



# DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DA  
Wednesday 20201014

## **Reinfection:**

### **COVID-19 patients might experience more severe symptoms on reinfection: Study (The Tribune: 20201014)**

<https://www.tribuneindia.com/news/health/covid-19-patients-might-experience-more-severe-symptoms-on-reinfection-study-155151>

According to the researchers, the patient may also have come in contact with a more virulent variant of the virus

COVID-19 patients might experience more severe symptoms on reinfection: Study  
Photo for representation only.

COVID-19 patients infected with the novel coronavirus for a second time might experience more severe symptoms, according to a study which is the first to confirm a case of reinfection with the virus in the US.

The study, published in the journal Lancet Infectious Diseases, found evidence that an individual with no known immune disorders or underlying conditions was infected with the SARS-CoV-2 virus in two separate occurrences.

According to the scientists, including those from the University of Nevada in the US, the patient, a 25-year-old male, was infected with two distinct SARS-CoV-2 variants within a 48-day time frame, while testing negative in between infections.

The study noted that the patient's second infection was more severe, resulting in hospitalisation with oxygen support, indicating previous exposure to COVID-19 may not translate to guaranteed total immunity.

The patient tested negative for the virus after testing positive for SARS-CoV-2 in April 2020, the researchers said.

Then in June 2020, after experiencing severe COVID-19 symptoms, including fever, headache, dizziness, cough, nausea, and diarrhea, the patient was hospitalised and tested positive for a second time.

The patient has since been discharged from the hospital and has recovered from the second infection, the study noted.

While further research into reinfections is required, the scientists believe all individuals -- whether previously diagnosed or not -- should take identical precautions to prevent infection with SARS-CoV-2.

"There are still many unknowns about SARS-CoV-2 infections and the immune system's response, but our findings signal that a previous SARS-CoV-2 infection may not necessarily protect against future infection," said Mark Pandori, lead author of the study from the University of Nevada.

"It is important to note this is a singular finding and does not provide generalisability of this phenomenon," Pandori said.

While more research is needed, the scientists said the possibility of reinfections could have significant implications for understanding COVID-19 immunity, especially in the absence of an effective vaccine.

"It also strongly suggests that individuals who have tested positive for SARS-CoV-2 should continue to take serious precautions when it comes to the virus, including social distancing, wearing face masks, and handwashing," Pandori explained.

According to the scientists, at least four other reinfection cases have been confirmed globally in Belgium, the Netherlands, Hong Kong, and Ecuador with the latter being the only other instance in which the second infection displayed worse disease outcomes than the first.

"We need more research to understand how long immunity may last for people exposed to SARS-CoV-2, and why some of these second infections, while rare, are presenting as more severe," Pandori said.

"So far, we've only seen a handful of reinfection cases, but that doesn't mean there aren't more, especially as many cases of COVID-19 are asymptomatic. Right now, we can only speculate about the cause of reinfection," he added.

The study noted several hypotheses that may explain the severity of the second infection, including the possibility the patient subsequently encountered a very high dose of the virus which caused a more acute reaction the second time.

According to the researchers, the patient may also have come in contact with a more virulent variant of the virus.

They said another plausible explanation could be the mechanism of antibody dependent enhancement in which some protective proteins produced by the immune system during the first encounter with the virus could make a subsequent infection worse.

This mechanism, the researchers noted, was seen previously with the 2002-03 SARS pandemic virus, as well as other diseases, such as dengue fever.

Citing the limitation of the study, the researchers said they were unable to undertake any evaluation of the immune response to the first episode of infection.

Since the confirmed reinfection cases occurred among patients who displayed COVID-19 symptoms, the scientists believe there is a possibility that many similar cases among individuals may be asymptomatic, and therefore likely to remain undetected under current testing and monitoring practices. PTI

## **COVID-19 illness**

### **How long can I expect a COVID-19 illness to last? (The Tribune: 20201014)**

<https://www.tribuneindia.com/news/health/how-long-can-i-expect-a-covid-19-illness-to-last-155133>

It's also hard to predict which patients will develop complications after their initial illness subsides

How long can I expect a COVID-19 illness to last?  
Photo for representation only. — Reuters

Most coronavirus patients have mild to moderate illness and recover quickly. Older, sicker patients tend to take longer to recover. That includes those who are obese, or have high blood pressure and other chronic diseases.

The World Health Organisation says recovery typically takes two to six weeks. One US study found that around 20 per cent of non-hospitalised individuals ages 18 to 34 still had symptoms at least two weeks after becoming ill. The same was true for nearly half of people age 50 and older.

Among those sick enough to be hospitalized, a study in Italy found 87 per cent were still experiencing symptoms two months after getting sick. Lingering symptoms included fatigue and shortness of breath.

Dr Khalilah Gates, a Chicago lung specialist, said many of her hospitalized COVID-19 patients still have coughing episodes, breathing difficulties and fatigue three to four months after infection.

She said it's hard to predict exactly when COVID-19 patients will return to feeling well.

“The unsettling part of all this is we don't have all the answers,” said Gates, an assistant professor at Northwestern University Feinberg School of Medicine.

It's also hard to predict which patients will develop complications after their initial illness subsides.

COVID-19 can affect nearly every organ, and long-term complications can include heart inflammation, decreased kidney function, fuzzy thinking, anxiety and depression.

It is unclear whether the virus itself or the inflammation it can cause leads to these lingering problems, said Dr Jay Varkey, an Emory University infectious diseases specialist.

“Once you get over the acute illness, it's not necessarily over,” he said. AP

## **Covid co-infection with dengue, malaria**

### **Growing evidence of Covid co-infection with dengue, malaria: Centre asks hospitals to be ready; issues guidelines (The Tribune: 20201014)**

<https://www.tribuneindia.com/news/health/growing-evidence-of-covid-co-infection-with-dengue-malaria-centre-asks-hospitals-to-be-ready-issues-guidelines-155116>

This poses challenges in clinical and laboratory diagnosis of Covid, and have a bearing on clinical management and patient outcomes, the ministry says

Growing evidence of Covid co-infection with dengue, malaria: Centre asks hospitals to be ready; issues guidelines

The government said malaria and dengue could co-exist with other infections. PTI file photo

The government on Tuesday said Covid could co-exist with a range of seasonal diseases and asked hospitals to be geared to treat a potential high burden of severe dengue/malaria cases along with Covid.

Issuing guidelines for the community and physicians on how to deal with Covid co-infections, the Health Ministry said that given the seasonal pattern of epidemic-prone diseases observed every year in the country, diseases like dengue, malaria, seasonal influenza, leptospirosis, chikungunya, and enteric fever cannot only present a diagnostic dilemma but may co-exist in Covid cases.

“This poses challenges in clinical and laboratory diagnosis of Covid, and have a bearing on clinical management and patient outcomes,” the ministry said issuing the guidance document that seeks to provide guidelines on prevention and treatment of co-infections of Covid with diseases like dengue, malaria, seasonal influenza (H1N1), leptospirosis, chikungunya.

The government said malaria and dengue could co-exist with other infections, and thus confirmation of malaria and dengue infection does not rule out the possibility of the patient not suffering from Covid and a high index of suspicion of malaria and dengue must be there when

a fever case is diagnosed as Covid, particularly during the rainy and post-rainy season in areas endemic for these diseases.

Both Covid and seasonal influenza can also present as influenza-like illness and so all such cases in areas reporting Covid cases must be evaluated and tested for both Covid and seasonal influenza, if both viruses are circulating in population under consideration.

The ministry says chikungunya leads to acute onset of moderate to high grade continuous fever and malaise followed by rash, myalgia and arthralgia. Respiratory failure may ensue in late stages. Co-infection with Covid may be suspected in chikungunya endemic areas, in the months of monsoon.

Leptospirosis apart from presenting as febrile illness also has the tendency to manifest as acute respiratory illness, leading to respiratory distress and shock. In areas where leptospirosis is known to cause outbreaks during monsoon and post monsoon, the possibility of co- infection should be considered, say the guidelines.

They add that scrub typhus prevalent in foothills of Himalayas in Jammu and Kashmir, Himachal Pradesh, Sikkim, Manipur, Nagaland, Meghalaya has in recent past also been seen in Delhi, Haryana, Rajasthan, Maharashtra, Uttarakhand, Chhattisgarh, Tamil Nadu and Kerala.

“The clinical picture consists of sudden high-grade fever, severe headache, apathy, myalgia and generalised lymphadenopathy. A maculopapular rash may appear first on the trunk and then on the extremities and blenches within a few days. The patients may develop complications that include interstitial pneumonia. Scrub typhus infection may co-exist with Covid, so can bacterial infection,” the ministry said recommending diagnostic and treatment techniques and asking all secondary- and tertiary-level hospitals to be prepared to manage severe dengue and Covid cases.

The government said a concerted effort is required in prevention, surveillance, behaviour change communication and management of co-infections.

Alert vigil, a high index of suspicion and constant awareness of the possibility of co-infections can help physicians avert the adverse outcome of cases with co-infection, it said.

## **Newborns**

### **Very low risk to newborns from moms with COVID-19, says study (The Tribune: 20201014)**

<https://www.tribuneindia.com/news/health/very-low-risk-to-newborns-from-moms-with-covid-19-says-study-155113>

They encouraged direct breastfeeding and skin-to-skin contact with babies

Very low risk to newborns from moms with COVID-19, says study

However, the researchers were unable to pinpoint how the babies became infected. — File photo

Moms with COVID-19 who take basic precautions rarely pass the novel coronavirus to their newborns, even if breastfeeding, according to a new study which says more extensive measures like separating the infected mothers from their babies may not be warranted.

The research, published in the journal JAMA Pediatrics, examined outcomes in the first 101 newborns born to COVID-19-positive mothers at the New York-Presbyterian Hospital in the US from March 13 to April 24, 2020.

"Our findings should reassure expectant mothers with COVID-19 that basic infection-control measures during and after childbirth—such as wearing a mask and engaging in breast and hand hygiene when holding or breastfeeding a—protected newborns from infection in this series," said Cynthia Gyamfi-Bannerman, a co-author of the study from Columbia University Irving Medical Center in the US.

To reduce the risk of transmitting the SARS-CoV-2 virus to newborns after delivery, the researchers said the hospital staff practised social distancing, wore masks, and placed COVID-positive moms in private rooms.

They said the hospitals also provided the mothers with educational materials about COVID-19 and shortened hospital stays for those without complications from delivery.

Most of the newborns roomed with their mothers, including during the first post-partum check-up, while some were admitted to the intensive care unit for non-COVID-related health reasons, the study noted.

The scientists said they placed the infants who roomed with their moms in protective cribs six feet away from the mothers' beds when resting.

They encouraged direct breastfeeding and skin-to-skin contact with babies, provided the moms wore masks and washed hands and breasts with soap and water.

"During the pandemic, we continued to do what we normally do to promote bonding and development in healthy newborns, while taking a few extra precautions to minimise the risk of exposure to the virus," Gyamfi-Bannerman said.

According to the study, only two of the newborns tested positive for the coronavirus, but they had no clinical evidence of illness.

However, the researchers were unable to pinpoint how the babies became infected.

When the physicians followed up with about half of the infants, including the two that tested positive for the virus, during the first two weeks of life, they found that all remained healthy.

According to the researchers the interim guidelines released by paediatric and health organisations for pregnant women with the coronavirus, recommends the separation of mothers and newborns during their hospital stay, no direct breastfeeding, and bathing newborns as soon as possible.

However, they said these recommendations were made in the absence of data on rates of mother-to-newborn transmission of the virus.

The scientists said these guidelines are based on experience with mother-newborn transmission of other infectious diseases.

"But some of the recommendations conflict with what we know about the developmental benefits of early breastfeeding and skin-to-skin contact," said study lead author Dani Dumitriu from the Columbia University Vagelos College of Physicians and Surgeons in the US.

"Our study shows that these measures may not be necessary for healthy newborns with COVID-positive moms," Dumitriu said.

The researchers believe it is particularly important that mothers with COVID-19 have the opportunity to directly breastfeed their newborns.

"Breast milk is known to protect newborns against numerous pathogens, and it may help protect newborns against infection with SARS-CoV-2. Most studies have not found SARS-CoV-2 in breast milk, and breast milk has been found to contain antibodies against the virus," Gyamfi-Bannerman explained. PTI

## **Nutritious diets**

**60% of rural India can't afford nutritious diets (HindustanTimes: 20201014)**

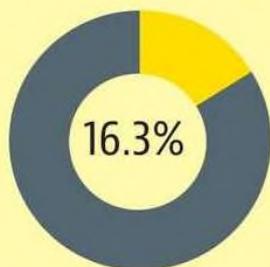
<https://epaper.hindustantimes.com/Home/ArticleView>

**60% of rural India can't afford nutritious diets**

# 1 Nutrition insecurity significantly higher than poverty across India

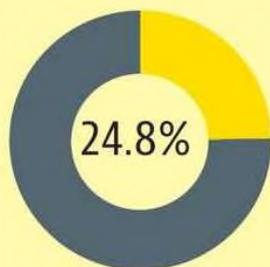
Only 22.5% Indians were poor, if one were to take the World Bank's \$1.9 per day poverty line in PPP terms, in 2011. This share was 24.8% in rural India. The share of Indian population considered food insecure by the FAO in 2011-12 was even lower, just 16.3%. The FAO measure essentially looks at calorie adequacy and therefore does not take into account other nutritional requirements. However, 63.3% of people in rural India could not afford what the paper describes as the Cost of a Recommended Diet (CoRD). This share increases to 76.2% if one were to assume that a third of their spending would go on non-food items.

## CoRD poverty and other measures



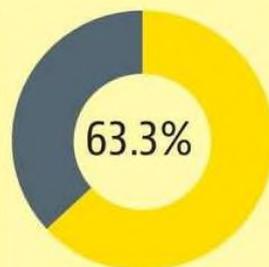
Prevalence of undernourishment (three-year average)

Source: FAO



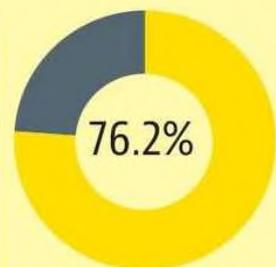
Rural poverty headcount ratio at \$1.90 a day (2011 PPP)

Source: World Bank



Rural population unable to afford cost of recommended diet

Source: K Raghunathan et al



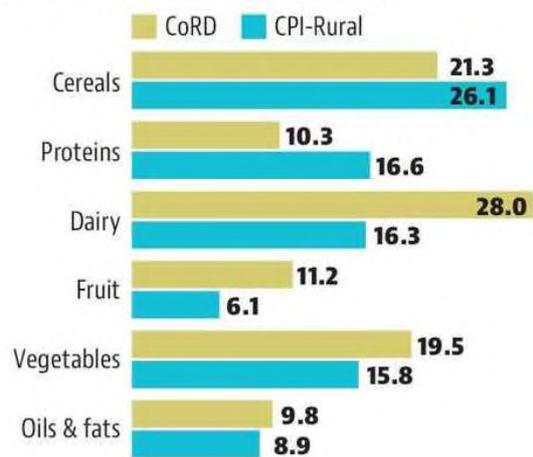
Rural population unable to afford CoRD after accounting for non-food spending

Source: K Raghunathan et al

# 2 Milk, vegetables are the key burden on nutritious diet budgets, not cereals

NIN has laid out dietary guidelines which specify the required intake of food items under the broad categories of cereals, proteins (pulses, meat, fish and eggs), dairy, fruits, vegetables, dark green leafy vegetables and oil and fats. The paper has estimated CoRD by looking at the cost of the cheapest food items in each of these groups across India's 380 rural districts, calculating the price of the nutritionally adequate food basket and then checking its affordability with expected earnings of men and women. The authors estimate CoRD to be ₹45.1 and ₹51.3 for women and men in 2011. The paper also gives a break up (by cost) of a nutritionally adequate diet and almost half of the cost is on account of dairy products and vegetables. The composition of CoRD, when compared with the weights in rural Consumer Price Index (CPI) food basket shows that the latter overestimates the importance of cereals and proteins at the cost of dairy products, fruits and vegetables. Another interesting finding of the paper is that not only have food prices increased between 2001 and 2011, which is expected, but so has their volatility

## % share of each group

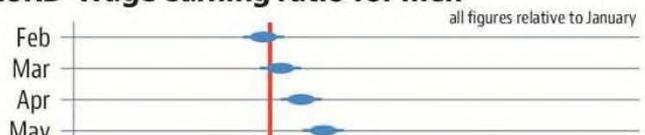


CPI-Rural shares will not add to 100 because sugar and spices categories have been left out  
Source: CMIE, K Raghunathan et al

# 3 Monsoon worsens nutritional insecurity in India

A key metric which the paper tracks is the ratio of CoRD and wage earnings, which is a good measure of affordability of nutritious diets. Affordability of nutritious diets worsens as the ratio becomes

## CoRD-Wage earning ratio for men



## Roshan Kishore

The cost of a recommended diet (CoRD) in India in 2011 (the most recent year for which expenditure and consumption data is available) was ₹45.1 and ₹51.3 for women and men, according to a paper published this month in the Food Policy journal — numbers that, according to the paper's authors, Kalyani Raghunathan, an economist at the International Food Policy Research Institute (IFPRI), and others were almost 1.6 times the commonly used World Bank poverty line of \$1.9 a day in Purchasing Power Parity (PPP) terms.

Worse still, according to the paper, in real terms, CoRD increased more than 3.5 times for both men and women between 2001 and 2011. To be sure, real earnings increased at a faster pace, especially for men, during this period.

The paper highlights an important fact: freedom from poverty, even food security — the way in which it is defined by the United Nations Food and Agricultural Organisation (FAO) — do not guarantee nutrition security. As a result, while India achieved a rapid reduction in poverty in the 2000s, a majority of its rural population was unable to afford nutritional diets and nutritional poverty was significantly higher in India than what is captured by commonly used poverty measures.

For its calculation of a nutritionally adequate diet in rural India, the paper used the definition used by the National Institute of Nutrition (NIN).

© 2020 All Rights Reserved. Powered by [Summit](#)

Disclaimer: The contents of this website is the copyright of HT Digital Streams Limited and any downloadable version thereof, including but not limited to electronic or digital version of newspaper (e-paper) in any format, is intended for personal consumption only. Dissemination, distribution, circulation and/ or publication of any content or e-paper (pdf or otherwise) through any mode and/or on any social media platform without prior authorization/ permission/ license, is strictly prohibited.

## **Covid-19: What you need to know today (HindustanTimes: 20201014)**

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

Johnson & Johnson has paused the trial of its vaccine candidate for the coronavirus after an unexplained illness in one of the participants, although it wasn't immediately clear whether the person was part of the test (or experimental group) which receives the shot, or the control group which doesn't (people in this group usually receive a placebo).

The news was broken by Stat News, which also broke the news of the pause in the AstraZeneca-Oxford vaccine trial back in September.

What now?

The Data Safety Monitoring Board (DSMB), an independent panel comprising at least three external experts who have no financial links with either the study or the company conducting it — it is considered good practice to, apart from medical experts, have someone who specialises in the ethics of medical trials, and a person who understands data, as part of this

board — will now have to look at the case, and decide what to do next. In any trial, the DSMB is responsible for the safety of participants.

Stat News, citing J&J, made the distinction between a pause and a hold.

“J&J emphasised... the difference between a study pause and a clinical hold, which is a formal regulatory action that can last much longer. The vaccine study is not currently under a clinical hold. J&J said that while it normally communicates clinical holds to the public, it does not usually inform the public of study pauses.”

The AstraZeneca study restarted a few days after it was paused.

Such pauses, and even holds, are common in the vaccine development process. But this isn't just any ordinary vaccine. It is a vaccine for the coronavirus disease, which has infected 38 million and killed almost 1.1 million people around the world since the beginning of the year. There are 8.35 million active cases of Covid-19 as this column is being written, and at the current fatality rate of closed cases, at least 300,000 of them can be expected to succumb to the viral disease. All of this has made the process of finding a vaccine for Covid-19 a very public one, with unprecedented attention being paid to every small development. Most newsrooms, including Hindustan Times, have a vaccine tracker (both – a piece of content, and a very real person keeping an eye on all vaccines). HT's for instance, shows that there are 29 vaccine candidates in early or Phase 1 trials, another 14 in Phase 2 trials, and 11 in large Phase 3 trials. It also shows that five have been approved for emergency, limited, or early use. The J&J vaccine was in a Phase 3 trial involving 60,000 participants.

Interestingly, most companies, including J&J, have released to the public extensive details of their clinical testing protocol — another unprecedented move in the history of vaccine development. J&J is also one of nine companies whose CEOs have signed a pledge to ensure they will “uphold the integrity of the scientific process as they work towards potential global regulatory filings and approvals” — a promise that came amidst fears that the political establishment in several countries could arm-twist companies into rushing vaccines into the market or for regulatory approval before their safety was established beyond doubt (and in vaccines, safety is even more important than efficacy).

J&J was matter-of-fact about the pause, as it should be. “Adverse effects — illnesses, accidents, etc — even those that are serious, are an expected part of any clinical study, especially large studies,” it said in a statement. It is likely that the company will release more information about the patient's illness over the next few days.

J&J's is a so-called vector vaccine, which means it uses a viral vector — in its case a modified virus that causes cold — to carry genetic material from Sars-CoV-2 into the human body so as to engineer an immune response. The company's vaccine candidate seemed to have an edge over others — the viral vector being used is the same used in the company's already approved Ebola vaccine — and also came with some advantages over the others: it needs refrigeration, not freezing; and it is a single-shot vaccine unlike many of the other candidates which are double shots.

Still, the pause is a good sign — it means that due process is being followed. As it should be.

## Covid rules in 300

**Police to enforce Covid rules in 300 popular city markets Loudspeakers at markets will be used to give out information about masks, social distancing; teams to also fine shopkeepers flouting norms(HindustanTimes: 20201014)**

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



Residents flout social distancing norms as they crowd at Sarojini Nagar market on Sunday. Police said special teams will be deployed at crowded markets to ensure people follow all Covid-related rules and wear masks. AMAL KS/HT PHOTO

### **Prawesh Lama**

prawesh.lama@htlive.com

New Delhi : Ahead of the festival season, Delhi Police have identified at least 300 markets where there could be a heavy footfall in the coming weeks, and have planned to deploy special teams to ensure people follow social distancing rules and wear masks in contain the spread of the Covid-19 pandemic.

Senior Delhi Police officers said their teams that are issuing fines to people on the road for not wearing masks or violating social distancing norms, will soon be posted in markets with high footfall such as Lajpat Nagar, Chandni Chowk, Sarojini Nagar and Karol Bagh.

Loudspeakers at the markets, presently used to make security-related announcements and caution people about unidentified objects, will be used to disseminate information about masks.

Many markets in Delhi have active containment zones, where it is important to ensure all shoppers wear masks. Chandni Chowk in central Delhi has at least 13 containment zones, and Karol Bagh, also a popular market, which sees large crowds during festivals, has at least 26 active containment zones.

Containment zones are sealed areas where the free movement of individuals is prohibited to contain the spread of the infection. All residents are put under strict surveillance and are periodically screened.

A police officer from south Delhi, who did not wish to be named, said, “We will make the announcements real-time. At many markets such as Sarojini Nagar and Lajpat Nagar, we have watchtowers from where we spotted suspicious people. This year the towers will be used to check social distancing norms and crowds outside and inside shops. Issuing fines will be used as the last alternative. We will speak to the shoppers after watching their movement from our control room through CCTV cameras.”

A report prepared by the National Control for Disease Control (NCDC) has cautioned that there could be at least 15,000 Covid-19 cases per day in the upcoming winters and festivals. The report has been drafted by NCDC under the supervision of Dr VK Paul, Chairman of NITI Aayog Member (Health).

At present, Delhi is reporting about 2,551 new Covid cases on an average every day( daily average of the last 10 days).

Until Tuesday evening, Delhi had reported a total of 314,224 Covid-19 cases. 5,854 have died, 286,880 recovered and there are still 21,490 active cases. The city on Tuesday recorded 3,036 new cases, with a positivity rate of 5.52%, and 45 deaths.

Delhi police officers said the strict checks on the use of masks on the streets is working well because people are now wary about the ₹500 fine. Police have to date (until Tuesday afternoon 4 pm), fined 386,188 persons and collected a total of ₹19,30,94,000(19.30 crore) for not wearing masks.

“We have been taking several steps such as making announcements for wearing masks, follow social distancing, and washing hands regularly. These are being done through police vehicles and public address systems that are in place at crowded places such as markets. Our police staff present in such places apprise people about the three precautionary measures to fight coronavirus (Covid-19). For the violators ,we are issuing challans. For the needy, police is distributing masks,” said Delhi Police spokesperson Eish Singhal.

Health experts have said wearing masks, washing hands and observing social distancing, specially in public places are the main precautions against the coronavirus disease. Police said apart from penalising those who do not wear masks, their teams will fine shopkeepers who flout social distancing norms.

“The fine for first time is ₹500. If the shopkeepers do not ensure social distancing, the fine is twice the amount. A case can be registered under the Indian Penal Code section if they continue to violate the norms. We will keep making announcements and request both shoppers and shopkeepers. It requires cooperation from their end ,” another police officer said.

Ashwani Marwah, general secretary of the Lajpat Nagar market welfare association, said they are in touch with the local police to ensure that Covid rules are followed.

“We have meetings regularly. We will follow all guidelines put in place by the government. We are working with police and will give them recordings that have to be played through the public address system. The public announcement (PA) system is monitored by the police. We will ensure there is no crowding in the market. Every shop has to have a thermal scanner and a sanitising station.”

Disclaimer: The contents of this website is the copyright of HT Digital Streams Limited and any downloadable version thereof, including but not limited to electronic or digital version of newspaper (e-paper) in any format, is intended for personal consumption only. Dissemination, distribution, circulation and/ or publication of any content or e-paper (pdf or otherwise) through any mode and/or on any social media platform without prior authorization/ permission/ license, is strictly prohibited.

## **Breast aware**

### **How to be breast aware? (The Hindu: 20201014)**

<https://www.thehindu.com/sci-tech/health/how-to-be-breast-aware/article32834961.ece>

Being breast aware is to become familiar with one's breast and the changes that happen to it throughout a person's life. It helps us be aware of what is normal and what is not.

## **Therapeutic leukaemia vaccine**

### **Scientists develop new precise therapeutic leukaemia vaccine (New Kerala: 20201014)**

<https://www.newkerala.com/news/2020/180953.htm>

In a major study, researchers have developed a new type of precise therapeutic vaccine against leukaemia -- a cancer of blood-forming tissues, including bone marrow.

Although the possibility of treating leukaemia through vaccination has been established, therapeutic performance still falls short of expectations in the clinic.

According to the study, published in the journal Nature Biomedical Engineering, the vaccine utilises self-healing polylactic acid microcapsules for co-encapsulating a new epitope peptide and PD-1 antibody.

"Our clinical findings revealed the high expression of EPS8 and PD-1/PD-L1 in leukaemia patients, which could be respectively used as a new type of leukaemia antigen and a checkpoint target for a leukaemia vaccine," said study author LI Yuhua from Zhujiang Hospital in China.

In the novel vaccine, epitope peptides and PD-1 antibodies can be simply, mildly and efficiently loaded into polylactic acid microcapsules, facilitated by the unique self-healing feature of the microcapsule.

After a single vaccination, the deposition and degradation of microcapsules at the local injection site lead to the recruitment of activated antigen-presenting cells and sustained release of both cargos.

"With the synergism of these two aspects, we observed a significant improvement in specific Cytotoxic T Lymphocyte (CTL) activation," said researchers.

They also verified the availability of the novel vaccine using various epitope peptides in different models, such as murine leukaemia, humanised cell line-derived leukaemia xenograft (CDX) and patient-derived leukaemia xenograft (PDX) models.

The microcapsule-based formulation demonstrated its superior performance over that of the ISA adjuvant (commercialized adjuvant) in all leukaemia therapeutic models, showing the promise of the microcapsule-based vaccine for use against various leukaemia antigens in the clinic.

"With the advantages of FDA-approved polylactic acid material, convenience in preparing the vaccine formulation, diversity of vaccine components, and excellent therapeutic effect, the microcapsule-based vaccine exhibits great potential for clinical translation," the authors wrote.

## **Breast cancer**

### **Breast cancer cases on rise due to Covid fear: Report (New Kerala: 20201014)**

<https://www.newkerala.com/news/2020/180773.htm>

The country has witnessed a spike in stage two and three breast cancer cases owing to delayed screenings and consultations as patients delay hospital visits due to Covid-19, according to a new report on Tuesday.

The report from Indraprastha Apollo Hospital in New Delhi found that women seem to be putting their breast health on the backseat by neglecting their screening and visit to physicians owing to the possibility of contracting Covid-19.

"Before the Covid 19 pandemic struck we had a minimum of 200 monthly visits by women for the post-operative follow-ups which are vital to monitor the patient' health and progress. Around 400 women used to visit for screening purposes," Ramesh Sarin, Senior Consultant, Surgical Oncology, Indraprastha Apollo Hospitals, said in a statement.

However, this number has now seen a sharp decline of 70 per cent since the lockdown, the hospital said.

"In the month of August-September, we have witnessed an increase in patients with late-stage two and three cancer which implies that cancer has progressed in the past six months from a treatable stage one phase to a complex life threatening stage three," Sarin added.

Breast cancer is the most common cancer in women worldwide, both in the developed and developing countries.

In India, over 1.5 lakh breast cancer patients are diagnosed annually and around 70,000 women succumb to it due to delay in detection and treatment.

It is predicted that by 2026 almost 2.3 lakh women will get breast cancer in India which is the same as in the west.

"The older you are the higher the risk for breast cancer. Women in India get breast cancer 10 years earlier than the women in the West," said Sarin.

"In India, a minimum of 12 per cent women cancer patients are between the age of 30-40 years and 50 per cent cases between the age group of 40-50 years," he added.

Early detection remains the best treatment in breast cancer. It is recommended that women should start having yearly mammography at the age of 40.

Women with dense breast tissue should have yearly high-quality breast ultrasound with their mammogram. When breast cancer is detected early then there is a good chance that it could be treated with breast saving surgery, the experts noted.

## **Mothers' anxiety**

### **Mothers' anxiety during pregnancy linked to asthma in kids (New Kerala: 20201014)**

<https://www.newkerala.com/news/2020/180687.htm>

Researchers have found that depression and anxiety in moms-to-be is linked to a heightened risk of asthma and poorer lung function in their 10-year-old children.

The findings, published in the journal Thorax, suggest that the risk of later life respiratory disease is likely programmed in the womb, rather than necessarily influenced by as yet unmeasured genetic, social or environmental factors.

Psychological distress, to include anxiety and depression, during pregnancy is associated with increased risks of respiratory disease in preschoolers, but whether this association persists into later childhood isn't known.

To find out, the researchers from Erasmus University Medical Centre in the Netherlands, drew on participants in the Generation R Study, a population-based prospective cohort study, which has been tracking life from early pregnancy onwards in Rotterdam.

The degree of overall psychological distress, depression and anxiety experienced by each parent in the second term of pregnancy and three years after the birth, was assessed, using a validated 53-item questionnaire.

Depression and anxiety were assessed only in the mothers, at two and six months after birth.

In all, 362 (nearly nine per cent) of the mothers and 167 (just under four per cent) of the fathers were clinically depressed and/or anxious during the pregnancy.

The lung function of 3,757 of the offspring was measured when they were 10 years old, and information on asthma obtained in 3,640 of them. Almost six per cent had asthma.

Mothers' overall psychological distress and symptoms of anxiety and depression during pregnancy were all associated with a 45-92 per cent increased risk of current asthma in their children, after adjusting for potentially influential factors, such as age, ethnicity, smoking during pregnancy, and pet keeping.

Factoring in fathers' psychological distress during pregnancy didn't change this association.

Further analysis of the patterns of psychological distress showed that mostly depressive or anxiety symptoms both during and after pregnancy were associated with a heightened risk of asthma in the children.

But separating out the potentially influential factors into three different groups, including lifestyle and health-related, socioeconomic, and birth and early childhood factors, made no difference to the associations found.

"Our results may indicate an intrauterine effect of maternal psychological distress during pregnancy on foetal lung development and respiratory morbidity, rather than an effect of unmeasured genetic, social, behavioural or environmental factors," the authors wrote.

## **Pregnancy complications**

### **Blood test that detects genetic abnormalities may help predict pregnancy complications before symptoms: Study (New Kerala: 20201014)**

<https://www.newkerala.com/news/2020/180684.htm>

A blood test, commonly used to detect foetal genetic abnormalities, may help predict complications associated with pregnancy even before symptoms develop, Epigenetics researchers have found.

Their preliminary study, appearing in Epigenetics journal, links certain cell-free DNA signatures to adverse outcomes in pregnancy, including ischemic placental disease and gestational diabetes.

The findings are the first to show that genetic material shed from the placenta into the mother's blood (circulating cell-free nucleic acids) during the first trimester of pregnancy could potentially be used to predict these complications.

Although the analysis of genetic material in mother's blood has been used to screen for genetic abnormalities in a pregnancy, this is the first time these specific methods have been used as a way to a more accurate prediction.

"Our research points to a promising approach that could improve outcomes for mothers and their babies using existing technologies," says Dr Sherin Devaskar, lead author of the study.

The physician-in-chief of UCLA Mattel Children's Hospital says if confirmed in larger studies, cell-free DNA blood tests may help identify issues in the placenta as an indicator of a healthy mother and foetus.

For the study, the researchers followed a diverse group of pregnant women between February 2017 and January 2019, testing their blood periodically throughout gestation. By the end of the study, 160 participants had given birth, with 102 maternal and 25 cord plasma samples taken along the way. They found that during the first-to-early second trimester, placenta-specific DNA increased among those women who went on to develop gestational diabetes. They also identified several differentially expressed genes and were able to create a model with a predictive value for adverse pregnancy outcomes.

"The novelty of this research is being able to break down a mother's DNA and be able to hone in on the health of the placenta -- something that researchers have never been able to do before," adds Devaskar who is also a distinguished professor of pediatrics at David Geffen School of Medicine. "This research warrants application of automated methodologies in multi-centre trials to improve future testing and screening of all women."

## **Blood test**

### **Blood test that detects genetic abnormalities may help predict pregnancy complications before symptoms: Study (New Kerala: 20201014)**

<https://www.newkerala.com/news/2020/180684.htm>

A blood test, commonly used to detect foetal genetic abnormalities, may help predict complications associated with pregnancy even before symptoms develop, Epigenetics researchers have found.

Their preliminary study, appearing in Epigenetics journal, links certain cell-free DNA signatures to adverse outcomes in pregnancy, including ischemic placental disease and gestational diabetes.

The findings are the first to show that genetic material shed from the placenta into the mother's blood (circulating cell-free nucleic acids) during the first trimester of pregnancy could potentially be used to predict these complications.

Although the analysis of genetic material in mother's blood has been used to screen for genetic abnormalities in a pregnancy, this is the first time these specific methods have been used as a way to a more accurate prediction.

"Our research points to a promising approach that could improve outcomes for mothers and their babies using existing technologies," says Dr Sherin Devaskar, lead author of the study.

The physician-in-chief of UCLA Mattel Children's Hospital says if confirmed in larger studies, cell-free DNA blood tests may help identify issues in the placenta as an indicator of a healthy mother and foetus.

For the study, the researchers followed a diverse group of pregnant women between February 2017 and January 2019, testing their blood periodically throughout gestation. By the end of the study, 160 participants had given birth, with 102 maternal and 25 cord plasma samples taken along the way. They found that during the first-to-early second trimester, placenta-specific DNA increased among those women who went on to develop gestational diabetes. They also identified several differentially expressed genes and were able to create a model with a predictive value for adverse pregnancy outcomes.

"The novelty of this research is being able to break down a mother's DNA and be able to hone in on the health of the placenta -- something that researchers have never been able to do before," adds Devaskar who is also a distinguished professor of pediatrics at David Geffen School of Medicine. "This research warrants application of automated methodologies in multi-centre trials to improve future testing and screening of all women."

## **Maternal blood test**

### **Maternal blood test may predict birth complications: Study(New Kerala: 20201014)**

<https://www.newkerala.com/news/2020/180682.htm>

A blood test commonly used to detect foetal genetic abnormalities may help predict complications associated with pregnancy before symptoms develop, say researchers, including one of Indian-origin.

The study, published in the journal *Epigenetics*, links certain cell-free DNA signatures to adverse outcomes in pregnancy, including ischemic placental disease and gestational diabetes.

The findings are the first to show that genetic material shed from the placenta into the mother's blood (circulating cell-free nucleic acids) during the first trimester of pregnancy could potentially be used to predict these potentially serious complications.

Although the analysis of genetic material in the mother's blood has been used to screen for genetic abnormalities in a pregnancy, this is the first time these specific methods have been used as a way of a more accurate prediction.

"Our research points to a promising approach that could improve outcomes for mothers and their babies using existing technologies," said study lead author Sherin Devaskar from the University of California, Los Angeles in the US.

"If confirmed in larger studies, cell-free DNA blood tests may help identify issues in the placenta as an indicator of a healthy mother and foetus," Devaskar added.

For the study, the researchers followed a diverse group of pregnant women between February 2017 and January 2019, testing their blood periodically throughout gestation.

By the end of the study, 160 participants had given birth, with 102 maternal and 25 cord plasma samples were taken along the way.

They found that during the first-to-early second trimester, placenta-specific DNA increased among those women who went on to develop gestational diabetes.

They also identified several differentially expressed genes and were able to create a model with a predictive value for adverse pregnancy outcomes.

"The novelty of this research is being able to break down a mother's DNA and be able to hone in on the health of the placenta - something that researchers have never been able to do before," said Devaskar.

"This research warrants application of automated methodologies in multi-centre trials to improve future testing and screening for all women," she noted.

**Infection (Hindustan: 20201014)**

[https://epaper.livehindustan.com/imageview\\_376951\\_124654422\\_4\\_1\\_14-10-2020\\_2\\_i\\_1\\_sf.html](https://epaper.livehindustan.com/imageview_376951_124654422_4_1_14-10-2020_2_i_1_sf.html)

लासेंट में प्रकाशित रिपोर्ट में खुलासा, भारत समेत कई देशों में इस तरह के मामले सामने आए

# दावा : दोबारा संक्रमण ज्यादा खतरनाक



नई दिल्ली | हिन्दुस्तान ब्यूरो

कोरोना से ठीक होने का मतलब आप सुरक्षित हैं, ऐसा बिल्कुल भी नहीं है। अमेरिका में 25 साल का एक युवक 48 दिन बाद दोबारा संक्रमण की चपेट में आ गया। वैज्ञानिकों ने शोध में पाया कि इस बार संक्रमण पहले के मुकाबले काफी घातक था। यहां तक कि युवक को ऑक्सिजन सपोर्ट पर रखना पड़ा। शोधकर्ताओं के मुताबिक, दोबारा संक्रमण ज्यादा खतरनाक हो रहा है। भारत समेत कई देशों में ऐसे मामले आए हैं।

लासेंट इंफेक्शियस डिजीज जर्नल में प्रकाशित अध्ययन के मुताबिक, अमेरिका के नेवादा राज्य में रहने वाले 25 वर्षीय व्यक्ति में 25 मार्च को कोरोना के लक्षण दिखाई दिए। 18 अप्रैल को उसकी रिपोर्ट पॉजिटिव आई। इसके बाद उसे आइसोलेशन में भेज दिया। वह पूरी तरह ठीक हो गया। मई में दो बार उसकी रिपोर्ट निगेटिव भी आई लेकिन 28 मई को एक बार फिर उसमें लक्षण दिखने लगे। पांच दिन बाद हालत बिगड़ी तो वह अस्पताल पहुंचा।

**04** ऐसे मामले बताए वैज्ञानिकों ने जिन्हें दोबारा संक्रमण हुआ

**48** दिन बाद दोबारा संक्रमण की चपेट में आया एक अमेरिकी

## मौत का भी खतरा

वैज्ञानिकों ने चार और ऐसे मामले बताए, जिन्हें दोबारा संक्रमण हुआ। इनमें एक बेलजियम, नीदरलैंड, हांगकांग और इक्वाडोर के हैं। नीदरलैंड में एक महिला दोबारा संक्रमित हुई और हालत ऐसी बिगड़ी कि मौत तक हो गई। इक्वाडोर में जिसे संक्रमण हुआ वह काफी बुरी हालत में अस्पताल में जूझ रहा।

## वैज्ञानिकों के सामने कई तरह की आशंकाएं

- शोधकर्ताओं का नेतृत्व करने वाले मार्क पैडोरी ने कहा, हमें यह समझना होगा कि दोबारा संक्रमण के मामलों में लक्षण इतने गंभीर क्यों हैं?
- कोरोना से पैदा इम्युनिटी आखिर कितने दिन बचाएगी। दोबारा संक्रमण खतरनाक है, कितनी बार हम वैकसीन देंगे, कहीं हमारी सारी मेहनत बेकार न हो जाए।
- हांगकांग यूनिवर्सिटी के शोधकर्ताओं ने बीते दिनों आशंका जताई थी कि शायद कोरोना कभी खत्म ही न हो और हमेशा के लिए इसानों के साथ बंधा रहे।



चीन के शेंगडोंग प्रांत में मंगलवार को बड़े पैमाने पर लोगों की कोरोना जांच की गई।

## क्या कहते हैं पहले के अध्ययन

### चीन : शायद फेफड़ों में रह गया हो वायरस

चीन में अस्पताल से ठीक हुए 15 फीसदी में दोबारा संक्रमण मिला था। महामारी रोग विशेषज्ञ वांग गुईकियांग ने मई में यह दावा किया था। वांग उस टीम का हिस्सा थे जो कोरोना के इलाज के लिए बनाई गई थी। उन्होंने कहा-शायद वायरस मरीजों के फेफड़ों में मौजूद था लेकिन जब नाक से सेंपल लिया गया तो वायरस पकड़ में नहीं आया।



### भारत : चार लोग गंभीर रूप से बीमार पाए गए

इंस्टिट्यूट ऑफ जिनोमिक्स एंड इंटीग्रेटिव बायोलॉजी व इंटर्नेशनल सेंटर फॉर जेनेटिक इंजीनियरिंग एंड बायोटेक्नोलॉजी दिल्ली ने मुंबई के तीन डॉक्टरों व एक स्वास्थ्यकर्मी में दोबारा संक्रमण की पुष्टि की। लासेंट की रिपोर्ट के मुताबिक, पहले की तुलना में चारों में ज्यादा गंभीर लक्षण थे और हालत भी नाजुक थी। इसमें मिला कि पहली बार संक्रमण कम लक्षण वाला होता है।



## चार बड़ी बातें

### 1. सबको 45 दिन बाद संक्रमण

हांगकांग, नेवाडा, इक्वाडोर व अन्य जितने भी मामलों की अब तक आधिकारिक तौर पर पुष्टि हुई है उनमें सबको 45 दिन बाद संक्रमण हुआ।

### 2. ज्यादातर युवा, उम्र 25 से 40 साल

इक्वाडोर का मामला छोड़ दिया जाए तो ज्यादातर दोबारा संक्रमित होने वाले लोगों की उम्र 25 से 40 के बीच थी, यानी युवाओं में सबसे ज्यादा दोबारा संक्रमण देखा गया।

### 3. दूसरे स्ट्रेन से संक्रमित हो रहे लोग

ज्यादातर मामलों में दूसरे स्ट्रेन से संक्रमण की बात आई। मुंबई में जिन चार में दोबारा संक्रमण की बात सामने आई थी उनमें भी अलग स्ट्रेन मिले थे।

### 4. इम्युनिटी टिकी रहने पर फिर सवाल

संक्रमित होने का मतलब वायरस के प्रति प्रतिरक्षा खत्म हो गई। ऐसे में ठीक हुए लोगों में एंटीबॉडी खत्म होने की बात सही साबित हो रही है।

## Vaccine (Hindustan: 20201014)

[https://epaper.livehindustan.com/imageview\\_376951\\_124658166\\_4\\_1\\_14-10-2020\\_2\\_i\\_1\\_sf.html](https://epaper.livehindustan.com/imageview_376951_124658166_4_1_14-10-2020_2_i_1_sf.html)

# देसी टीकों के दूसरे चरण का परिणाम अगले माह आएगा

## उम्मीद

नई दिल्ली | विशेष संवाददाता

देश में विकसित किए गए कोरोना के दो टीकों के दूसरे चरण के परीक्षण पूरे हो गए हैं। इन दो चरणों के परीक्षण के नतीजे नवंबर में आएंगे। उनके अध्ययन के बाद आगे की रणनीति बनाई जाएगी। नीति आयोग के सदस्य डॉ. वी. के. पॉल ने मंगलवार को प्रेस कॉन्फ्रेंस में यह जानकारी दी।

उन्होंने कहा कि कैडिला एवं भारत बायोटेक द्वारा विकसित दोनों टीकों ने दो चरणों के परीक्षण पूरे कर लिए हैं।

## जानकारी

- नीति आयोग के सदस्य वीके पॉल ने दी यह जानकारी
- कहा- नतीजों का अध्ययन करने के बाद आगे की रणनीति बनेगी

नवंबर तक इनके नतीजे मिलेंगे। यदि आंकड़ों से टीके के सफल रहने की जानकारी मिलती है तो फिर तीसरे चरण के परीक्षण आरंभ होंगे।

**सीरम इंस्टीट्यूट ने टीके के तीसरे चरण के परीक्षण फिर से आरंभ कर दिए:** उन्होंने कहा कि सीरम इंस्टीट्यूट ने अपने टीके के तीसरे चरण के परीक्षण फिर से आरंभ कर दिए हैं। वह एक

अंतरराष्ट्रीय वैक्सीन ट्रायल का हिस्सा है। उन्होंने उम्मीद जताई की नवंबर-दिसंबर तक यह परीक्षण भी पूरे हो जाएंगे। उन्होंने कहा कि जैसे ही कोरोना का टीका उपलब्ध होगा, उसे हर व्यक्ति तक पहुंचाने की दिशा में कार्य किया जाएगा। सरकार इसके लिए तैयारियां अभी से कर रही है।

**शीत भंडारणों का आकलन किया जा रहा :** केंद्रीय स्वास्थ्य सचिव ने कहा कि टीके को पहुंचाने के लिए टीकाकरण कार्यक्रम के शीत भंडारण के अलावा निजी क्षेत्र के शीत भंडारणों का आकलन किया जा रहा है, ताकि जरूरत पड़ने पर उसका इस्तेमाल किया जा सके।

## मंत्री समूह ने मंथन किया

**नई दिल्ली।** कोरोना पर मंत्रि समूह की बैठक में कोरोना टीकाकरण के उपायों पर चर्चा की गई। बैठक की अध्यक्षता केंद्रीय स्वास्थ्य एवं परिवार कल्याण मंत्री डॉ. हर्षवर्धन ने वचुंअल तरीके से की। बैठक में नीति आयोग के सदस्य (स्वास्थ्य) डॉ. विनोद के. पॉल ने विस्तृत प्रस्तुतिकरण के माध्यम से कोविड वैक्सीन के विकास की प्रक्रिया से अवगत कराया। उन्होंने जनसंख्या के प्राथमिकता वाले वर्ग पर व्यापक अध्ययन प्रस्तुत किया जिन्हें सेंटर फॉर डिजिज कंट्रोल (सीडीसी), अमरीका

और विश्व स्वास्थ्य संगठन की सिफारिशों के अनुसार वैक्सीन की प्रारंभिक खुराक मिलेगी। उन्होंने टीके की नवीनतम भंडारण स्थिति, भंडारण सुविधा में तापमान जीओ-टैग स्वास्थ्य केंद्रों आदि के बारे में बताया। केंद्रीय स्वास्थ्य सचिव राजेश भूषण ने पॉजिटिविटी दर को पांच प्रतिशत से कम रखने, देशव्यापी मृत्यु दर को एक प्रतिशत से कम रखने के लिए आक्रामक जांच तथा सामान्य जनसंख्या के बीच कोविड अनुकूल व्यवहार की गंभीरता और मजबूती की जरूरत बताई।

## **Corona (Hindustan: 20201014)**

[https://epaper.livehindustan.com/imageview\\_376951\\_124656616\\_4\\_1\\_14-10-2020\\_2\\_i\\_1\\_sf.html](https://epaper.livehindustan.com/imageview_376951_124656616_4_1_14-10-2020_2_i_1_sf.html)

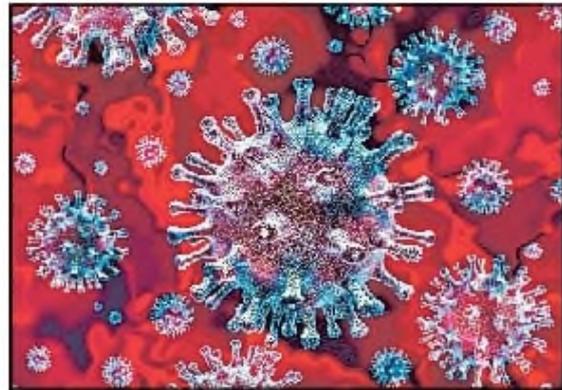
# युवा कोरोना को लेकर मुगालते में ना रहें: केंद्र

## चेतावनी

नई दिल्ली | विशेष संवाददाता

केंद्रीय स्वास्थ्य मंत्रालय ने मंगलवार को कहा कि कोविड-19 संबंधी 47 प्रतिशत मौत के मामलों में 60 साल से कम उम्र के लोग शामिल हैं। इनमें दो फीसदी लोग 25 साल से कम उम्र के भी हैं। इसलिए युवा इस मुगालते में नहीं रहें कि वे जवान हैं, उन्हें बीमारी का कोई असर नहीं होगा। वे अपनी धारण बदलें और बचाव के नियमों का पालन करें।

स्वास्थ्य सचिव राजेश भूषण ने प्रेस कांफ्रेंस में कहा कि कोविड-19 संबंधी मौतों में 70 प्रतिशत मामले पुरुषों और 30 प्रतिशत मामले महिलाओं से संबंधित हैं। भूषण ने कहा कि लगभग 53 प्रतिशत मामलों में लोगों की उम्र 60 साल या इससे अधिक रही। मौत के 35 प्रतिशत मामलों में 45-60 वर्ष की उम्र समूह के लोग शामिल रहे हैं। 10 प्रतिशत मामलों में 26-44 वर्ष की उम्र समूह के लोग शामिल रहे। 18-25 वर्ष की उम्र समूह और 17 साल से कम उम्र के लोगों में एक-एक प्रतिशत मौत के



## संक्रमण दर घटी

भूषण ने कहा कि संक्रमित होने की कुल साप्ताहिक और प्रतिदिन की दर में कमी आई है। यह क्रमशः 8.07%, 6.24% तथा 5.16% है।

## मौसमी बीमारियों के संक्रमण पर दिशा-निर्देश

स्वास्थ्य मंत्रालय ने मंगलवार को कोरोना और अन्य मौसमी बीमारियों के साझा संक्रमण के इलाज को लेकर दिशानिर्देश जारी किए। इसमें कहा गया है कि डब्ल्यूएचओ के मुताबिक तेज बुखार और कफ की स्थिति में मरीज कोरोना का भी शिकार हो सकता है। इसके अलावा बुखार, कफ, कमजोरी, सिर दर्द दिखें तो भी कोरोना की आशंका रहती है।

प्रतिशत लोगों को पहले से कोई ना कोई बीमारी थी, जबकि 4.8 प्रतिशत मामलों

● तीन हफ्ते बाद सक्रिय केस में रिकॉर्ड कमी ● एक दिन में 55 हजार नए केस

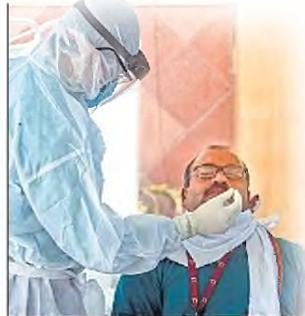
# उम्मीद : कोरोना से जंग जीतने की तरफ बढ़ा देश

नई दिल्ली | एजेंसी

देश अब कोरोना से जंग जीतने की तरफ बढ़ने लगा है। सक्रिय मरीजों में लगातार कमी से महामारी से जल्द छुटकारा पाने की उम्मीद जगी है। उपचाराधीन मरीजों की संख्या में मंगलवार को तीन हफ्ते बाद सबसे बड़ी गिरावट आई। इनकी कुल संख्या 24 हजार घटकर 8,38,729 रह गई। वहीं, दो माह में सबसे कम 55,342 केस ही सामने आए।

केंद्रीय स्वास्थ्य मंत्रालय के मुताबिक स्वस्थ होने वालों की संख्या बढ़ने और नए केस अपेक्षाकृत कम होने से लगातार पांचवां दिन है जब सक्रिय केस की संख्या नौ लाख के नीचे रही। मंत्रालय के अनुसार, भारत उन देशों की फेहरिस्त में शामिल है जहां प्रति 10 लाख आबादी पर संक्रमण और इससे मृत्यु दर सबसे कम है।

वहीं, 24 घंटों में ठीक हुए मरीजों की संख्या बढ़कर 62,27,296 हो गई, वहीं 706 और मरीजों की जान जाने से कुल संख्या एक लाख पार कर गई।



एक महीने में औसत दैनिक दर दो फीसदी से अधिक घटी

8.50% 6.24%  
(9 से 15 सितंबर) (7 से 13 अक्टूबर)

कुल 8.07 प्रतिशत

6.24% 5.16%  
साप्ताहिक प्रतिदिन



कोरोना का खतरा अभी बना हुआ है। चेहरे पर मास्क, बार-बार हाथ धोना, साफ-सफाई और दूरी, इन नियमों में बिल्कुल लापरवाही नहीं करनी है।

- नरेंद्र मोदी, प्रधानमंत्री



## सलाह

- स्वास्थ्य मंत्रालय ने त्योहारी मौसम और सर्दियों के मद्देनजर विशेष एहतियात रखने की हिदायत दी
- मास्क पहनने, सामाजिक दूरी का पालन और हाथ धोने की आदत बनाए रखें। युवा अपनी धारणा बदलें और बचाव के तरीके अपनाएं
- महामारी के खिलाफ जन-आंदोलन से जुड़ने की अपील। ट्विटर पर #यूनाइट2फाइट ने ट्रेंड किया



## संभावना

- देश में कैडिला और भारत बायोटेक के टीकों के दूसरे चरण के परीक्षण के नतीजे नवंबर में आ सकते हैं
- सीरम इंस्टीट्यूट ने तीसरे चरण का परीक्षण दोबारा शुरू किया। नवंबर-दिसंबर तक परिणाम
- डब्ल्यूएचओ ने उम्मीद जताई है कि इस साल के अंत या 2021 की शुरुआत तक एक किसी एक वैक्सीन का पंजीकरण हो जाएगा

## दुनिया में प्रति 10 लाख आबादी पर संक्रमित मरीजों की संख्या

विश्व	4794
भारत	5199
ब्रिटेन	8893
फ्रांस	10838
अमेरिका	23072