



DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY
Tuesday 2020714

Covid-19 vaccine: Report

Russia 'first nation' to finish human trials for Covid-19 vaccine: Report (The Tribune: 2020714)

There was no information on commercial production of vaccine

<https://www.tribuneindia.com/news/health/russia-first-nation-to-finish-human-trials-for-covid-19-vaccine-report-112036>



Russia has become the first nation to complete clinical trials of Covid-19 vaccine on humans, and the results have proven the medication's effectiveness, the media reported on Sunday.

Chief researcher Elena Smolyarchuk, who heads the Center for Clinical Research on Medications at Sechenov University, told Russian news agency TASS on Sunday that the human trials for the vaccine have been completed at the university and they will be discharged soon.

“The research has been completed and it proved that the vaccine is safe. The volunteers will be discharged on July 15 and July 20,” Smolyarchuk was quoted as saying in the report.

There was, however, no further information on when this vaccine would enter commercial production stage.

Russia had allowed clinical trials of two forms of a potential Covid-19 vaccine developed by the Gamaleya National Research Center for Epidemiology and Microbiology on June 18.

The first vaccine, in the form of a solution for intramuscular administration, was carried out at the Burdenko Military Hospital.

Another vaccine, in the form of a powder for the preparation of a solution for intramuscular administration, was carried out at Sechenov First Moscow State Medical University.

The first stage of research on the vaccine at Sechenov University involved a group of 18 volunteers and the second group involved 20 volunteers.

After vaccination, all volunteers were expected to remain in isolation in a hospital for 28 days.

Earlier, results of the COVID-19 vaccine tests performed on a group of volunteers in Russia showed that they were developing immunity to the coronavirus.

“The data obtained by the Gamalei National Research Center for Epidemiology and Microbiology, proves that volunteers of the first and second groups are forming an immune response after injections of the vaccine against the coronavirus,” according to an earlier statement from the Russian Defense Ministry.

Russia has reported 719,449 cases and 11,188 deaths to date.

There are at least 21 vaccines currently under key trials, according to the World Health Organisation (WHO).

The overall number of global COVID-19 cases was nearing 12.7 million, while the deaths have increased to more than 564,000, according to Johns Hopkins University in the US.

As of Sunday morning, the total number of cases stood at 12,681,472, while the fatalities rose to 564,420.

The US accounted for the world’s highest number of infections and fatalities at 3,245,158 and 134,764. Brazil came in the second place with 1,839,850 infections and 71,469 deaths. — IANS

COVID biomedical waste- environmental challenge

COVID biomedical waste poses environmental challenge (The Tribune: 2020714)

<https://www.tribuneindia.com/news/health/covid-biomedical-waste-poses-environmental-challenge-112389>

Experts seek pro-active action from government, industry, stake-holders

COVID biomedical waste poses environmental challenge

The world is facing a new challenge in disposing masks, gloves and personal protective equipment amid the COVID-19 crisis.

Already fighting pollution created by single-use plastics and other non-biodegradable material, the world is facing a new challenge in disposing masks, gloves and personal protective equipment amid the COVID-19 crisis.

Environmentalists say PPEs, masks and gloves are mainly made of plastic and are neither biodegradable nor recyclable. Amid the ongoing health crises, they are creating an unexpected impact on the environment resulting in “a silent, invisible health hazard for a large number of people”

“The government needs to act now to ensure a green recovery that incentivises sustainability. Our health care governance and industry must also quickly respond, install toxic gas absorbing filters and take all necessary steps for safe disposal of the huge amounts of biomedical waste being generated,” says Soumya Dutta, an environmental expert.

Dutta says while health workers and frontline workers must be protected, in many places these are openly disposed of, threatening the spread of diseases to larger populations. Even in the case of “systematic disposal” most of these are being burned in incinerators, leading to the creation of two very toxic carcinogenic gases—Dioxin and Furan.

“Most of our hospital Incinerators do not have specialised filters to eliminate them. This is creating a silent, invisible health hazard for a large number of people living around these incinerators and might end up having cancer and other diseases in the years to come,” adds Dutta.

Meanwhile, according to Ramnath Vaidyanathan, General Manager (Sustainability) at Godrej Industries Limited, carelessly discarded PPEs can end up polluting land, rivers and oceans, adding to the glut of plastic waste already threatening the ecosystem. “It is imperative for the country to step up efforts to sensitise regarding proper handling of biomedical waste to protect the environment and reduce the threat of Covid-19,” he says.

Immune system

Understanding bat immune system may help identify new COVID-19 drug targets, scientists say (The Tribune: 2020714)

<https://www.tribuneindia.com/news/health/understanding-bat-immune-system-may-help-identify-new-covid-19-drug-targets-scientists-say-112360>

Bats have specific mechanisms which reduce the replication of viruses in their bodies, and also dampen their immune response to a virus.

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The capacity of bats to tolerate viruses such as the novel coronavirus may stem from their ability to control inflammation, according to a review of studies which says understanding the immune system of the flying mammals can provide new drug targets for human therapies against COVID-19.

Researchers, including those from the University of Rochester in the US, said while bats are the ancestral hosts to many deadly viruses affecting humans such as Ebola, rabies, and the novel coronavirus, SARS-CoV-2, the flying mammals themselves tolerate these pathogens without ill effects.

“Although humans experience adverse symptoms when afflicted with these pathogens, bats are remarkably able to tolerate viruses, and, additionally, live much longer than similar-sized land mammals,” they noted in a statement.

In the review research, published in the journal Cell Metabolism, the scientists assessed how the natural ability of bats to control inflammation may be contributing to their longevity and tendency to fight off diseases.

“With COVID-19, the inflammation goes haywire, and it may be the inflammatory response that is killing the patient, more so than the virus itself,” said study co-author Vera Gorbunova from the University of Rochester.

“The human immune system works like that—once we get infected, our body sounds an alarm and we develop a fever and inflammation,” Gorbunova explained.

She said the goal of this immune system response in humans is to kill the virus and fight infection, but added that it can also be a detrimental response as patients’ bodies overreact to the threat.

But unlike humans, the scientists said bats have specific mechanisms which reduce the replication of viruses in their bodies, and also dampen their immune response to a virus.

As a result, they said there is a beneficial balance in bats with their immune systems controlling viruses, and at the same time not mounting a strong inflammatory response.

According to the researchers, one of the factors for this ability may be driven by their flight.

Bats, being the only mammals that can fly, require that they adapt to rapid increases in body temperature, sudden surges in metabolism, and molecular damage, the scientists explained.

They said these adaptations may also assist in disease resistance.

The researchers said another factor contributing to the heightened immunity in bats may be due to their environment, where many species of the flying mammals live in dense colonies, and hang close together on cave ceilings or trees.

“Bats are constantly exposed to viruses. They are always flying out and bringing back something new to the cave or nest, and they transfer the virus because they live in such close proximity to each other,” said Andrei Seluanov, another co-author of the study.

Because bats are constantly exposed to viruses, the scientists believe their immune systems are in a “perpetual arms race with pathogens”—a pathogen will enter the organism, the immune system will evolve a mechanism to combat the pathogen, the pathogen will evolve again, and so on.

“Dealing with all of these viruses may be shaping bats’ immunity and longevity,” Gorbunova said.

While humans may be developing social habits that parallel those of bats, we have not yet evolved bats’ sophisticated mechanisms to combat viruses as they emerge and swiftly spread, the scientists noted.

“COVID-19 has such a different pathogenesis in older people. Age is one of the most critical factors between living and dying, and we have to treat aging as a whole process instead of just treating individual symptoms,” Gorbunova said.

According to the researchers studying bats’ immune systems can provide new targets for human therapies to fight diseases and aging.

Citing an example, they said bats have mutated or completely eliminated several genes involved in inflammation, adding that scientists can develop drugs to inhibit these genes in humans.

“Humans have two possible strategies if we want to prevent inflammation, live longer, and avoid the deadly effects of diseases like COVID-19,” Gorbunova said.

“One would be to not be exposed to any viruses, but that’s not practical. The second would be to regulate our immune system more like a bat,” she added. PTI

Changing lifestyle:

Changing lifestyle: Added screen time taking toll on health of Jalandhar residents

More cases of backache, neck pain & eye strain being reported (The Tribune: 2020714)

<https://www.tribuneindia.com/news/health/changing-lifestyle-added-screen-time-taking-toll-on-health-of-jalandhar-residents-112314>

Changing lifestyle: Added screen time taking toll on health of Jalandhar residents
Dr Navjot Dahiya, Orthopaedician

As the Covid-19 pandemic has turned our home into our workspace, complaints related to backache, neck pain, eye strain and associated sleeplessness have witnessed a surge.

For online classes and office work, both students and the work-from-employees have been using laptops and mobiles for prolonged hours these days. Instead of using a table and chair to study or work, they rather prefer sitting on sofa, couch or bed in order to work amid the comforts of home.

Dr Navjot Dahiya, a city-based Orthopedic Doctor, said, “With all the stay-at-home activities, our screen time has increased exponentially. Our online activities have also increased. But there is a dire need to understand its flip side. It is having a detrimental effect on our eyes and is also affecting our overall health.”

He said making use of bed or sofa for a long time while watching TV, working or studying, weakens and tightens muscles, stiffening the back, shoulders and neck. The cases of cervical, backache and neck pain have increased manifold these days, owing to the sedentary lifestyle of people.

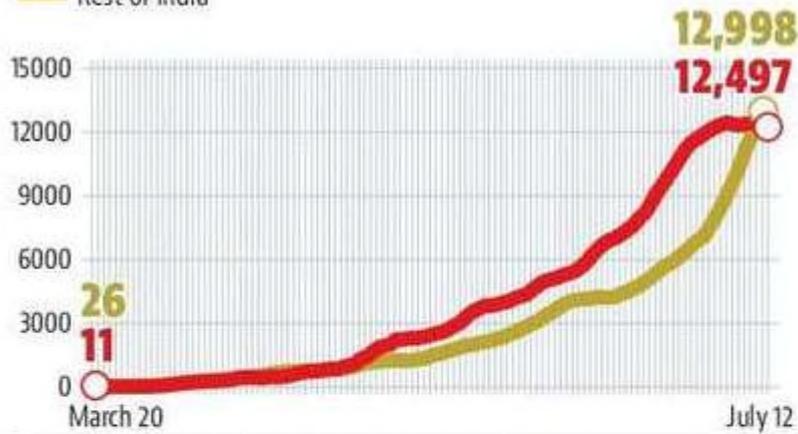
Tanishtha Kaura, a social media marketer, who has been working from home these days, said it has become difficult to handle work from home considering the impact it has on our health. “I developed severe back and neck pain after working from my bed and constantly looking down at the laptop for long hours. We should adopt ergonomic postures to enhance our work

Covid-19: What you need to know today (Hindustan Times: 2020714)

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

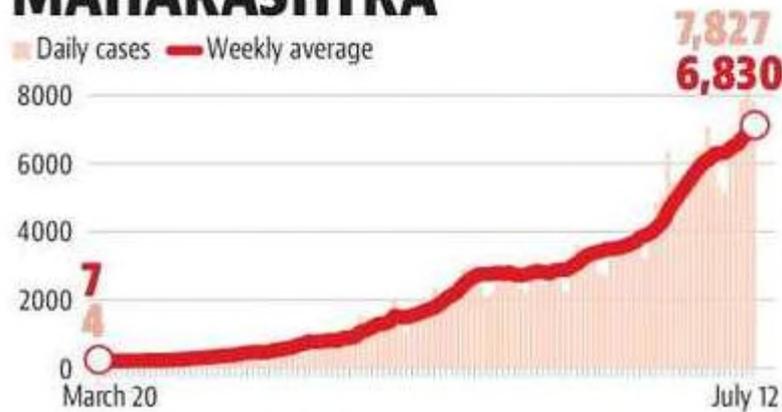
AVERAGE NEW CASES

— Maharashtra, Tamil Nadu and Delhi
— Rest of India



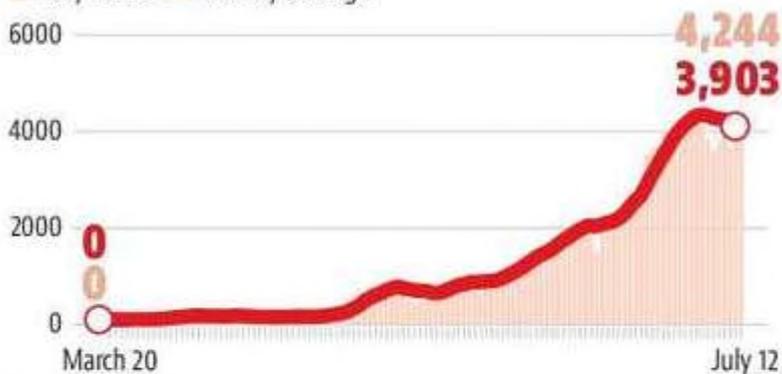
MAHARASHTRA

■ Daily cases — Weekly average



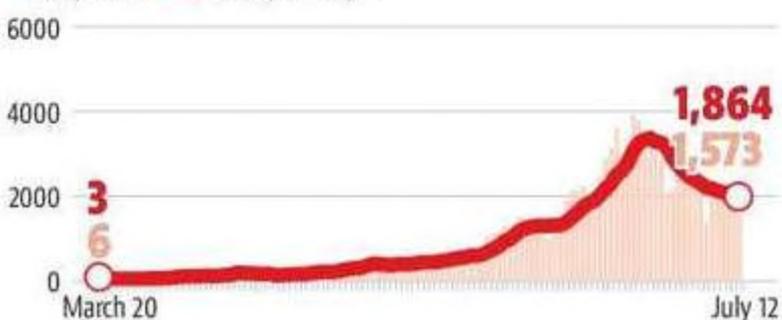
TAMIL NADU

■ Daily cases — Weekly average



DELHI

■ Daily cases — Weekly average



My current obsession, in tracking the spread of the coronavirus disease pandemic around the world, is curves and waves — and readers of this column will likely encounter both this week, as well as some hypotheses about them.

Several experts including Dr Anthony Fauci, the US immunologist who is the head of the National Institute of Allergy and Infectious Diseases, believe that countries such as the US are not seeing a second wave of infections, just a continuation of the first. They are right — at the country level.

At the regional level, I have a different opinion. I believe that the first wave is over in at least some US states (New York is one, for sure), just as it is in continental Europe. As the infection has picked up in other US states, the plateauing and dip in the curve of daily new infections at an aggregate level — very evident in the middle of June — has been offset to an extent that it is no longer visible. But New York, for instance, is showing a curve that has flattened. It peaked in mid-April, and is now perfectly flat (the seven-day average for new cases, on July 11, according to the NYT, was 634, way off its peaks of nearly 10,000 in mid-April). If the state sees a consistent increase in cases — one hopes it doesn't — it will definitely be a second wave of infections. The state has clearly fought off the first.

A similar curve, mapping daily new cases and the weekly average of new cases for the three Indian states that have seen the most cases — and which, on Sunday evening, accounted for 58% of all Covid-19 cases and 67% of all deaths in the country — throws up some interesting conclusions.

Delhi has definitely flattened the curve, although the peak is a little too narrow for my liking (in general, the peaks of many distributions, including infections, are more rounded and gradual).

Tamil Nadu appears to be in the very early stages of flattening the curve.

And Maharashtra is still seeing an increase in cases — although HT's reporting has shown that Mumbai itself may have flattened the curve a bit.

At an aggregate level, starting the last week of June, the curve of infections (new cases) in these three states is beginning to plateau. Sure, this may be just an aberration — but if it is, we will know soon enough. The reason it finds mention here is because it is in keeping with the trend of how the infection has waxed and waned globally. For a little over two months, Delhi, Maharashtra and Tamil Nadu have driven India's Covid-19 numbers. That may be changing.

For the first time since early May, on July 10, the total number of new cases in the rest of the country exceeded the aggregate number of new cases in the three states. This, too, fits in with what we know of how the pandemic spreads through a population. Much like the US — this column has pointed out that the US can be compared to India because both countries are large in terms of geographical area (the US is much larger) and population (India has a much higher population) — India is beginning to see a significant proportion of the new cases coming from states outside Delhi, Maharashtra, and Tamil Nadu.

Purely in numerical terms, this could mean an increase in the number of new cases, perhaps to hitherto unseen levels. The good news from Delhi and, perhaps, Tamil Nadu, has to be tempered by the bad news from the rest of India.

Recovery rate improves,

As recovery rate improves, nearly 72% Covid beds free (Hindustan Times: 2020714)

‘INFRA ADEQUATE’: Govt not converting stadiums into makeshift hospitals yet

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

Government reports show that as on Monday, 11,130 Covid beds in hospitals -- of a total of 15,359 -- were vacant. mohd zakir/Ht photo
HT Correspondent

With the recovery rate steadily rising in Delhi, the availability of Covid-19 beds in Delhi's hospitals for the first time touched 72% in the second week of this month (July 6-12). The bed availability during the second week of June (June 8-14) was only 44%, government data showed on Monday.

“The numbers mean that today, more patients are being discharged than admitted in hospitals. As many as 72% of the total beds are now available and vacant in Delhi, as opposed to 65% last week. More beds are being added every week and these are reserved for patients with moderate to severe symptoms,” a media advisor to chief minister Arvind Kejriwal said on Monday.

The number of available beds continues to rise with nearly 200 more getting vacant on Monday. Government reports showed that as on Monday, as many as 10,944 Covid beds in hospitals were vacant against the total of 15,253 beds.

On Sunday, 10,938 beds were available, the number on Saturday 10,751 and 10,631 beds were vacant on Friday. Availability of Covid-19 beds in Delhi had crossed the 10,000-mark for the first time on July 6, when 10,051 beds were vacant.

Gauging the favourable conditions and easy availability of beds, the government has put on hold a plan to convert stadiums such as Talkatora and Pragati Maidan and more banquet halls into makeshift hospitals.

“Delhi's recovery rate is 79.98% now, which is better than the national average of 62.93%. Plasma therapy has helped in improving the recovery rate as well as reducing the fatality rate which has declined to 3% now from 3.64% between June 22 and July 5. It is because of these positive indices that we do not immediately require the creation of more large scale Covid facilities,” said a senior government official.

Apart from attaching at least five hotels with hospitals, the government has attached eight banquet halls with big Covid-19 hospitals for them to be converted into Covid facilities. In

addition, there is the 10,000-bed Sardar Patel Covid Care Centre and Hospital in the south district and the 500-bed Covid care centre in CWG village in east district. Besides, another 1,000-bed hospital has been built near Dhaula Kuan by DRDO. All of these are currently being largely underutilised due to lack of patients. The Sardar Patel centre in Chhatarpur, for example, has only 180 of its 10,000 beds occupied so far. At least 2,000 beds have been set up and are ready at the centre.

On Monday, 1,246 cases were reported, while 1,344 people recovered. There have been a total of 113,740 cases, of which 91,312 have recovered. Of the active cases, 11,170 are under home isolation.

An analysis of the bed occupancy on a weekly basis shows that in the first week of June around 215 more beds were being occupied by new patients on an average every day. In the second week of June, this came down to 171. A reverse trend began on June 22 when the number of those who recovered exceeded those who were admitted. From July 5 to July 12, as many as 139 beds were vacated by recovered patients on an average every day.

The government, however, has no plans to de-escalate the preparations made for Covid-19 treatment. Government officials had told HT that even though the number of hospitalisations has gone down, the numbers may rise again just as it happened in Mumbai and other places across the world.

Experts agreed it would be premature to scale down the number of Covid beds.

Assuming the initial trends of the sero-surveillance data to be true, Delhi is a long way away from herd immunity. “There were reports that there is a 15% prevalence of the antibodies against Covid-19 in Delhi. This is not enough for herd immunity, which can protect those who are uninfected. Besides, we don’t even know whether the antibodies are enough to prevent a second infection — studies have shown that antibody levels are lower in asymptomatic patients and those with mild symptoms. Plus, we also don’t know how long the antibodies last in a person. The infection is spreading in the other parts of the country and there is a possibility of resurgence in Delhi,” Dr Arun Gupta, president of the Delhi Medical Council, had told HT last week.

Plasma bank

Lok Nayak to house Delhi’s second plasma bank (Hindustan Times: 2020714)

Delhi’s biggest treatment facility for Covid-19 patients—the 2,000-bed Lok Nayak hospital—will house the city’s second convalescent plasma bank, the government said Monday. Chief minister Arvind Kejriwal will inaugurate it on Tuesday.

The Delhi government had opened the country’s first one at the Institute of Liver and Biliary Sciences in south Delhi’s Vasant Kunj on July 2.

Lok Nayak hospital has already set up an apheresis machine, which is used to separate the blood components. The collection of plasma from recovered patients will start this week, the hospital said. The hospital has already discharged over 3,600 Covid-19 patients, many of whom will be eligible to make plasma donations. “The plasmapheresis machine has already been set up and will start collecting plasma from recovered patients from Monday. Within a week, we will be able to set up a bank as well to store this plasma,” said Dr Suresh Kumar, medical director, Lok Nayak hospital.

The Delhi government-run Guru Teg Bahadur hospital, a dedicated Covid-19 hospital, has also begun work to set up a plasma bank, the city’s third.

Convalescent plasma therapy uses the blood component plasma — rich in virus-fighting antibodies from patients who have recovered from the infection — to aid the immune system of Covid patients. It is still an experimental therapy that has been approved by the health ministry for use in patients, whose need for oxygen increases despite providing oxygen support and steroids.

Lok Nayak was the first government hospital in the country to administer convalescent plasma therapy in April as part of the COPLA trial being conducted by the Institute of Liver and Biliary Sciences, which houses the first plasma bank of Delhi.

Under the trial at Lok Nayak hospital, 14 patients received the therapy and 15 patients received fresh frozen plasma with no therapeutic benefits, to study the efficacy of the therapy for Covid-19.

The study showed that those who received plasma fared better with their respiratory rate coming down, oxygen saturation improving and their sequential organ failure assessment (SOFA) score reducing, a yardstick that predicts ICU mortality.

The duration of ICU stay and hospitalisation also came down in the patients who received convalescent plasma.

For the second phase of the trial, 200 patients each from Lok Nayak hospital and Rajiv Gandhi Super Speciality hospital will receive plasma therapy.

“ILBS was a good start but all hospitals in the city cannot rely on one organisation for the plasma. I think, at least the bigger hospitals—both government and private—should start asking their own patients to come back and donate plasma. We started collecting plasma two or three days ago and are using it for our own patients,” said Dr Neeraj Gupta, professor of pulmonary medicine at Safdarjung hospital.

Health Care Services (The Asian Age: 2020714)

<http://onlinepaper.asianage.com/articledetailpage.aspx?id=14989522>



Patients at CWG Village care centre during Unlock 2.0 near Akshardham in New Delhi on Monday. — PRITAM BANDYOPADHYAY

More people recovering daily from Covid than contracting it

AGE CORRESPONDENT
NEW DELHI, JULY 13

The first 12 days of July have largely reported more cases of people recovering daily from the coronavirus than the fresh ones added to Delhi's Covid-19 count, according to the Delhi government data.

From July 1-12, the city recorded 25,134 cases, while 31,640 people recovered. Barring July 1 and July 6, all days this month recorded more recoveries than fresh cases.

The recoveries from July 1-12 too have been sharp — six days saw recoveries in the range of 2,000, three days in the range of 3,000 while one day (July 9) saw over 4,000 recoveries.

Overall, 89,968 recoveries took place till July 12, while the total number of cases stands at 1,12,494.

As many as 1,246 new cases and 40 deaths were reported in the last 24 hours. Of the total 1,13,740 cases in Delhi, 19,017 are active and 91,312 patients have recovered. Of the

Nurses say their jobs terminated for demanding basic facilities

New Delhi, July 13: A group of nurses working in the Covid ward of the Hakeem Abdul Hameed Centenary Hospital, a private health facility here, protested against its management on Monday, alleging that their contracts were terminated for "demanding basic facilities". The hospital authorities, however, said the non-renewal of contracts "is not linked to their demands".

The 84 nurses, whose services have been terminated, protested on the hospital premises on Monday and also wrote to Union health minister Harsh Vardhan, Delhi lieutenant governor Anil Baijal and chief minister Arvind Kejriwal, seeking

their intervention in the matter.

The nurses claimed that their contracts expired between February and June, but "we were asked to continue".

"All of a sudden they have asked us to go. They did not even follow the usual assessment process for renewal of contracts," a nurse said.

Every year, the hospital follows a process wherein nurses fill up an assessment form and nursing in-charges give their remarks.

The hospital, which is linked to the Hamdard Institute of Medical Sciences and Research, has now constituted a committee for the assessment process. — PTI

double at 3,015.

July 3 saw a slight decline in the recoveries recorded within 24 hours

Hospital will be the second hospital in the national capital after the ILBS to start a plasma bank

Stress hormone

Stress hormone linked to higher blood sugar in diabetics (New Kerala: 2020714)

<https://www.newkerala.com/news/2020/124673.htm>

Researchers have showcased a clear link between the stress hormone cortisol and higher blood sugar levels in people with type 2 diabetes.

Previous research has shown that stress and depression are two of the major causes of a flatter cortisol profile.

"In healthy people, cortisol fluctuates naturally throughout the day, spiking in the morning and falling at night," said study researcher Joshua J Joseph from the Ohio State University.

"But in participants with type 2 diabetes, cortisol profiles that were flatter throughout the day had higher glucose levels," Joseph said in a paper published in the journal Psychoneuroendocrinology.

These sustained levels of cortisol make it much more difficult to control blood sugar and manage the disease, which is why it is so important for those with type 2 diabetes to find ways to reduce stress.

"We have begun a new trial to examine if mindfulness practices can lower blood sugar in those with type 2 diabetes," said Joseph.

"But this isn't the only effective form of stress relief. It's important to find something you enjoy and make it a part of your everyday routine," he added.

The relationship of cortisol with glucose levels was only observed in those with diabetes.

However, the research team believe the stress hormone likely plays an important role in diabetes prevention and they continue to research the connection between cortisol and the development of diabetes and cardiovascular disease.

With type 2 diabetes, your body doesn't use insulin properly.

Some people can manage their blood sugar levels with healthy eating and exercise, while others may need medication or insulin to help manage it.

"Most people with Type 2 diabetes know the importance of exercising regularly, eating a healthy diet, and getting plenty of rest. But stress relief is a crucial and often forgotten component of diabetes management," Joseph said.

"Whether it's a yoga class, taking a walk or reading a book, finding ways to lower your stress levels is important to everyone's overall health, especially for those with type 2 diabetes," the authors wrote.

Covid-19 pandemic

Study reveals new strategies to control Covid-19 pandemic (New Kerala: 2020714)

<https://www.newkerala.com/news/2020/124612.htm>

Strategies for the safe reopening of low and middle-income countries (LMICs) in response to the ongoing Covid-19 pandemic must recognise that preserving people's health is as important as reviving the economy, say researchers, including one of Indian-origin.

In the study, published in the European Journal of Epidemiology, the research team examined three community-based exit strategies, and recommended their scopes, limitations and the appropriate application in the LMICs.

The three approaches considered are sustained mitigation, zonal lockdowns and rolling lockdowns. "Successfully re-opening a country requires consideration of both the economic and social costs," said study lead author Rajiv Chowdhury from the University of Cambridge in the UK.

"Governments should approach these options with a mind-set that health and economy both are equally important to protect - reviving the economy should not take priority over preserving people's health," he added.

The study also revealed that strategies need to be based on the local epidemic growth rate at the time, social and economic costs, existing health systems capabilities and detailed plans to implement.

Sustained 'mitigation-only' approaches such as those adopted in the UK, Switzerland and other European countries, involve basic prevention measures such as mask-wearing, physical distancing and the isolation of positive cases after testing.

Zonal lockdowns approach involves identifying and 'cordonning off' new outbreak clusters with a high number of cases, keeping contact between zones and containing the disease within a small geographic area.

However, the authors point out that any successful implementation of zonal lockdown requires regular data feedback operations in real-time to identify hotspots, including information on

newly confirmed cases, updated region-specific reproduction and growth rates, and deaths by age.

Additionally, control of transmission within zones may be an enormous undertaking. For example, in India, where this approach has been employed, the infection size within a cordoned zone can be as high as 100-200 times outside the zone.

Intermittent rolling lockdowns are now advocated by the World Health Organisation (WHO) in various LMICs. These involve implementing strict social distancing for a set number of days before a period of relaxation. Rolling lockdowns may be particularly useful in LMICs with dense populations, where this is a high potential for contact, weak health systems and poor contact tracing.

"These three strategies should not be considered as one or the other. A country should further adapt and could combine them as needed," the authors wrote.

Health services

Mothers, newborns lose 20% health services due to Covid-19: Study (New Kerala: 2020714)

<https://www.newkerala.com/news/2020/124564.htm>

Mothers, newborns, young children and adolescents are losing 20 per cent of their health and social services due to the Covid-19 pandemic, according to a new report from a panel senior global health experts.

The experts revealed that immunisation campaigns are being halted and health workers are being diverted from maternity to Covid-19 units.

"Covid-19 is making a bad situation worse," said Joy Phumaphi, co-chair of the Panel and former WHO Assistant Director-General.

"The new findings show how weak our health systems are at protecting mothers, newborns, young children and adolescents," Phumaphi added.

The panel has compiled data from various surveys and studies and provided an overview of estimated impacts from Covid-19 pandemic on mothers, newborns, young children and adolescents since its start in January.

The early data found that women are experiencing a loss of various types of support and social safety nets and can't access increased support, in contrast to men.

According to the experts, since 2000, maternal and children under 5 deaths have been cut by 40 per cent, because of focused leadership and investment, even in the poorest nations.

But due to Covid-19, the health care systems in both rich and poor nations are massively struggling and the services for mothers, newborns, young children and adolescents are crumbling.

"Especially worrisome decline in access to life-saving vaccines for children and maternal health services due to closures and movement restriction," said Elizabeth Mason, co-chair of the UN Secretary-General's Independent Accountability Panel (IAP) for Every Woman, Every Child, Every Adolescent reviewing the impact of COVID-19 on these groups.

Besides the loss of services due to the pandemic, IAP has found that globally implementation is 20 per cent behind on the UN's 2030 goals to reduce preventable deaths for mothers, newborns, young children and adolescents.

The IAP's 2020 report, published this week, calls for leaders to fulfil their commitments and lays out the action needed to get back on track.

Commitments to universal health coverage, primary health care, International Health Regulations and sustainable development, were urgently needed before the pandemic.

According to global health experts, now with Covid-19, they are even more important.

Skin allergies

Avoid skin allergies caused by masks (New Kerala: 2020714)

<https://www.newkerala.com/news/2020/124536.htm>

Avoid skin allergies caused by masks

Wearing a mask is a must, but this has led to many complaining of various skin issues. Masks create a hot and moist environment inside it, becoming the perfect breeding ground for bacteria and germs. These bacteria make the skin itchy and acne and rashe prone.

Lalita Arya, Vice President Dermapuritys, suggests a few ways on how one can prevent skin problems which may arise from wearing a mask for longer periods.

To prevent skin problems

Make sure that your skin has been cleansed properly and then moisturized with a water-based moisturizer as they are light and suitable for hot weather, also it are not oily. After moisturising your face, apply an antibacterial or anti-inflammatory cream for extra protection. This step will

avoid any chances for rashes and acne to occur. Once you have removed the mask wash your hands with soap and then cleanse your face to remove any grown bacteria; do not forget to moisturize irrespective of your skin type else the skin will dry up and cause irritation and skin problems.

How to cure skin issues caused by mask

If acne or rash has shown up in the area, take care of it as it can grow, get aggravated and cause irritation. Apply anti-inflammatory cream or zinc oxide on the affected areas. Try home remedies for acne and do not pick your acne as it worsens its condition. Do not rub over the rash, it can cause swelling and irritation. Follow a good skincare regimen and find suitable products according to your skin types. If the skin condition worsens, visit a dermatologist for expert help.

Home remedies

Use cucumber on the skin in different forms; rub cucumber juice ice-cubes it would soothe the skin, or can easily rub slices of cucumber on the face.

Try homemade soothing face packs for or a healthy and refreshed skin

If you have acne-prone skin, then do not exfoliate your skin, it can worsen the condition and can make it painful.

TIPS

Prefer a disposable mask also ensure your dispose of them in a correct way

If your skin feels dry and flaky, cleanse the face gently and apply heavy moisturizer to rehydrate the skin.

If using reusable masks, use cotton, or a breathable fabric mask.

You may even wash the mask and clean the bacteria that might have grown so that they do not transfer onto your skin again.

Keep your diet vitamin C and K rich, you may also take supplements for the same. These are essential elements for the skin.

Use gentle products on your face.

Use light weight moisturizer; prefer a water-based product. Since moisturizer with oil base can feel sticky and attract dust.

The mask should not be too tight else it will leave marks and severe rashes.

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Mental health

Study reveals short, frequent walks near water bodies can benefit mental health (New Kerala: 2020714)

<https://www.newkerala.com/news/2020/124265.htm>

Barcelona [Spain], July 12: While walking is good for cardiovascular health, a recent study has found additional benefits of the activity. According to a new study, taking frequent, short walks near water bodies, like beaches, lakes, rivers, or even fountains may have a positive effect on people's wellbeing and mood.

The study was led by the Barcelona Institute for Global Health (ISGlobal), a centre supported by the "la Caixa" Foundation. Conducted within the BlueHealth project and published in Environmental Research, the study used data on 59 adults. Over the course of one week, participants spent 20 minutes each day walking in a blue space.

In a different week, they spent 20 minutes each day walking in an urban environment. During yet another week, they spent the same amount of time resting indoors. The blue space route was along a beach in Barcelona, while the urban route was along city streets. Before, during, and after each activity, researchers measured the participants' blood pressure and heart rate and used questionnaires to assess their well-being and mood.

"We saw a significant improvement in the participants' well-being and mood immediately after they went for a walk in the blue space, compared with walking in an urban environment or resting," commented Mark Nieuwenhuijsen, Director of the Urban Planning, Environment, and Health Initiative at ISGlobal and coordinator of the study.

Specifically, after taking a short walk on the beach in Barcelona, participants reported improvements in their mood, vitality, and mental health.

The authors did not identify any cardiovascular health benefits, although they believe this may be due to the design of the study.

"We assessed the immediate effects of taking a short walk along a blue space. Continuous, long-lasting exposure to these spaces might have positive effects on cardiovascular health that we were not able to observe in this study," commented ISGlobal researcher Cristina Vert, lead author of the study.

"Our results show that the psychological benefits of physical activity vary according to the type of environment where it is carried out, and that blue spaces are better than urban spaces in this regard," commented Vert.

Numerous ISGlobal studies have identified health benefits associated with green spaces, including a lower risk of obesity, better attention capacities in children, and slower physical

decline in older adults. The new study provides evidence showing that blue spaces are an environment favourable to mental health.

"According to the United Nations, 55 per cent of the global population now lives in cities. It is crucial to identify and enhance elements that improve our health--such as blue spaces--so that we can create healthier, more sustainable, and more liveable cities," explained Nieuwenhuijsen.

Heart disease

Study reveals good gut bacteria helps reduce the risk for heart disease (New Kerala: 2020714)

<https://www.newkerala.com/news/2020/124188.htm>

One of the good bacteria found in the human gut which has a benefit that was unrecognized until now, has been discovered by scientists. The good bacteria has the potential to reduce the risk of heart disease.

The bacteria's activity in the intestines reduces the production of a chemical that has been linked to the development of clogged arteries. After it's manufactured in the gut, the chemical enters the bloodstream and travels to the liver, where it is converted into its most harmful form.

Ohio State University researchers have traced the bacteria's behaviour to a family of proteins that they suspect could explain other ways that good gut organisms can contribute to human health. In essence, these microbes compete with bad bacteria for access to the same nutrients in the gut - and if the good bacteria win, they may prevent health problems that can result from how the body metabolizes food. Much more work is ahead, but the scientists see the potential for this microbe, *Eubacterium limosum*, to be used for therapeutic purposes in the future. Previous research has already shown the bacteria is "good" because it calms inflammation in the gut.

"Over the last decade, it has become apparent that bacteria in the human gut influence our health in many ways. The organism we studied affects health by preventing a problematic compound from becoming a worse one," said Joseph Krzycki, professor of microbiology at Ohio State and senior author of the study. "It's too soon to say whether this bacteria could have therapeutic value. But that's what we're working toward," added Krzycki.

The research appears online and will be published in a future edition of the *Journal of Biological Chemistry*. The chemical linked to the clogged arteries that characterize atherosclerosis is called trimethylamine, or TMA. It is produced during metabolism when some intestinal microbes - generally the bacteria considered unhelpful to humans - interact with certain nutrients from food. Among those nutrients is L-carnitine, a chemical compound found in meat and fish that is also used as a nutritional supplement to improve recovery after exercise.

Krzycki and his colleagues discovered that *E. limosum* interacts with L-carnitine in a different way in the gut and that interaction eliminates L-carnitine's role in the production of TMA (other nutrients also participate in TMA production in the gut).

The researchers attribute the bacteria's beneficial behaviour to a protein called MtcB, an enzyme that cuts specific molecules off of compounds to help bacteria generate energy and survive. The process is called demethylation, and involves the removal of one methyl group - a carbon atom surrounded by three hydrogen atoms - to change a compound's structure or function.

"The bacteria does this for its own benefit, but it has the downstream effect of reducing the toxicity of TMA," Krzycki said. "Up until now, the only known gut microbial reactions with L-carnitine involved converting it into its bad form. We've discovered that a bacteria known to be beneficial could remove a methyl group and send the resulting product down another pathway without making any other harmful compounds in the process."

In these interactions, L-carnitine functions as a growth substrate - a compound consumed so the organism can live and grow, and also a target for enzyme activity. In the study, the researchers fed *E. limosum* cultures an assortment of potential substrates, including L-carnitine. Only when offered L-carnitine did the microbe synthesize the MtcB protein specifically to lop off L-carnitine's methyl group - in essence, MtcB is part of the bacteria's natural way to consume the nutrient.

Krzycki said finding this one significant health benefit in one species of gut bacteria suggests there is still a lot to learn about how gut bacteria can influence health outcomes associated with human metabolism. "MtcB is part of a family of proteins with thousands of representatives that may use different compounds and change what nutrients bacteria consume in the gut," he said. "These proteins may behave very similar chemically, but using different compounds obviously can create big changes as far as biology goes."

Anxiety

How brain activity evolves fear into anxiety (New Kerala: 2020714)

<https://www.newkerala.com/news/2020/124089.htm>

Mexico City [Mexico], July 12: In a bid to understand the brain's response to fear, a team of researchers tried to observe the fear and its reason, as to why in some cases it may lead to prolonged anxiety states like post-traumatic stress syndrome (PTSD).

A University of New Mexico research team led by Elaine L. Bearer, MD, PhD, the Harvey Family Professor in Pathology, and graduate student Taylor W Uselman has identified for the first time brain-wide neural correlates of the transition from fear to anxiety.

"Until now, psychiatrists had little information about what goes on in the brain after a fearful experience, and why some people don't easily recover and remain anxious, for even as long as the rest of their lives," said Bearer.

While not feasible in human subjects, fear can be provoked in rodents by exposure to a scary smell, such as a product commonly used to protect our barbecues from mouse nesting. This smell simulates a predator odour and scares mice away.

The UNM team used this trick to witness how the brain responds to scary events and discover how brain activity evolves from a scary feeling to anxiety.

In a paper published this week in the journal *NeuroImage*, they report a correlation of behaviour with brain activity by watching behaviour and capturing magnetic resonance images before, during, and after exposure to non-scary and scary smells.

They created vulnerability to anxiety by manipulating the serotonin transporter (SERT), which is the major target of psychoactive drugs, like cocaine, and antidepressants, like Prozac. Deletion of the SERT gene (SERT-KO) produces vulnerability to anxiety, and thus provides a unique model to learn how frightening experiences morph into anxiety.

The UNM researchers compared behaviour and brain activity in normal versus SERT-KO to identify the neural correlates of anxiety - those regions active in anxious SERT-KOs and not in normal subjects.

To highlight active neurons, they used manganese, a non-toxic ion that lights up active neurons in magnetic resonance images. Computational analyses of these brain-wide images yielded maps of activity throughout the brain before, immediately and long after brief exposure to the scary smell.

They identified differences in neural activity in 45 sub-regions throughout the brain. Some regions were activated by the scary smell, and some only came on later. Vulnerability to anxiety correlated with much more activity in many more regions.

The function of some of these regions, including the amygdala and hypothalamus, is at least partly understood, but others, such as the reward circuitry, were not previously known to be involved in anxiety. In anxiety, the coordination between regions was altered, which may represent a brain-wide signature of anxiety, or signify a dis-coordination between brain regions, which is often experienced when we are frightened or anxious.

"We now know that brain activity in anxiety is not the same as in an acute fear response. With anxiety, neural activity is elevated across many specific regions of the brain, and normal coordination between regions is lost," Bearer said.

What does this mean in the time of COVID? The time lag for resilient or anxious outcomes suggests that early containment of fearful responses to surges in cases, protests, and economic recession may reduce the likelihood of progression to anxiety.

The involvement of serotonin also suggests pharmacologic targets that could help in reducing the likelihood of anxiety. Meditation, music, poetry, exercise, and other stress-reducing activities that engage the reward circuitry will also likely help. Early interventions will have lasting benefits.

संक्रमण के 1246 नए केस आए, 1344 स्वस्थ हुए

नई दिल्ली | वरिष्ठ संवाददाता

रिपोर्ट

दिल्ली में सोमवार को 1246 नए कोरोना संक्रमित मरीज मिले, हालांकि इस दौरान 1344 कोरोना पीड़ित ठीक भी हो गए। वहीं 40 लोगों की कोरोना संक्रमण से मौत भी हो गई।

दिल्ली में सोमवार को जांचे गए 10 फीसदी सैंपल पॉजिटिव मिले हैं। सोमवार को आए 1246 नए मामलों के साथ कोरोना के मामले 1,13,740 हो गए। वहीं 1344 मरीज कोरोना संक्रमण से उबर गए। दिल्ली में अब तक

- 40 लोगों की कोरोना के संक्रमण के कारण मौत हो गई
- 91 हजार से अधिक मरीज अब तक कोरोना से उबर चुके हैं

91312 मरीज कोरोना से जंग जीत चुके हैं। दिल्ली में सोमवार तक कोरोना के कुल 19017 सक्रिय मरीज मौजूद हैं। 4309 मरीज दिल्ली के विभिन्न अस्पतालों में भर्ती हैं, जबकि 11170 मरीज घर पर आइसोलेशन में हैं।

Mapping (Hindstan: 2020714)

कोरोना से जंग में जियो मैपिंग हथियार बनेगी

तैयारी

नई दिल्ली | वरिष्ठ संवाददाता

दिल्ली के वो इलाके जहां लगातार कोरोना के इक्का-दुक्का केस आ रहे हैं, लेकिन संक्रमण की वजह पता नहीं है। उन इलाकों को चिह्नित करके संक्रमण रोकने के लिए सरकार जियो स्पेशियल मैपिंग करा रही है। इसके लिए दिल्ली को जियोग्राफी के आधार पर 375 जोन में बांटा गया है।

आरोग्य सेतू ऐप से लिंक जियो स्पेशियल मैपिंग के तहत ऐसे इलाकों को चिह्नित करके स्थानीय जिलाधिकारियों को जानकारी दी जा रही है। इससे उस गली, कॉलोनी, सोसाइटी या ब्लॉक में ऐसे मरीजों का स्पेशल सर्विलांस समूह तैयार किया जाएगा, जिनकी रैपिड एंटीजन किट से संदिग्धों या हाई रिस्क समूह की जांच कराकर संक्रमण की चेन वहीं खत्म की जाएगी। ये वो इलाके हैं, जहां केस तो है मगर कंटेनमेंट जोन नहीं है। इसमें होम आइसोलेशन में रह रहे लोगों को भी शामिल किया गया है।

अस्पतालों में 72% बेड खाली

दिल्ली के अस्पतालों में कोरोना मरीजों के लिए तैयार 72 फीसदी बेड खाली हैं। सोमवार शाम तक अस्पतालों में उपलब्ध 15,361 बेड में से 4309 बेड पर मरीज भर्ती हैं। संक्रमण दर में कमी से ऐसा हुआ है।



दिल्ली के अस्पतालों में कोरोना बेड की कमी नहीं है।

दिल्ली के कोविड अस्पतालों का हाल

कुल बेड	➤ 15361	बिना वेंटिलेटर आईसीयू	1003
मरीज भर्ती	➤ 4309	मरीज भर्ती	499
आईसीयू वेंटिलेटर बेड	➤ 1053		
मरीज भर्ती	➤ 515		

504

आईसीयू कोरोना बेड बिना वेंटिलेटर के दिल्ली के सभी अस्पतालों में खाली हैं

इस तरह कम है

