



# DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY  
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## Air pollution

### Air pollution may hinder India's fight against COVID-19, say scientists (The Tribune: 20201027)

<https://www.tribuneindia.com/news/health/air-pollution-may-hinder-indias-fight-against-covid-19-say-scientists-161422>

Increase in 1 microgram per cubic metre in PM 2.5 associated with an 8 pc rise in COVID-19 death rate: Study

Air pollution may hinder India's fight against COVID-19, say scientists  
A pollution and Covid mascot launched in New Delhi. Tribune photo: Mukesh Aggarwal

The causal link between air pollution and COVID-19 cases is yet to be established conclusively but long-term exposure will certainly make people more vulnerable to lung infections, warn scientists as the skies over large parts of north India, including Delhi, turn smoky and the air quality deteriorates rapidly.

Their concerns come amid several global studies pointing to the possible connection between higher air pollution levels and increased COVID-19 cases and deaths.

A study by researchers at Harvard University in the US in September showed that an increase of only 1 microgram per cubic metre in PM 2.5 is associated with an 8 per cent increase in the COVID-19 death rate.

“Given the current limited literature, the surge of PM2.5 level in Delhi may be associated with increased COVID-19 cases... Although the literature is relatively sparse at this stage,” Xiao Wu, corresponding author of the Harvard study, told PTI.

He said the relationship between long-term air pollution and COVID-19 has been documented in many studies, which indicate that adverse health impacts of air pollution can make people prone to the infection or exacerbate the severity of COVID-19 symptoms once infected.

This is interesting, especially considering COVID-19 causes viral pneumonia and acute respiratory distress syndrome, and severe inflammation to the heart and circulatory system, the scientist said.

Another study by the University of Cambridge in April found an association between living in an area of England with high levels of air pollution and the severity of COVID-19, caused by the SARS-CoV-2 virus.

“Based on our findings, I would expect to see an association between higher levels of air pollution in India and COVID-19 in the winter, similar with what we found in England,” said Marco Travaglio, corresponding author of the Cambridge study.

“If the levels of air pollution have been consistently above the legal limits for several months or years before this coming winter, I would expect to see a relationship between those levels and COVID-19 burden across different parts of India in November and thereafter,” Travaglio told PTI.

He noted that a key component of PM<sub>2.5</sub> toxicity is its composition which may vary considerably between countries.

“Nonetheless, the WHO legal limits for PM<sub>2.5</sub> are currently set at 10 µg/m<sup>3</sup> (microgrammes per cubic metre) annual mean. Levels beyond 500 µg/m<sup>3</sup> are extremely high and may have considerable impact on people’s health in relation to COVID-19 but also beyond it,” said Travaglio.

The level of small particulate matter (PM<sub>2.5</sub>) levels in Delhi have averaged around 180-340 µg/m<sup>3</sup> in the past few weeks while that of bigger pollution particles (PM<sub>10</sub>) has hovered between 120 and 450 during the time.

Long-term exposure to chronically high PM<sub>2.5</sub> levels weakens the ability of the lungs to fend off infections, therefore making people more susceptible to COVID-19, the scientists said.

In addition, studies from Italy have shown that traces of SARS-CoV-2 RNA, the genetic material of the virus, can be found on pollution particles, meaning that increased air pollution may act as a vehicle to increase COVID-19 transmission in highly polluted places.

The air quality in north India is expected to deteriorate further from November to February due to several factors such as stubble burning, festive fireworks and low wind speed conditions which lead to an uptick in vehicular and industrial pollution being trapped in the lower atmosphere.

“In view of this evidence, high levels of PM<sub>2.5</sub> in Delhi may lead to a higher number of COVID-19 cases,” Travaglio added.

Studies in humans have shown that toxic air particles can penetrate airways and cause widespread infiltration of lung cells.

This chronic state of inflammation may induce or aggravate health conditions such as asthma, chronic obstructive pulmonary disease, cardiovascular diseases and diabetes, experts said.

Because these conditions have been widely found to be associated with increased risk of contracting COVID-19 or incurring into critical illness, it is likely that air pollution acts as a risk factor to increase the susceptibility to COVID-19.

India has the world's second-highest caseload of over 7.9 million and the third-highest death toll with more than 115,000 from the novel coronavirus.

The National Centre for Disease Control (NCDC) has warned that Delhi is likely to report around 15,000 COVID-19 cases daily in winter because of the prevalence of respiratory illnesses during this season that worsen the symptoms of the disease. On Sunday, the national capital recorded 4,136 fresh COVID-19 cases, the highest single-day spike in 38 days.

D J Christopher, head of pulmonary medicine at the Christian Medical College in Tamil Nadu, noted that the increased severe form of COVID-19 among patients would lead to increased ICU hospitalisations, thereby increasing the burden of the healthcare system.

“The lung is the gateway to the body and takes the first impact from inhaled pollutants. It causes an inflammatory response which damages the lung and makes it more susceptible to infections,” Christopher told PTI.

‘Let us hope the numbers are not so high. There is a chance of hospital beds getting filled and shortage of ICU beds,’ he added.

Prof Rajneesh Bhardwaj concurred, saying there is growing scientific evidence that airborne respiratory droplets carrying the virus travel and contaminate the air after an infected person coughs. He added that pollution may help this airborne droplet to remain suspended for a longer time and may increase the spread of COVID-19.

“PM2.5 are finer particles which remain suspended in the air for a long time and hence droplet or viral particles can cling on to these particles to increase the risk. They may increase the number of cases as pollution increases especially with large PM2.5 levels,” Bhardwaj, associate professor at the Indian Institute of Technology-Bombay, told PTI.

He said the government should make contingent plans to deal with an expected large number of cases and warned that any healthcare system can be overwhelmed by a larger number of cases.

According to pulmonologist Anurag Agarwal, however, the relation between air pollution and COVID-19 cases is very complex. While in general high air pollution increases risk of respiratory infections, it is difficult to say much more, he said.

“Studies finding more infections and deaths in areas with high pollution have tried to statistically adjust for higher population density in polluted cities. Such adjusted correlations are interesting but do not represent proof,” Agarwal, director of the CSIR Institute of Genomics and Integrative Biology, told PTI.

“Nevertheless, it is clear that air pollution is bad for health and COVID-19 is more dangerous in unhealthy people. So the message is clear - we must take steps to reduce air pollution for many reasons,” he added. — PTI

## **COVID-19 transmission**

### **Ban on public events can bring down COVID-19 transmission rate by 24 per cent: Lancet study**

**R value above 1 indicates a growing outbreak, whereas an R value below 1 indicates a shrinking outbreak (The Tribune: 20201027)**

<https://www.tribuneindia.com/news/health/ban-on-public-events-can-bring-down-covid-19-transmission-rate-by-24-per-cent-lancet-study-161419>

Ban on public events can bring down COVID-19 transmission rate by 24 per cent: Lancet study  
Pupils at Martin-Buber-Oberschule secondary school wear protective masks against the spread of the coronavirus disease as school resumes following the autumn holidays in Berlin on October 26, 2020. Reuters

Ban on public events can bring down the COVID-19 reproduction number 'R' number—a key measure of virus transmission—by 24 per cent in less than a month, according to a modelling study published in The Lancet journal.

An R value above 1 indicates a growing outbreak, whereas an R value below 1 indicates a shrinking outbreak.

The research using data from 131 countries suggests that individual measures, including closure of schools and workplaces, ban on public events and gatherings of more than 10 people, requirements to stay at home, and internal movement limits, are associated with a reduction in transmission of SARS-CoV-2.

However, combined measures are more effective at reducing transmission, the researchers said.

“We found that combining different measures showed the greatest effect on reducing the transmission of COVID-19. As we experience a resurgence of the virus, policymakers will need to consider combinations of measures to reduce the R number,” said Professor Harish Nair from the University of Edinburgh, UK.

“Our study can inform decisions on which measures to introduce or lift, and when to expect to see their effects, but this will also depend on the local context—the R number at any given time, the local healthcare capacity, and the social and economic impact of measures,” Nair said.

When looking at the measures individually, a ban on public events was associated with the greatest reduction in R -- 24 per cent reduction after 28 days—which the researchers suggest may be because they are likely to prevent super spreader events and it was often the first measure to be introduced in countries.

The measures most strongly associated with an increase in R were lifting bans on gatherings of more than ten people and re-opening of schools, according to the researchers.

Although reopening schools was associated with a 24 per cent increase in the R by day 28, the researchers caution that they were unable to account for different precautions some countries implemented for reopening schools, for example limiting class sizes, distancing measure, routine deep cleaning, personal handwashing, face masks, and thermal temperature checks on arrival.

They said these are essential for safer school reopening and should be taken into account when interpreting this finding.

“We found an increase in R after reopening schools but is not clear whether the increase is attributable to specific age groups, where there may be substantial differences in adherence to social distancing measures within and outside classrooms,” Nair added.

“Furthermore, more data are needed to understand the specific role of schools in increased SARS-CoV-2 transmission through robust contact tracing,” he said.

The study, however, does not account for other potentially influential factors that have an impact on R—including, among other things, compliance with the interventions, changes in population behaviour, sub-national differences in R, or the effects of contact tracing and isolation – all of which vary by context.

Using the R number as a proxy for transmission also has limitations, as it is difficult to estimate accurately, particularly when prevalence is low, the researchers said.

In this modelling study, data on daily country-level estimates of R were linked with data on what measures those countries had in place from January 1, 2020 to July 20, 2020.

The timeline of each country was divided into individual phases when all measures remained the same in that country.

The analysis included 790 phases from 131 countries and the authors used a model to measure the association between which measures were in place and changes in the R. — PTI

**AI can predict students' educational outcomes based on tweets  
A team of Russian researchers has used AI-based models to predict high academic achievers from lower ones (The Tribune: 20201027)**

<https://www.tribuneindia.com/news/health/ai-can-predict-students-educational-outcomes-based-on-tweets-161391>

AI can predict students' educational outcomes based on tweets  
A team of Russian researchers has used AI-based models to predict high academic achievers from lower ones. Reuters

Dear parents, please note. You may not need to ask teachers how your kid is performing in studies as his or her tweets will be enough to gauge whether he or she will make it big in the future or not, thanks to Artificial Intelligence (AI).

A team of Russian researchers has used AI-based models to predict high academic achievers from lower ones based on their social media posts.

The prediction model uses a mathematical textual analysis that registers users' vocabulary (its range and the semantic fields from which concepts are taken), characters and symbols, post length and word length.

Every word has its own rating (a kind of IQ).

Scientific and cultural topics, English words, and words and posts that are longer in length rank highly and serve as indicators of good academic performance.

An abundance of emojis, words or whole phrases written in capital letters, and vocabulary related to horoscopes, driving and military service indicate lower grades in school.

"At the same time, posts can be quite short -- even tweets are quite informative," said Ivan Smirnov, leading research fellow at the Institute of Education of Higher School of Economics University in Moscow.

The study traces the career paths of 4,400 students in 42 Russian regions.

"Since this kind of data, in combination with digital traces, is difficult to obtain, it is almost never used," Smirnov said.

This kind of dataset allows you to develop a reliable model that can be applied to other settings.

"And the results can be extrapolated to all other students -- high school students and middle school students," Smirnov said in a paper published in the journal EPJ Data Science.

The researchers said that it is important that the model worked successfully on datasets of different social media sites, such as VK (a Russian online social media and social networking service) and Twitter, thereby proving that it can be effective in different contexts.

In addition, the model can be used to predict very different characteristics, from student academic performance to income or depression.

The study data included data about the students' VK accounts (3,483 students consented to provide this information).

In the study, unsupervised machine learning with word vector representations was performed on VK post corpus (totalling 1.9 billion words, with 2.5 million unique words).

It was then combined with a simpler supervised machine learning model that was trained in individual positions and taught to predict PISA (Programme for International Students Assessment) scores.

Posts from publicly viewable VK pages were used as a training sample -- this included a total of 130,575 posts from 2,468 subjects who took the PISA test.

The test allowed the researcher to assess a student's academic aptitude as well as their ability to apply their knowledge in practice, the authors wrote.

## **Breast cancer**

### **Indian, Pakistani women diagnosed with more aggressive breast cancer at younger age: Study**

### **Research also has shown poor mammogram screening rates in Indian and Pakistani women (The Tribune: 20201027)**

<https://www.tribuneindia.com/news/health/indian-pakistani-women-diagnosed-with-more-aggressive-breast-cancer-at-younger-age-study-161390>

Indian, Pakistani women diagnosed with more aggressive breast cancer at younger age: Study  
Research also has shown poor mammogram screening rates in Indian and Pakistani women  
Image: Thinkstock

Indian and Pakistani women are diagnosed with breast cancer, including more aggressive forms, at a younger age, according to a study that provides an insight into understanding the risk factors influencing the disease.

The study, published in the International Journal of Cancer, examined the characteristics of breast cancer among Indian and Pakistani-American and non-Hispanic white women in the US using data from the National Cancer Institute's Surveillance, Epidemiology and End Results Program.

Both, Indian and Pakistani women are diagnosed with more aggressive forms of the disease, at a younger age, according to the researchers.

The researchers, who are part of the Rutgers School of Public Health and Rutgers Cancer Institute of New Jersey, reviewed incidence data among Indian and Pakistani women between 1990 and 2014.

"Our results provide an insight into breast cancer in Indian and Pakistani women, suggesting several hypotheses to guide future scientific studies to better understand the risk factors influencing disease aetiology and prognosis," said Jaya M Satagopan, lead author and director of the Center for South Asian Quantitative Health and Education at the Rutgers School of Public Health.

South Asians are the fastest-growing major ethnic group in the United States with breast cancer rates increasing within the population, but little is known about the disease in this socio-culturally unique population, according to the study.

The researchers also reviewed the disease characteristics, treatment and survival data between 2000 and 2016 for 4,900 Indian and Pakistani women and 482,250 non-Hispanic white women with breast cancer.

They found that the occurrence of breast cancer in Indian and Pakistani women was lower than in non-Hispanic white women, however, the number of Indian and Pakistani women diagnosed with breast cancer increased over the years.

Indian and Pakistani women with breast cancer were more likely to be diagnosed at a younger age and more advanced stages of the disease. Besides, they received more subcutaneous or total mastectomies than non-Hispanic white women, it said.

While the researchers found that Indian and Pakistani women were less likely to die of breast cancer than their non-Hispanic white counterparts, their health was tracked for a shorter time.

Prior cancer research has shown that fewer Indian and Pakistani women participate in scientific studies and that several socio-cultural factors may delay their seeking health care.

Research also has shown poor mammogram screening rates in Indian and Pakistani women, which is linked to a lack of family support, lack of transportation, modesty, fear, beliefs that cancer is divine punishment for past deeds, having lived in the United States for less than 10 years, low English proficiency and a lack of faith in the health system.

"Our study indicated that there are important differences in this population that justify further studies to better understand biological, sociocultural, and system-level factors such as interactions with the health system, affecting breast cancer screening patterns, diagnosis, risk and survival among South Asian women, given the paucity of literature on this topic," said the study's senior author Elisa V Bandera, co-leader of the Cancer Prevention and Control Research Program at Rutgers Cancer Institute of New Jersey and professor at Rutgers Robert Wood Johnson Medical School.

The study recommends identifying strategies to better engage Indian and Pakistani women in breast cancer studies and to improve interactions between health care providers and Indian and Pakistani women to identify socio-cultural factors associated with screening decisions and health care use in this population.

"As the South Asian population in the United States — and especially in New Jersey — grows, it is imperative that we work to promote health equity in cancer prevention, screening, early diagnosis and treatment through community engagement and a team science approach," said Anita Kinney, director of the Center for Cancer Health Equity at Rutgers School of Public Health and Rutgers Cancer Institute of New Jersey and professor at the Rutgers School of Public Health, who is also one of the study's authors. PTI

## **India's COVID-19 fatality rate**

### **India's COVID-19 fatality rate at 1.50 pc, lowest since Mar 22: Health ministry**

**There are 14 states and Union Territories including Rajasthan, Jharkhand, Andhra Pradesh, Telangana, Bihar, Odisha, Assam and Kerala where the Case Fatality Ratio (CFR) is lower than 1 per cent.(The Tribune: 20201027)**

<https://www.tribuneindia.com/news/health/indias-covid-19-fatality-rate-at-1-50-pc-lowest-since-mar-22-health-ministry-161389>

India's COVID-19 fatality rate at 1.50 pc, lowest since Mar 22: Health ministry

Less than 500 deaths (480) have been reported in a span of 24 hours in the country, according to the data updated at 8 am on Monday. PTI photo.

India's COVID-19 fatality rate has dropped to 1.50 per cent, the lowest since March 22, the Union Health Ministry said on Monday crediting the focused efforts of the Centre, states and UTs on effective clinical management of hospitalised cases.

There are 14 states and Union Territories including Rajasthan, Jharkhand, Andhra Pradesh, Telangana, Bihar, Odisha, Assam and Kerala where the Case Fatality Ratio (CFR) is lower than 1 per cent, the ministry said.

With an effective containment strategy, aggressive testing and standardised clinical management protocols based on a holistic standard of care protocol across government and private hospitals, the number of new deaths has significantly dipped, it said.

Less than 500 deaths (480) have been reported in a span of 24 hours in the country, according to the data updated at 8 am on Monday.

"India has one of the lowest fatality rates in the world. The case fatality rate is lowest since March 22 and is continuously declining," the ministry said as it underlined that the case fatality rate was 3.23 per cent on May 4.

As part of the COVID-19 management and response policy, the Centre has had a sharp focus on not only containing the spread of the disease but to reduce deaths and save lives by providing quality clinical care to critical and severe patients, the ministry said.

Collaborative efforts of the Centre, states, and union territories have resulted in the strengthening of the health facilities across the country. Presently, 2,218 dedicated COVID hospitals are providing quality medical care, it said.

As part of a unique initiative to build the capacities of ICU doctors in the clinical management of critical patients towards reducing fatalities, e-ICU has been started by AIIMS, New Delhi, it said.

Twice a week, on Tuesdays and Fridays, tele/video-consultation sessions are held by knowledge and domain experts for doctors manning the ICUs in the state hospitals. These sessions started from July 8. Till date, 25 tele-sessions have been held, and 393 institutions across 34 states and UTs have participated in them.

Also, many states have conducted population surveys to map and identify the vulnerable population like the elderly, pregnant women and those with comorbidities. This, with the help of technological solutions like mobile apps has ensured keeping the high-risk population under continuous observation, thus aiding early identification, timely clinical treatment and reducing fatalities.

At the ground level, frontline health workers like ASHAs and ANMs have done a commendable job of managing the migrant population and to enhance awareness at the community level, the ministry said.

"As a result, there are 14 states and UTs with CFR lower than 1 per cent," the ministry underscored.

The ministry said that 59,105 new recoveries were added in a span of 24 hours as against 45,148 new infections being reported during the same period. The total number of recoveries have crossed 71 lakh (71,37,228). A higher number of single day recoveries is also reflected in the continuous increase in the national recovery rate, which is 90.23 per cent at present, the ministry highlighted.

"India continues to report a trend of steadily decreasing active cases. Presently the active cases comprise merely 8.26 pc of the total caseload of the country standing at 6,53,717. This is the lowest since August 13 when the active cases were 6,53,622," the ministry said.

Seventy-eight per cent of the new recovered cases are observed to be concentrated in 10 states and a UT -- Karnataka, Kerala, Maharashtra, Tamil Nadu, West Bengal, Delhi, Andhra Pradesh, Assam, Uttar Pradesh and Rajasthan.

Karnataka has contributed the maximum to the single-day recoveries with more than 10,000 cases followed by Kerala with more than 7,000 cases.

A total 45,148 new coronavirus infections were registered in a day in the country on Monday which is "the lowest since July 22 when 37,000 new cases were added", the ministry said.

Eighty-two per cent of the new cases are from 10 states and a UT -- Kerala, Maharashtra, Karnataka, Delhi, West Bengal, Andhra Pradesh, Tamil Nadu, Uttar Pradesh, Rajasthan and Odisha. Kerala and Maharashtra contributed the maximum to the new confirmed cases with more than 6,000 cases each followed by Karnataka, Delhi and West Bengal with more than 4,000 cases, the ministry said.

Also, 480 case fatalities have been reported in 24 hours. Of these, nearly 80 per cent are concentrated in 10 states and a UT -- Maharashtra, West Bengal, Delhi, Karnataka, Tamil Nadu, Uttar Pradesh, Kerala, Chhattisgarh, Andhra Pradesh and Odisha.

More than 23 per cent of the new fatalities were reported from Maharashtra (112 deaths). India's COVID-19 caseload mounted to 79,09,959 with 45,148 new infections being reported

in a day, while the death toll climbed to 1,19,014 with 480 new fatalities, the data updated at 8 am on Monday showed. PTI

## **Oxford COVID-19 vaccine**

### **Oxford COVID-19 vaccine trials produce robust immune response in elderly, reports Financial Times. (The Tribune: 20201027)**

<https://www.tribuneindia.com/news/health/oxford-covid-19-vaccine-trials-produce-robust-immune-response-in-elderly-reports-financial-times-161354>

The findings echo data released in July which showed the vaccine generated ‘robust immune responses’ in a group of healthy adults aged between 18 and 55

Oxford COVID-19 vaccine trials produce robust immune response in elderly, reports Financial

The COVID-19 vaccine being developed by the University of Oxford and AstraZeneca Plc produces a robust immune response in elderly people, the group at highest risk, the Financial Times has said on Monday, citing early results.

The vaccine triggers protective antibodies and T-cells in older age groups, the Financial Times said, citing two people familiar with the finding, encouraging researchers as they seek evidence that it will spare those in later life from serious illness or death from the virus.

Details of the finding are expected to be published shortly in a clinical journal, the Financial Times said, without naming the publication.

The findings echo data released in July, which showed the vaccine generated “robust immune responses” in a group of healthy adults aged between 18 and 55, the newspaper reported, citing people aware of the results from so-called immunogenicity blood tests.

But the Financial Times cautioned that positive immunogenicity tests did not guarantee that the vaccine would ultimately prove safe and effective in older people.

AstraZeneca, which is developing the vaccine with Oxford University researchers, is seen as a frontrunner in the race to produce a vaccine to protect against COVID-19.

Oxford and AstraZeneca did not immediately respond to Reuters’ request for comments.

One of the world’s leading coronavirus vaccine candidates, called AZD1222 or ChAdOx1 nCoV-19, was developed by Oxford University scientists and licensed to AstraZeneca in April, which took on the task of scaling trials and production.

AstraZeneca resumed the US trial of the experimental vaccine after approval by US regulators, the company said on Friday.

It is a viral vector vaccine that uses a weakened version of a chimpanzee common cold virus that encodes instructions for making proteins from the novel coronavirus to build immunity against COVID-19. Reuters

## **Coronavirus disease (Covid-19)**

### **Why Delhi needs to ramp up testing again (Hindustan Times: (The Tribune: 20201027)**

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

After appearing to drop for a second time, new infections of the coronavirus disease (Covid-19) in Delhi have started rising again over the past two weeks. This spike in cases has come hand-in-hand with a steady rise in the positivity rate, suggesting that the outbreak may be expanding again. A rising positivity rate typically suggests that a region is testing inadequately. The positivity rate should drop to 5% or below if the testing programme is adequate and is keeping the outbreak in control, according to the World Health Organization. That is why testing enough, and using the right kind of tests, is the key to Delhi being able to control the outbreak in the next few weeks.

## **Air pollutionSupreme**

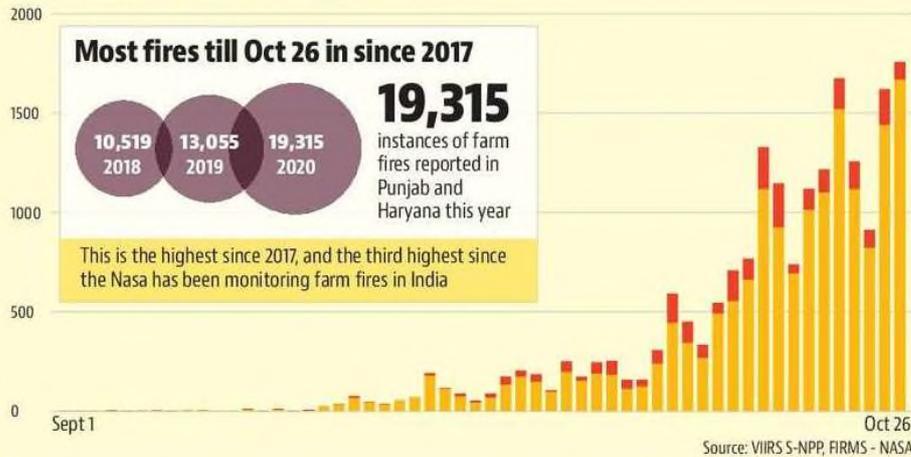
### **Central law in works to curb air pollutionSupreme Court puts on hold order to appoint one-man panel to check stubble burning (The Tribune: 20201027)**

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

# Stubble fires touch a new high

On Monday, a total of 1,758 farm fires were reported in Haryana and Punjab, the highest instances of stubble burning reported this season

Fires detected in ■ Punjab ■ Haryana



The Union government will bring in a new law for a permanent authority to oversee matters relating to air pollution in the National Capital Region (NCR), the Centre told the Supreme Court on Monday, prompting the judges to suspend an order that authorised former top court judge Madan Lokur to tackle the issue.

Solicitor general Tushar Mehta said the new authority will have a statutory role and have members from all states that contribute to the pollution problem in NCR, assuring the bench that a draft of the law will be shared in four days.

“The Centre has taken a holistic view of the matter and found that several ad hoc measures taken in the past have not achieved any results. Now a comprehensive law is being planned with a permanent body having participation of neighbouring states,” he said.

The submission came on a day when farm fires in Punjab and Haryana hit a new peak and the Capital’s air quality index (AQI) continued to linger in the “very poor” category for the fourth consecutive day, threatening to plunge into the “severe” zone as it has inevitably done at this time of the year for every year since 2016.

Mehta indicated the new law is likely to be brought in as an ordinance and, while he did not give more details, a top environment ministry official told HT it will focus on the Delhi-NCR region.

“I will not share any details of the law or what penalties are involved but this is a comprehensive law focused only on the Delhi-NCR region to curb the air pollution menace here from various sources. It is not an amendment of existing laws,” said RP Gupta, secretary, environment ministry.

The solicitor general also repeated a request for the top court to suspend an October 16 order designating retired justice Lokur to oversee the farm fire problem, claiming there could be points of conflict between the new authority and the former judge’s single-member panel.

Farmland fires contribute heavily to the annual air pollution crisis. Smoke from smouldering paddy fields, which are set alight as a way to prepare for sowing the next crop, rises up and

settles over much of north and northwest India. Coupled with local emissions and dust, it has in recent years turned cities into what the Supreme Court once described as gas chambers.

The top court accepted the Centre's request till the next date of hearing. "People are choking in this city. This is something that the government should have curbed and not a matter to be decided in a public interest litigation (PIL). We will welcome your decision if it is appropriate," said chief justice SA Bobde, who headed a bench that also comprised AS Bopanna and V Ramasubramanian.

Senior advocate Harish Salve, who has been assisting the SC on environment-related issues, supported the Centre's stand. "Attempts made by the Court in the past are not working out. Union government may require to write to states to take effective steps [to curb stubble burning]," Salve said. The lawyer of the petitioner whose plea triggered the hearing had opposed the decision to put the October 16 order "in abeyance". "For this year, justice Lokur Committee should continue. The law can be made operational from next year. On Thursday, the stubble burning cases in the MC Mehta case are listed. By then, justice Lokur's report will also be ready," said Vikas Singh. The October 16 order required the Lokur Committee to submit periodic reports. It was Singh who had suggested appointing an expert committee led by justice Lokur, who has past experience in hearing matters related to stubble burning and Delhi's pollution.

Experts said that while the Union government has the constitutional right to bring in a law since environment is a central subject, its implementation will need focus. "Though I have not seen the draft and heard only what solicitor general said in the Supreme Court, I believe such a law could be binding on state governments. But orders by the authority to be created under the law would have to be implemented by the state government. In the past, we have seen statutory orders under the Air Act by CPCB were also not implemented by state governments. So, the question would remain that what action Centre can take if the state fails to follow the directions," said Vijay Panjwani, former counsel for Central Pollution Control Board (CPCB), in the Supreme Court.

Environmental lawyer Ritwick Dutta too said the focus should be on enforcing existing mechanisms instead of creating new ones. "Air pollution has been an issue for a fairly long time. Why do you need an ordinance now? The Centre has powers to issue directions under Section 5 of the environment protection act. Why is this coming in the pre-pollution season? It's a distraction as drafting a law will take time," he said. Dutta added that the new law will also create multiple authorities.

A third expert said the new law and the mechanism will need to look beyond NCR. "What we need is legal compliance and deterrence strategy for the entire country. The Graded Response Action Plan and the comprehensive action plan are both notified under the environment protection act. There is no dearth of power under the law. The question is of adherence," said Anumita Roy Chowdhury, executive director, Centre for Science and Environment.

**Covid-19: What you need to know today (The Tribune: 20201027)**

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

I skipped four instalments of this column because I decided to take a short break — part birding trip, part R&R, but all safe, masked, and socially distanced. It involved driving through rural and semi-urban Uttar Pradesh, where no one appears to be wearing masks (and there is no social distancing), and Uttarakhand, where most people sport them, and there is some adherence to social distancing norms.

That India's largest state has managed to keep its Covid-19 numbers where they are (470,270 cases till the evening of October 25; 6,882 deaths; a mere 2,032 cases on October 25 itself; and only 27,317 active cases) despite a dependence on rapid antigen tests (which are unreliable) and lax enforcement of both mask discipline and social distancing is truly impressive — and also surprising.

Uttarakhand, at least the part I went to, wasn't crowded. The state insists that all inbound tourists register themselves, and there was a check at the point of entry to ensure this. A test isn't required, although I did take a reverse transcription polymerase chain reaction (RT-PCR) one a few days before I travelled (it was negative). According to the HT dashboard (which is also the source of the Uttar Pradesh numbers), Uttarakhand saw 221 cases on October 25, has seen 60,376 in all, and has had 993 deaths. That means it has fewer than 5,000 active cases.

To digress, it felt good to get out of Delhi after nearly eight months. I think, when this is all over (which must be one of the most commonly used phrases these days), it will take me some time to get used to not wearing masks; it felt strange to walk even on jungle trails without a mask despite there being no one else around.

The sense of normalcy in both Uttar Pradesh and Uttarakhand isn't surprising given their current caseloads. India itself has just around 650,000 active cases at this point. And on Sunday, India registered a mere 46,011 cases, half the number of cases it was registering per day in the third week of September. The last time it registered such numbers was in late July. As Dispatch 176 on October 7 first pointed out, the first wave of the coronavirus disease in India is over. It lasted roughly seven months.

There's no telling how long the lull will last, and how low the daily case numbers could go. Yet, based on what's happening in Europe — Dispatch 155, on September 11, referred to the emergence of the second wave in Europe that is now raging through that continent — and the US (the same column mentioned the likelihood of a third wave in the US), the respite will likely be temporary. And based on the trajectory of the second and third waves in the US and the second in Europe, there is a high probability that the intensity of the second wave in India will be stronger than the first. The second wave in Europe is following the same trend seen in the second wave in the US: it is leading to fewer deaths, and it will be interesting to see if the number of deaths in the ongoing third wave in the US is lower even than that seen in the second. Still, lower deaths haven't meant fewer hospitalisations. Hospitals in many European countries have been overwhelmed by the sheer number of people needing treatment for Covid-19, and the same thing is beginning to happen in several US states.

Part of the reason for the higher intensity of subsequent waves of the coronavirus disease is obvious — they coincide with progressive easing of restrictions on movement and activities, often encouraging people, usually the young, to indulge in irresponsible behaviour. In many European countries, the median age of people infected in the second wave is lower than that in the first.

The result isn't just a spike in infection numbers but severe illnesses, and may be even deaths in vulnerable populations. Research by Paraic Kenny of the Gundersen Medical Foundation, Wisconsin, and others, published on pre-print server medRxiv and reported in Nature, shows a strong correlation between the reopening of in-person education in colleges in one of the state's counties and an increase in coronavirus disease infections, with one of the strains (the researchers carried out a genomic investigation) spreading to old-age homes where it infected eight and killed two.

## **Immune system**

### **Study shows how exercise stalls cancer growth through immune system (The Tribune: 20201027)**

<https://www.newkerala.com/news/2020/188243.htm>

A recent study suggested that people with cancer who exercise generally have a better prognosis than inactive patients. Now, scientists explain 'Why?'

The study is published in the journal eLife.

Researchers at Karolinska Institutet in Sweden have found a likely explanation of why exercise helps slow down cancer growth in mice. Physical activity changes the metabolism of the immune system's cytotoxic T cells and thereby improves their ability to attack cancer cells.

"The biology behind the positive effects of exercise can provide new insights into how the body maintains health as well as help us design and improve treatments against cancer," said Randall Johnson, professor at the Department of Cell and Molecular Biology, Karolinska Institutet, and the study's corresponding author.

Prior research has shown that physical activity can prevent the health condition as well as improve the prognosis of several diseases including various forms of cancer. Exactly how exercise exerts its protective effects against cancer is, however, still unknown, especially when it comes to the biological mechanisms. One plausible explanation is that physical activity activates the immune system and thereby bolsters the body's ability to prevent and inhibit cancer growth.

In this study, researchers expanded on this hypothesis by examining how the immune system's cytotoxic T cells, that is white blood cells specialized in killing cancer cells, respond to exercise.

They divided mice with cancer into two groups and let one group exercise regularly in a spinning wheel while the other remained inactive. The result showed that cancer growth slowed and mortality decreased in the trained animals compared with the untrained.

Next, the researchers examined the importance of cytotoxic T cells by injecting antibodies that remove these T cells in both trained and untrained mice. The antibodies knocked out the positive effect of exercise on both cancer growth and survival, which according to the researchers demonstrates the significance of these T cells for exercise-induced suppression of cancer.

The researchers also transferred cytotoxic T cells from trained to untrained mice with tumours, which improved their prospects compared with those who got cells from untrained animals.

To examine how exercise influenced cancer growth, the researchers isolated T cells, blood and tissue samples after training sessions and measured levels of common metabolites that are produced in muscle and excreted into plasma at high levels during exertion. Some of these metabolites, such as lactate, altered the metabolism of the T cells and increased their activity. The researchers also found that T cells isolated from an exercised animal showed an altered metabolism compared to T cells from resting animals.

In addition, the researchers examined how these metabolites change in response to exercise in humans. They took blood samples from eight healthy men after 30 minutes of intense cycling and noticed that the same training-induced metabolites were released in humans.

"Our research shows that exercise affects the production of several molecules and metabolites that activate cancer-fighting immune cells and thereby inhibit cancer growth," said Helene Rundqvist, senior researcher at the Department of Laboratory Medicine at the Institutet, and the study's first author. "We hope these results may contribute to a deeper understanding of how our lifestyle impacts our immune system and inform the development of new immunotherapies against cancer."

## **Heart disease**

### **Key brain region linked to heart disease risk in depressed people (The Tribune: 20201027)**

<https://www.newkerala.com/news/2020/188202.htm>

Researchers at University of Cambridge have identified a brain region linked to higher heart disease risk in depressed and anxious people.

The new study, published today in the journal Nature Communications, suggests that the brain region called the subgenual anterior cingulate cortex (sgACC) -- a key part of the emotional brain -- is a crucial region in depression and anxiety, and targeted treatment based on a patient's symptoms could lead to better outcomes.

"We found that over-activity in sgACC promotes the body's 'fight-or-flight' rather than 'rest-and-digest' response, by activating the cardiovascular system and elevating threat responses," said Laith Alexander, one of the study's first authors.

"This builds on our earlier work showing that over-activity also reduces anticipation and motivation for rewards, mirroring the loss of ability to experience pleasure seen in depression."

Using marmosets, a type of non-human primate, the team of researchers infused tiny concentrations of an excitatory drug into sgACC to over-activate it.

Marmosets are used because their brains share important similarities with those of humans and it is possible to manipulate brain regions to understand causal effects.

The researchers found that sgACC over-activity increases heart rate, elevates cortisol levels and exaggerates animals' responsiveness to threat, mirroring the stress-related symptoms of depression and anxiety.

The researchers used brain imaging to explore other brain regions affected by sgACC over-activity during threat.

Over-activation of sgACC increased activity within the amygdala and hypothalamus, two key parts of the brain's stress network.

By contrast, it reduced activity in parts of the lateral prefrontal cortex - a region important in regulating emotional responses and shown to be underactive in depression.

"Our research shows that the sgACC may sit at the head and the heart of the matter when it comes to symptoms and treatment of depression and anxiety," said Professor Angela Roberts.

## **Better bone health**

### **Women who perform domestic chores have better bone health (The Tribune: 20201027)**

<https://www.newkerala.com/news/2020/188076.htm>

Women who spend a substantial amount of time doing domestic chores such as growing fruits and vegetables, churning butter, beating rugs, washing windows and caring for children have better bone density and overall bone health than women leading sedentary lifestyles, new research has found.

Previous studies in the field have looked at bone density measurements in menopausal women.

This time, the researchers from Beckman Institute for advanced Science and Technology at the University of Illinois at Urbana-Champaign focused on women between the ages of 18 and 46, an age group that is not often looked at in bone density studies.

"We wondered why there was so little research on pre-menopausal women, since presumably their bone density and activity predicts postmenopausal osteoporosis," said Kathryn Clancy, an associate professor of anthropology.

The researchers focused on a population of farmers in rural Poland whose lifestyles involved substantial farm and domestic labour.

They made some basic body measurements and looked at the physical activity patterns of these women.

"We also used a bone sonometer. It is a portable device that can be conveniently used to carry out bone density measurements," Lee informed.

The study found that measures such as grip strength and lean mass are associated with the bone density and frame size of pre-menopausal women.

"We also saw that the bone density of the radius, which is the bone at the base of your thumb, is very high compared to an average white woman of European descent," Lee said in a paper published in the American Journal of Human Biology.

"My work focuses on understanding how our activities shape our skeleton and what it means for the modern population," Lee added.

Moving forward, the researchers said they are interested in understanding whether the childhood environment has helped shape the bone health of the women.

## **Diabetes**

### **Are potatoes safe for people with diabetes to eat? (The Tribune: 20201027)**

<https://www.newkerala.com/news/2020/188070.htm>

A new study challenges a longstanding perception that people with type-2 diabetes always need to avoid eating potatoes, and other high Glycemic Index (GI) foods.

The findings, published in the journal Clinical Nutrition, showed that Glycemic Index is not an accurate surrogate for an individual's glycemic response (GR) to a food consumed as part of an evening meal.

"These findings are contrary to that of observational research and traditional dietary guidance that has led some to believe potatoes are not an appropriate food choice for people with type-2 diabetes," said corresponding author of the study Brooke Devlin from Australian Catholic University in Melbourne.

"Our study shows high GI foods, like potatoes, can be consumed as part of a healthy evening meal without negatively affecting GR -- and while delivering key nutrients in relatively few calories, which is essential for people with type-2 diabetes."

The controlled clinical trial involved 24 adults with type-2 diabetes.

Participants were provided the same breakfast and lunch, but they were randomly assigned to one of four dinners, each including either skinless white potatoes (test meal) prepared in three different ways (boiled, roasted, boiled then cooled then reheated) or basmati rice (control meal).

Participants repeated the experiment, with a nine-day break in between each trial, to cycle through all test meals and the control.

In addition to having blood samples collected regularly (both immediately after the meal and again every 30 minutes, for two hours), participants also wore a continuous glucose monitor overnight to track changes in blood sugar levels while sleeping.

There were no differences between meals in glucose response following the dinner that contained any of the potato dishes or basmati rice.

Moreover, participants' overnight glycemic response was more favourable after eating the evening meal that included any of the potato side dishes compared to low basmati rice, said the study.

Although the potatoes' impact on long-term glycemic control was not assessed in the study, the researchers concluded that "potatoes are a vegetable that is sustainable, affordable and nutrient-dense, and thus, they can play an important role in modern diets irrespective of metabolic health status."

However, people with diabetes should continue to follow the diet suggested by their physician, the study authors cautioned.

## **Sleep disorders**

### **Sleep disorders related to life in lockdown (The Tribune: 20201027)**

<https://www.newkerala.com/news/2020/187969.htm>

2020, unfortunately, has been a year that has not brought us much happiness, and for a significant proportion of individuals, sleep disturbances have added to their woes. The lockdowns imposed to prevent the spread of the novel coronavirus, SARS-CoV-2, have led to significant behavioral changes and adaptations to help individuals optimise their productivity, which in turn, have affected normal physiological processes related to health.

#### Circadian rhythm disturbances

Most mammals have a circadian body-clock which rhythmically has sleep and wake cycles. In humans, eight hours of sleep is considered the average requirement for most individuals, and the presence of cues such as external light and temperature influence such cycles. In the pre-COVID era, the timing, duration and regularity of sleep in most individuals was determined by

rigid schedules related to work or study. Post the lockdown, this has now been left to the vagaries of the demands of the new normal, and this has caused circadian disturbances. Work/study from home is relatively unstructured, and the increased digital media/backlit device exposure leads to the biological clock getting mixed signals about day-night transition, often leading to delays in sleep onset. A survey conducted among 1511 participants in India revealed that younger individuals and women were more susceptible to these changes, causing a state of 'social jetlag'. When conventional gender roles are in play, working women now have to multitask between household and work responsibilities, in addition to assisting younger kids with online school, and this possibly explains why their sleep schedules have been most disrupted. What has also been reported in studies is that despite sleeping for longer hours, individuals often report a poorer quality of sleep, resulting in feeling less rested.

### Insomnia

Social isolation, financial/job insecurity, stigmatization of individuals with COVID-19, the constant media exposure to reports of rising infections and deaths, and stories of near and dear ones succumbing to the disease all lead to a sense of helplessness, anxiety and depression. Insomnia is a common manifestation of depression, and as treating physicians, we have experienced a significant proportion of individuals report the symptom during the lockdown. In addition, post-traumatic stress disorder (PTSD), anxiety and depression, which were reported in up to half of all individuals who suffered from SARS infection in 2003 are likely to affect an equally high percentage of individuals who have had COVID-19, and insomnia is being recognized as a frequent symptom of what is now being called 'long COVID'. A psychological evaluation should be considered in all individuals who are experiencing insomnia, and the temptation to consume sedatives in a knee-jerk manner must be avoided. The elderly are especially vulnerable, and careful attention must be paid to any elderly person who has had new-onset insomnia during the lockdown.

### Sleep apnea

Sleep apnea is one of the commonest sleep disorders in the population, affecting up to 10 per cent adults. Inactivity, weight gain, alcohol consumption are all risk factors for obstructive sleep apnea, and lockdowns, by limiting one's activity outside the home along with binge eating/snacking and drinking might worsen pre-existing sleep apnea, or cause it in individuals who have significantly gained weight during the lockdown. Individuals who snore loudly, especially if they have high blood pressure or other cardiovascular disease must be assessed for sleep apnea.

The importance of sleep to maintain health cannot be overemphasized. It plays an important role in immunity and in recovery from infections. Simple measures that can be employed to ensure sleep hygiene during the lockdown would be maintaining a structure to one's day and having a constant sleep-wake time, avoiding bright lights in the form of devices close to bedtime, keeping the bedroom as dark as possible, avoiding caffeinated beverages for 6-8 hours prior to bedtime, exercising in the morning and avoiding excessive amounts of alcohol. If, despite these measures, one fails to ensure an adequate quantity and quality of sleep, seeking professional help to address the potential underlying causes would be prudent.

## New Cases (Hindustan: 20201027)

[https://epaper.livehindustan.com/imageview\\_408541\\_86722026\\_4\\_1\\_27-10-2020\\_2\\_i\\_1\\_sf.html](https://epaper.livehindustan.com/imageview_408541_86722026_4_1_27-10-2020_2_i_1_sf.html)

# • 24 घंटे में संक्रमण को 59,105 लोगों ने मात दी • इसी अवधि में 45,148 नए संक्रमित सामने आए देश में 94 दिन बाद 45 हजार मामले आए

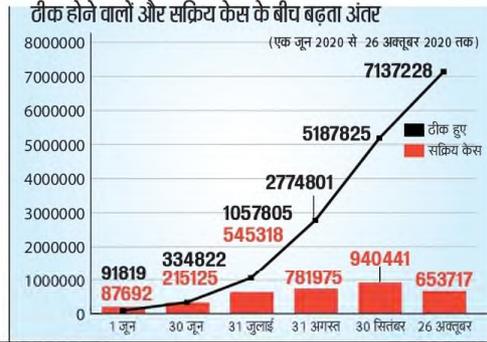


### कोरोना से लड़ाई

नई दिल्ली | एजेंसी

देश में इस महीने में दूसरी बार 24 घंटे के अंदर 50 हजार से कम नए मामले सामने आए। वहीं, इस दौरान मरने वालों की संख्या भी 500 से कम रही। 108 दिनों बाद 24 घंटे में मरने वालों की संख्या 500 से कम है।

केंद्रीय स्वास्थ्य मंत्रालय द्वारा सोमवार सुबह जारी आंकड़ों के अनुसार एक दिन में कोविड-19 के 45,148 नए मामले सामने आने के बाद देश में संक्रमण के मामले बढ़कर 79,09,959 हो गए। इससे पहले करीब 94 दिन पहले यानी 23 जुलाई को 24 घंटे के अंदर 45,720 मामले सामने आए थे। वहीं, सोमवार को देश में 480 और लोगों की मौत के बाद मृतक संख्या बढ़कर 1,19,014 हो गई। इससे पहले 10 जुलाई को 475 मौतें हुई थीं। उधर, आईसीएमआर के अनुसार 25 अक्टूबर तक कुल 10,34,62,778 नमूनों को कोविड-19 की जांच की गई, जिनमें से 9,39,309 नमूनों का परीक्षण रविवार



को ही किया गया।

**टीक होने की 90.23 प्रतिशत :**  
कुल 71,37,228 लोगों के संक्रमण मुक्त होने के बाद देश में मरीजों के टीक होने की दर बढ़कर 90.23 प्रतिशत हो गई है। देश में अभी 6,53,717 मरीजों का इलाज चल रहा है, जो कुल मामलों का 8.26 प्रतिशत है। यह 13 अगस्त के बाद सबसे कम है जब उपचाराधीन मामलों की संख्या 6,53,622 थी। टीक होने के मामलों में से 78 प्रतिशत मामले 10 राज्यों व केंद्रशासित प्रदेशों-कर्नाटक, केरल, महाराष्ट्र, तमिलनाडु, पश्चिम बंगाल, दिल्ली, आंध्र प्रदेश, असम, यूपी और राजस्थान से हैं।

### ऐसे बढ़ता गया संक्रमितों का आंकड़ा

17 जुलाई	10 लाख	16 सितंबर	50 लाख
07 अगस्त	20 लाख	28 सितंबर	60 लाख
23 अगस्त	30 लाख	11 अक्टूबर	70 लाख
05 सितंबर	40 लाख		

(स्वास्थ्य मंत्रालय)

### मृत्युदर 1.50 प्रतिशत, 22 मार्च के बाद सबसे कम

स्वास्थ्य मंत्रालय ने सोमवार को कहा कि भारत में कोविड-19 संबंधी मृत्युदर घटकर 1.50 प्रतिशत रह गई है जो 22 मार्च के बाद सबसे कम है। राजस्थान, झारखंड, आंध्र प्रदेश, तेलंगाना, बिहार, ओडिशा, असम और केरल सहित 14 राज्यों तथा केंद्रशासित प्रदेशों में कोविड-19 संबंधी मृत्युदर एक प्रतिशत से कम है। चार मई को महामारी संबंधी मृत्युदर 3.23 प्रतिशत थी। भारत विश्व में सबसे कम मृत्युदर वाले देशों में शामिल है।

### अमेरिका के मुकाबले भारत में आधे मामले

बीते सप्ताह में अमेरिका में कोरोना संक्रमण के मामलों में तेजी आई है, जो भारत की तुलना में दोगुनी है। शनिवार को अमेरिका में करीब 90 हजार नए मामले सामने आए थे और करीब 800 नई मौतें हुई थीं। वहीं, रविवार को भी अमेरिका में करीब 64 हजार नए संक्रमित सामने आए हैं। अमेरिका में संक्रमितों की संख्या 86,35,752 हो गई है। जबकि इस संक्रमण से अब तक 2,57,227 लोगों की मौत हो चुकी है।

## Infection (Hindustan: 20201027)

[https://epaper.livehindustan.com/imageview\\_408541\\_86721072\\_4\\_1\\_27-10-2020\\_2\\_i\\_1\\_sf.html](https://epaper.livehindustan.com/imageview_408541_86721072_4_1_27-10-2020_2_i_1_sf.html)

# प्रदूषण, फफूंदी और कबूतर बीमार कर रहे फेफड़े



कानपुर | राजेश द्विवेदी

कानपुर में जानलेवा फेफड़े की बीमारी (इंटरस्टीशियल लंग डिजीज यानी आईएलडी) ने तेजी से दस्तक दे दी है। चैस्ट विशेषज्ञों के पास लगातार आईएलडी के मरीजों का ग्राफ बढ़ रहा है। वह बीमारी प्रदूषण, फफूंदी और कबूतरों के कारण फैल रही है। इंडियन चैस्ट सोसाइटी और नेशनल कॉलेज आफ चैस्ट फिजीशियन ने सचेत कर इस बीमारी

की डायग्नोसिस और इलाज की गाइडलाइंस हाल में जारी की हैं। आईएलडी में समय से इलाज नहीं मिला तो यह बीमारी मरीज की जान ले लेती है। क्योंकि गंभीर आईएलडी मरीजों को आईसीयू में सिस्टम भी मदद नहीं करता है। मरीज के फेफड़े काम करना बंद करने लगते हैं। इससे फेफड़े की मेमब्रेन डैमेज हो जाती है। केस डिस्ट्री की रिपोर्ट मिलने के बाद इंडियन चैस्ट सोसाइटी और नेशनल कॉलेज आफ चैस्ट फिजीशियन ने माना कि शहर में वह बीमारी प्रदूषण और कबूतर के पंखों और डूपिंग यानी बीट से हो रही है। इस बीमारी के लिए कुलर, एसी में फफूंदी को भी जिम्मेदार माना जा रहा है।



### कौन से रोग आते हैं

आईएलडी के प्रकारों में पल्मोनरी फाइब्रोसिस प्रमुख है जो ज्यादातर मामलों में पाया जाता है। इसके अलावा इसमें सार्कॉइडोसिस, हाइपरसेंसिटिविटी न्यूमोनाइटिस और ऑक्ट्युएशनल लंग डिजीज शामिल हैं।

### क्या है बीमारी

इंटरस्टीशियल लंग डिजीज एक बीमारी का समूह है जो फेफड़ों के वायुकोशों के बीच की जगह (इंटरस्टीशियम) को प्रभावित करता है। इसमें वायुकोशों के बीच की कोशिकाएं मोटी हो जाती हैं। इस कारण व्यक्ति सही प्रकार से सांस नहीं ले पाता व ऑक्सीजन की उचित मात्रा रक्त में नहीं पहुंच पाती।

### यह है गाइडलाइन

इंडियन चैस्ट और नेशनल कॉलेज ने हाल ही में जारी गाइड लाइन में साफ किया है कि इस बीमारी की पहचान के लिए पल्मोनरी फंक्शन टेस्ट, सीटी स्कैन और जरूरत हो तो लंस बायोप्सी कराई जाए। क्योंकि इसके लक्षण अस्थमा, सीओपीडी से अलग हैं। मरीजों को एंटी फाइब्रोसिटिक और एंटी इन्फ्लेमेशन ड्रग्स के साथ ही ऑरल कॉर्टिको स्टेरॉइड्स देना कारण होगा।

### लापरवाही घातक

आईएलडी गंभीर बीमारी होती जा रही है। कबूतर, फफूंदी और प्रदूषण इसके वाहक हैं। महीने में 60 मरीज लगातार आ रहे हैं। पहली बार इंडियन चैस्ट सोसाइटी और नेशनल कॉलेज आफ चैस्ट फिजीशियन ने गाइडलाइंस जारी की है। - डॉ. एस्के कटियार, पूर्व प्राचार्य जीएसवीएम एंड सदस्य आईसीएस-एनसीसीपी

आईएलडी शहर में तेजी से बढ़ने वाली बीमारी होती जा रही है। शुरु में लापरवाही घातक हो सकती है। चैस्ट अस्पताल में हर महीने दो दर्जन से ज्यादा नए मरीज आ रहे हैं। - डॉ. सुधीर चौधरी, प्रोफेसर चैस्ट विभाग, जीएसवीएम मेडिकल कॉलेज

### मुख्य लक्षण

सांस लेने में तकलीफ इसका प्रमुख लक्षण है। चलने या काम करते समय सांस फूलना रोग की शुरुआती अवस्था है। बिना शारीरिक गतिविधि के सांस का फूलना भी रोग की गंभीरता को दर्शाता है। मरीज को बार-बार सूखी खासी होने के साथ यकान भी महसूस होती है।

## Pendamic (Hindustan: 20201027)

[https://epaper.livehindustan.com/imageview\\_408541\\_86717948\\_4\\_1\\_27-10-2020\\_2\\_i\\_1\\_sf.html](https://epaper.livehindustan.com/imageview_408541_86717948_4_1_27-10-2020_2_i_1_sf.html)

# कोरोना पीढ़ी पर महामारी का सबसे बुरा असर पड़ा

लंदन | एजेंसी

कोरोना पीढ़ी के नाम से पुकारे जाने लगे 25 साल तक के युवाओं पर महामारी का सबसे बुरा असर पड़ा है। लंदन स्कूल ऑफ इकोनॉमिक्स ने अध्ययन के आधार पर यह दावा किया है। अध्ययन से पता लगा कि शिक्षा, करियर, आर्थिक व सामाजिक स्थिति के मामलों में इन आयुवर्ग पर सबसे गहरा असर हुआ है।

शोध में पाया कि 16 से 25 साल के युवाओं की नौकरी जाने का खतरा इस आयुवर्ग से बड़े उम्र के लोगों की

तुलना में दोगुना है। साथ ही हर दस में से छह युवाओं को आमदनी में कमी का सामना करना पड़ रहा है। धनी पारिवारिक पृष्ठभूमि से आने वाले युवाओं की तुलना में गरीब विद्यार्थियों की पढ़ाई पर ज्यादा असर हुआ। तालाबंदी के दौरान 25 लाख बच्चों को किसी भी माध्यम से स्कूल शिक्षकों या ट्यूशन के जरिए पढ़ाई की सुविधा नहीं मिल सकी। उस दौरान सरकारी स्कूल के सिर्फ 38% विद्यार्थियों को शिक्षा की सुविधा मिल पाई जबकि निजी स्कूलों के 74% विद्यार्थी शिक्षा पा सके।

**Pollution (Hindustan: 20201027)**

# चेताया: प्रदूषण से संक्रमण का जोखिम और बढ़ेगा

नई दिल्ली | एजेसी

वैज्ञानिकों ने आगाह किया है कि वायु प्रदूषण कोरोना के खिलाफ लड़ाई को कमजोर कर सकता है। दिल्ली समेत उत्तर भारत के अधिकतर हिस्सों में धुंध छाने और हवा की गुणवत्ता में तेजी से गिरावट आने के बीच इस बात का खतरा ज्यादा बढ़ गया है।

वैज्ञानिकों ने आगाह किया है कि वायु प्रदूषण और कोविड-19 के मामलों के बीच कोई संबंध पूरी तरह भले ही साबित नहीं हो पाया है, लेकिन

लंबे समय तक प्रदूषण से फेफड़ों के संक्रमण का खतरा बना रहेगा। वायु प्रदूषण के उच्च स्तर और कोरोना के मामलों में वृद्धि तथा मौत के मामलों के बीच संभावित जुड़ाव का उल्लेख करने वाले वैश्विक अध्ययनों के बीच वैज्ञानिकों ने यह चिंता व्यक्त की है। हार्वर्ड विश्वविद्यालय द्वारा सितंबर में किए गए एक अध्ययन में यह पता चला कि पीएम 2.5 में प्रति घन मीटर केवल एक माइक्रोग्राम वृद्धि का संबंध कोविड-19 से मृत्यु दर में आठ प्रतिशत बढ़ोतरी से है।

**Pandamic (Hindustan: 20201027)**

# कोरोना पीढ़ी पर महामारी का सबसे बुरा असर पड़ा

लंदन | एजेंसी

कोरोना पीढ़ी के नाम से पुकारे जाने लगे 25 साल तक के युवाओं पर महामारी का सबसे बुरा असर पड़ा है। लंदन स्कूल ऑफ इकोनॉमिक्स ने अध्ययन के आधार पर यह दावा किया है। अध्ययन से पता लगा कि शिक्षा, करियर, आर्थिक व सामाजिक स्थिति के मामलों में इन आयुवर्ग पर सबसे गहरा असर हुआ है।

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तुलना में दोगुना है। साथ ही हर दस में से छह युवाओं को आमदनी में कमी का सामना करना पड़ रहा है। धनी पारिवारिक पृष्ठभूमि से आने वाले युवाओं की तुलना में गरीब विद्यार्थियों की पढ़ाई पर ज्यादा असर हुआ। तालाबंदी के दौरान 25 लाख बच्चों को किसी भी माध्यम से स्कूल शिक्षकों या ट्यूशन के जरिए पढ़ाई की सुविधा नहीं मिल सकी। उस दौरान सरकारी स्कूल के सिर्फ 38% विद्यार्थियों को शिक्षा की सुविधा मिल पाई जबकि निजी स्कूलों के 74% विद्यार्थी शिक्षा पा सके।

**Vaccine ((Hindustan: 20201027)**

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कोरोना से जंग: लंदन के अस्पतालों को वितरण की तैयारी करने को कहा

# अगले माह आ जाएगी ऑक्सफोर्ड की वैक्सीन



अच्छी खबर

नई दिल्ली | एजेंसियां

दुनिया भर में कोरोना वायरस के संक्रमण के कारण मचे कोहराम के बीच अच्छी खबर यह है कि ऑक्सफोर्ड यूनिवर्सिटी की कोविड-19 वैक्सीन नवंबर के पहले हफ्ते से उपलब्ध हो सकती है। ब्रिटेन में अस्पतालों के स्टाफ से कहा गया है कि जल्द ही उन्हें टीके की पहली खेप सौंप दिया जाएगी।

रिपोर्ट्स के अनुसार, अस्पतालों से कहा गया है कि वे दो नवंबर से शुरू हो रहे सप्ताह से वैक्सीन के वितरण की तैयारी शुरू कर दें। ब्रिटेन के अस्पताल में अन्य सभी नैदानिक परीक्षणों को रोक दिया गया है, क्योंकि सभी संसाधन ऑक्सफोर्ड एस्ट्राजेनेका वैक्सीन के टीकाकरण की तैयारी में जुट गए हैं।

**बुजुर्गों और वयस्कों पर कारगर है टीका :** ऑक्सफोर्ड यूनिवर्सिटी और दवा कंपनी एस्ट्राजेनेका द्वारा विकसित की जा रही कोरोना वैक्सीन बुजुर्गों और वयस्कों दोनों पर अच्छा असर दिखा रही है। एक रिपोर्ट के मुताबिक ऑक्सफोर्ड की वैक्सीन देने के बाद बुजुर्गों में एंटीबॉडीज और टी सेल बने, जो कोरोना

**10** महीने से ऑक्सफोर्ड यूनिवर्सिटी में टीके पर चल रहा है शोध

**193** कंपनियां दुनिया में कोरोना टीका बनाने में जुटी हैं

- 42 कंपनियों के टीके क्लिनिकल ट्रायल में हैं
- 4.18 करोड़ से ज्यादा लोग अब तक दुनिया में हो चुके हैं कोरोना वायरस से संक्रमित



## और भी टीके प्रगति में

- जॉनसन एंड जॉनसन द्वारा बनाए जा रहे टीके के जनवरी 2020 तक उपलब्ध होने की उम्मीद। कंपनी ने वर्ल्ड हेल्थ समिट में जानकारी दी है।
- भारत बायोटेक कंपनी की कोवाक्सिन को ड्रग्स कंट्रोलर जनरल ऑफ इंडिया से तीसरे चरण के ट्रायल की मंजूरी मिली। आईसीएमएआर के सहयोग से स्वदेशी टीका विकसित हो रहा है।
- भारत में बन रही जायडस कैडिला वैक्सीन का परीक्षण अभी दूसरे चरण में चल रहा है।
- डॉक्टर रेड्डीज लैब भी रूसी वैक्सीन स्पूतनिक-वी का भारत में अंतिम नैदानिक परीक्षण शुरू करने वाली है।

भारत में सीरम इंस्टीट्यूट से कराए

ऑक्सफोर्ड यूनिवर्सिटी और एस्ट्राजेनेका की वैक्सीन का भारत में तीसरे चरण का परीक्षण चल रहा है। वैक्सीन को बनाने के लिए सीरम इंस्टीट्यूट ऑफ इंडिया से समझौता किया गया है। भारत में उपलब्ध होने वाली यह पहली वैक्सीन हो सकती है।

**निर्माता कंपनी बेहद उत्साहित**

एस्ट्राजेनेका ने कहा, यह उत्साहजनक है कि टीका देने से बुजुर्गों-युवाओं में वायरस के खिलाफ अच्छी प्रतिरोधक क्षमता विकसित हुई है। बुजुर्गों पर इस वैक्सीन का दुष्प्रभाव भी कम देखा गया है।

वायरस को मात देने में व्यक्ति को सक्षम बनाते हैं। परीक्षण में शामिल बुजुर्ग वालंटियर के पिछले जुलाई में लिए गए रक्त के नमूनों से मिले रिपोर्ट के आंकड़ों के विश्लेषण से यह तथ्य सामने आया है कि टीका देने के बाद उनमें अच्छी

खासी मात्रा में रोग प्रतिरोधक क्षमता विकसित हुई है। वहीं 18 से 55 साल की आयु वर्ग के वालंटियर में भी इसका अच्छा प्रभाव दिखा।

बता दें कि यूनीसेफ टीकाकरण के लिए इस साल के अंत तक 52 करोड़

सीरिज का भंडारण करेगा। 50 लाख सेपटी बॉक्स भी खरीदेगा ताकि सीरिज और सुईयों का सुरक्षित रखा जा सके वैक्सीन से पहले दुनियाभर में सीरिज और सेपटी बॉक्स पहुंचाने की तैयारी जारी है।