोना अस्पताल में भर्ती है। कोविड केयर सेंटर में 654 मरीज उपचार करवा रहे हैं और कोविड हेल्थ सेंटर में 154 लोग भर्ती हैं, जबकि 5461 संक्रमित लोगों को उनके घरों में उपचार के लिए रखा गया है।