



# DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY  
Thursday 20201112

## **Sputnik V COVID-19 vaccine is 92% effective**

### **Russia says its Sputnik V COVID-19 vaccine is 92% effective**

**Results are based on data from the first 16,000 trial participants to receive both shots of the two-dose vaccine (The Tribune: 20201112)**

<https://www.tribuneindia.com/news/health/russia-says-its-sputnik-v-covid-19-vaccine-is-92-effective-169307>

Russia says its Sputnik V COVID-19 vaccine is 92% effective

A medic of the regional hospital receives Russias "Sputnik-V" vaccine shot against the coronavirus disease (COVID-19) in Tver, Russia. Reuters photo.

Russia's Sputnik V vaccine is 92% effective at protecting people from COVID-19 according to interim trial results, the country's sovereign wealth fund said on Wednesday, as Moscow rushes to keep pace with Western drugmakers in the race for a shot.

The initial results are only the second to be published from a late-stage human trial in the global effort to produce vaccines that could halt a pandemic that has killed more than 1.2 million people and ravaged the world economy.

The results are based on data from the first 16,000 trial participants to receive both shots of the two-dose vaccine, the Russian Direct Investment Fund (RDIF), which has been backing its development and marketing it globally, said.

"We are showing, based on the data, that we have a very effective vaccine," said RDIF head Kirill Dmitriev, adding that it was the sort of news that the vaccine's developers would talk about one day with their grandchildren.

The analysis was conducted after 20 participants in the trial developed COVID-19 and examined how many had received the vaccine versus placebo.

That is significantly lower than the 94 infections in the trial of a vaccine being developed by Pfizer Inc and BioNTech. To confirm the efficacy rate, Pfizer said it would continue its trial until there were 164 COVID-19 cases.

RDIF said the Russian trial would continue for six more months and data from the study will also be published in a leading international medical journal following a peer review.

European stocks and U.S. stock futures extended their gains slightly after Russia's announcement.

Russia's announcement follows swiftly on from results posted on Monday by Pfizer and BioNTech, which said their shot was also more than 90% effective.

The Russian results are another boost to other COVID-19 vaccines currently in development and are a proof of concept that the disease can be halted with vaccination.

Experts said knowledge about the trial's design and protocol was sparse, making it difficult to interpret the figures released on Wednesday.

Scientists have raised concerns about the speed at which Moscow has worked, giving the regulatory go-ahead for the shot and launching a mass vaccination programme before full trials to test its safety and efficacy had been completed.

Russia registered its COVID-19 vaccine for public use in August, the first country to do so, though the approval came before the start of the large-scale trial in September.

The so-called Phase III trial of the shot developed by the Gamaleya Institute is taking place in 29 clinics across Moscow and will involve 40,000 volunteers in total, with a quarter receiving a placebo shot.

The chances of contracting COVID-19 were 92% lower among people vaccinated with Sputnik V than those who received the placebo, the RDIF said.

That's well above the 50% effectiveness threshold for COVID-19 vaccines set by the U.S. Food and Drug Administration.

"I can see no a priori reason to disbelieve these results, but it's so very hard to comment because there is so little data there," said Danny Altmann, a professor of Immunology at Imperial College London.

He said that while the Russian release was similar in its level of detail to the one from Pfizer and BioNTech, the key difference was that Pfizer's release came against a backdrop of a wealth of published data on how the trial was designed, its protocol, and what its endpoints were.

The results of the early-stage trials were peer-reviewed and published in September in The Lancet medical journal.

**SPUTNIK V**

The Russian drug is named Sputnik V after the Soviet-era satellite that triggered the space race, a nod to the project's geopolitical importance for Russian President Vladimir Putin.

The vaccine is designed to trigger a response from two shots administered 21 days apart, each based on different viral vectors that normally cause the common cold: human adenoviruses Ad5 and Ad26.

The Pfizer and BioNTech vaccine uses messenger RNA (mRNA) technology and is designed to trigger an immune response without using pathogens, such as actual virus particles.

Russia is also testing a different vaccine, produced by the Vector Institute in Siberia, and is on the cusp of registering a third, Putin said on Tuesday, adding that all of the country's vaccines were effective.

RDIF said as of Nov. 11 no serious side effects had been reported during the Sputnik V Phase III trial.

Some volunteers had short-term minor adverse events such as pain at the injection site, flu-like syndrome including fever, weakness, fatigue, and headache, it said.

## MASS VACCINATIONS

Successful vaccines are seen as crucial to restoring daily life around the world by helping end the health crisis that shuttered businesses and put millions out of work.

Russia registered the vaccine for domestic use in August and has also inoculated 10,000 people considered at high risk of COVID-19 outside of the trial

Putin has said that Russia expects to start mass vaccinations by the end of the year.

"The publication of the interim results of the post-registration clinical trials that convincingly demonstrate Sputnik V vaccine's efficacy gives way to mass vaccination in Russia against COVID-19 in the coming weeks," Alexander Ginsburg, director of the Gamaleya Institute, said.

Moscow is rolling out a large network of vaccination rooms and residents who want the shot may be able to get it as early as next month if large volumes of doses are supplied by then, Deputy Mayor Anastasia Rakova said on Oct. 30.

However, production challenges remain. Earlier estimates that Russia could produce 30 million doses of the vaccine this year have since been scaled down.

Moscow aims to produce 800,000 doses this month, industry minister Denis Manturov has said, followed by 1.5 million in December. But significantly higher volumes of output per month are expected from early 2021.

Manturov cited issues with scaling up production from small to large-volume bioreactors, while Putin last month cited issues with the availability of equipment.

In late October, the vaccination of new volunteers was temporarily paused due to high demand and a shortage of doses.

Officials have said that domestic production of the vaccine will be used first to meet Russia's needs.

RDIF, however, has also struck several international supply deals, amounting to 270 million doses in total.

It is expected that these will in large part be produced in other countries and RDIF has previously announced a deal to manufacture 300 million doses in India and an undisclosed amount of doses in Brazil, China and South Korea.

Trials have also begun in Belarus, and are on track to begin soon in the United Arab Emirates, Venezuela and India.

Russia reported 19,851 new coronavirus infections in the past 24 hours and a record high of 432 deaths. At 1,836,960, its overall case tally is the fifth largest in the world, behind the United States, India, Brazil and France.—Reuters

## **Transmission of coronavirus**

### **Scientists find evidence of two-way transmission of coronavirus on mink farms**

#### **COVID-19 virus is capable of transmission between humans to minks, as well as from these mammals to people. (The Tribune: 20201112)**

<https://www.tribuneindia.com/news/health/scientists-find-evidence-of-two-way-transmission-of-coronavirus-on-mink-farms-169290>

Scientists find evidence of two-way transmission of coronavirus on mink farms

Caged minks are seen amid the coronavirus disease outbreak, at a mink farm in Gjoel, North Jutland, Denmark, on October 9, 2020. Reuters file

An analysis of outbreaks of the novel coronavirus on 16 mink farms in the Netherlands has revealed that the COVID-19 virus is capable of transmission between humans to minks, as well as from these mammals to people.

While the virus was initially introduced from humans to the minks, the researchers, including Bas B. Oude Munnink from the Erasmus University Medical Center in the Netherlands, said it has since evolved.

"More research in minks and other mustelid species is important to understand if these species are at risk of becoming a reservoir of SARS-CoV-2," they wrote in the study, published in the journal Science.

According to the scientists, the virus was first diagnosed on two mink farms in late April of 2020 in the Netherlands.

In response, they said an extensive surveillance system was set up.

The researchers performed an in-depth investigation among the first 16 infected mink farms in the Netherlands using a combination of coronavirus diagnostics, whole-genome sequencing, and in-depth interviews with farmworkers.

By the end of June, they found that 66 of 97 of the mink farm residents, employees and/or contacts tested had evidence for SARS-CoV-2 infection.

According to the study, the mink virus genome analysis revealed a diversity of sequences.

These large clusters of infection were initiated by COVID-19 cases with viruses that bear the "D614G mutation", which has come to dominate human infections in several parts of the world, the scientists said.

They also found that some people were infected with strains of the virus with an animal sequence signature, providing evidence of animal to human transmission.

However, they did not find any evidence of spillover to people living in close proximity to mink farms.

"It is imperative that fur production and the trading sector should not become a reservoir for future spillover of SARS-CoV-2 to humans," the scientists wrote in the study. PTI

## **COVID-19 vaccine**

### **Where are we in the COVID-19 vaccine race?**

**Drugmakers and research centers around the world are working on COVID-19 vaccines, with large global trials of several of the candidates involving tens of thousands of participants well underway. . (The Tribune: 20201112)**

<https://www.tribuneindia.com/news/health/where-are-we-in-the-covid-19-vaccine-race-169282>

The following is what we know about the race to deliver vaccines to help end the coronavirus pandemic that has claimed over 1.26 million lives worldwide:

Who is furthest along?

US drugmaker Pfizer Inc and German partner BioNTech SE were the first to release data showing on Monday that their vaccine worked in a large, late-stage clinical trial.

Russia's sovereign wealth fund published interim late-stage trial results for its Sputnik V vaccine on Wednesday showing the shot is 92% effective at protecting people from COVID-19.

The next data releases will likely be from US biotech firm Moderna Inc, possibly in November, and from Britain-based AstraZeneca Plc with the University of Oxford in November or December. Johnson & Johnson says it is on track to deliver data this year.

What happens in these trials?

The companies are testing their vaccines against a placebo - typically saline solution - in healthy volunteers to see if the rate of COVID-19 infection among those who got the vaccine is significantly lower than in those who received the dummy shot.

Why is Pfizer ahead with its data?

The trials rely on subjects becoming naturally infected with the coronavirus, so how long it takes to generate results largely depends on how pervasive the virus is where trials are being conducted. Each drugmaker has targeted a specific number of infections to trigger a first analysis of their data.

Pfizer said its interim analysis was conducted after 94 participants in the trial developed COVID-19 while Russia's examination was conducted after 20 participants in the trial developed the disease.

AstraZeneca said last week a slowdown in infections during the summer is delaying data analysis for its UK trial.

COVID-19 cases, however, soared in October and early November, setting daily records in the United States and Europe.

How well are the vaccines supposed to work?

The World Health Organization has recommended a minimum standard for effectiveness of at least 50%. The United States and some other regulators are following that guideline – which means there must be at least twice as many infections among volunteers who received a placebo as among those in the vaccine group. The European Medicines Agency has said it may accept a lower efficacy level.

Pfizer and Russia both said their vaccines are more than 90 per cent effective against COVID-19.

When will regulators rule on safety and efficacy?

Regulators review vaccines after companies submit applications seeking either emergency use authorization (EUA) or formal approval.

The earliest the US Food and Drug Administration could make a decision is in December because Pfizer/BioNtech and Moderna do not expect to have enough safety data until the

second half of November. The FDA has asked companies to watch trial participants for side effects for two months after receiving a final vaccine dose.

Regulators for Europe, the United Kingdom and Canada are considering data on a rolling basis, as it becomes available.

They expect to conduct expedited reviews as well. It is not clear when companies will submit efficacy data to these agencies or when the agencies would make a decision.

Could these be the first widely available coronavirus vaccines?

Yes, although China is on a similar timeline. The country launched an emergency use program in July aimed at essential workers and others at high risk of infection that has vaccinated hundreds of thousands of people.

At least four vaccines are far along, including those from China National Biotec Group (CNBG), CanSino Biologics and Sinovac. Sinovac and CNBG have said to expect early trial data as soon as November.

Russia has also given the Sputnik V vaccine developed by the Gamaleya Institute to 10,000 members of the general population considered at high risk of contracting the virus.

In late October, the director of the Gamaleya Institute, Alexander Gintsburg, said 20,000 volunteers had received the first shot so far and 9,000 the second.

## **Plasma treatment**

### **Plasma treatment can quickly kill Covid virus on surfaces (The Tribune: 20201112)**

<https://www.tribuneindia.com/news/health/plasma-treatment-can-quickly-kill-covid-virus-on-surfaces-169266>

Plasma is one of the four basic states of matter and can be created by heating a neutral gas or subjecting it to a strong electromagnetic field

Plasma treatment can quickly kill Covid virus on surfaces  
Photo for representational purpose only. iStock

Strains of the novel coronavirus on surfaces like metal, leather, and plastic can be killed quickly when treated with argon-fed, cold atmospheric plasma, says a new study.

Plasma is one of the four basic states of matter and can be created by heating a neutral gas or subjecting it to a strong electromagnetic field.

A relatively new technology, cold atmospheric plasma is an ionized, near-room-temperature gas that has proven effective in cancer treatments, wound healing, dentistry, and other medical applications.

The new findings, published in the journal *Physics of Fluids*, show great potential for the use of plasma in the fight against the spread of Covid-19.

“This is only the beginning,” said corresponding author Richard Wirz from University of California, Los Angeles (UCLA).

“We are very confident and have very high expectations for plasma in future work. In the future, a lot of answers for the scientific community will come from plasma.” The researchers used an atmospheric pressure plasma jet they built with a 3D printer to spray surfaces that were treated with SARS-CoV-2 cultures. SARS-CoV-2 is the virus responsible for Covid-19.

The surfaces included plastic, metal, cardboard, and basketball, football, and baseball leather.

The spray using plasma fed by argon killed all the coronavirus on the six surfaces in less than three minutes, and most of the virus was destroyed after 30 seconds, said the study.

Additional testing showed the virus was destroyed in similar times on cotton from face masks.

The novel coronavirus can remain infectious on surfaces for several hours.

The authors ran a similar coronavirus test with helium-fed plasma, but the helium was not effective, even with treatments up to five minutes.

The researchers believe this was due to lower rates of reactive oxygen and reactive nitrogen when using helium-fed gas, compared to argon.

Study co-author, Zhitong Chen, also from UCLA, said the researchers are building a compact device that could be used widely to treat surfaces for the coronavirus with plasma.

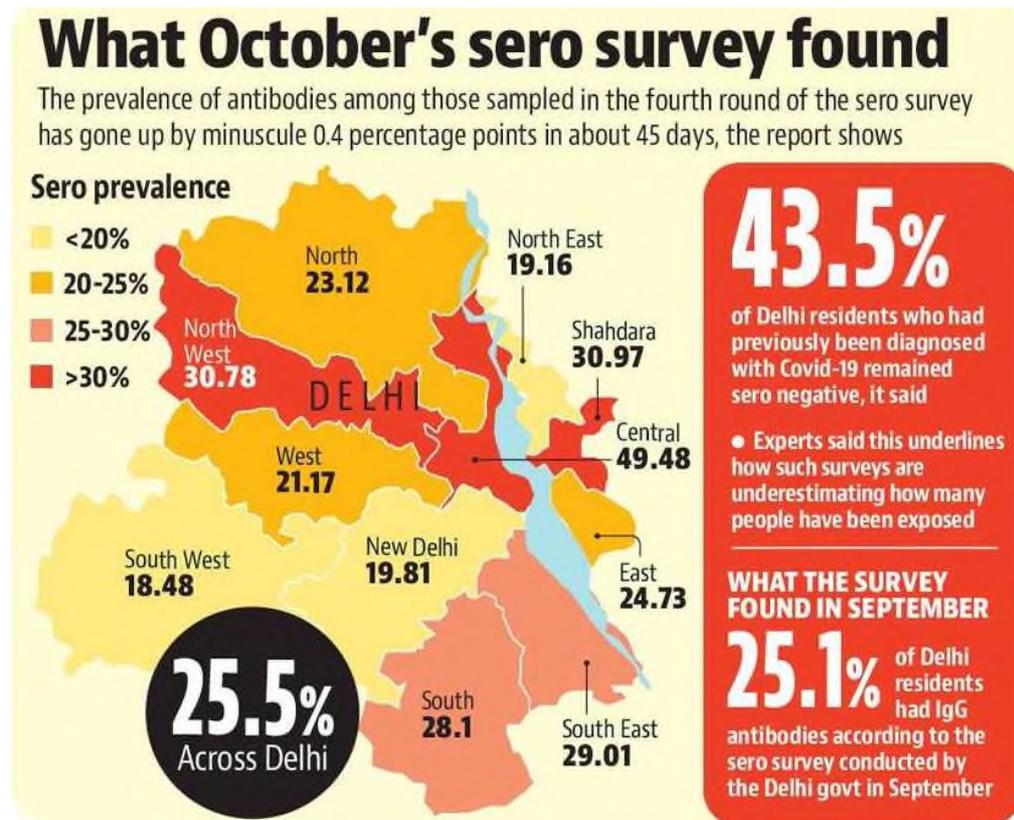
It is a safer, healthier option than chemicals or other treatments, he said.

“Everything we use comes from the air,” he said.

“Air and electricity: It’s a very healthy treatment with no side effects.” The researchers hope the benefits of plasma, like those shown in this study, can be made available to people around the world. — IANS

## **Sars-Cov-2,**

**New sero survey shows 1 in 4 exposed in Capital (Hindustan Times: 20201112)**



Around one in four of the 15,000 people tested in the latest serological survey in the capital showed prevalence of antibodies against Sars-Cov-2, the government informed the Delhi high court on Wednesday, indicating that the proportion of people with antibodies has remained largely unchanged from the previous round of the exercise.

The report also showed that a large proportion (43.5%) of people who had previously been diagnosed with Covid-19 remained sero-negative, a statistic that independent experts said underlined how such surveys were underestimating how many people had been exposed.

Authors of the report, however, said it was because antibodies take time to develop after contracting an infection and that they remain detectable only for a limited period.

Researchers caution that absence of antibodies in infected people cannot be conclusive evidence that they are unprotected from the disease.

Equally, it isn't clear how long and how strong a protection against Covid-19 such antibodies can offer. The prevalence of the antibodies among those sampled in the fourth round of the sero survey has gone up by minuscule 0.4 percentage points in a month-and-a half – from 25.1% in the first week of September to 25.5% in the third week of October. The authors of the study attributed the lack of an increase of sero-prevalence to “fewer infections reported in August” and “disappearing” antibodies.

The findings of the October round of sero-prevalence survey report were submitted during the hearing in the Delhi high court on a plea seeking more aggressive testing in Delhi. During the hearing, the court censured the government for relaxing norms for public movement at a time when infections have “spiralled alarmingly”. The court asked the government to put in place a

policy on controlling the “mind-boggling” rate of new cases. “No household has been left untouched,” a bench of justice Hima Kohli and justice Subramonium Prasad said.

“The rates in the city are mind-boggling. The number of deaths is in double figures every day. What’s with the Delhi government allowing all the un-lockdown when the cases are skyrocketing? Why have you opened everything? What are the strategies that you are following?” the court said.

“Today, Delhi is beating the whole state of Maharashtra and Kerala hands down in Covid-19 infections. When the numbers are decreasing in all the states, then why numbers are rising only in your state? Either there is no control or there is lack of control,” the bench said.

The seven-day average of daily new cases in Delhi has touched 7,148, and the Union territory has seen an average of 75 Covid-19 deaths a day over the past week. Delhi currently accounts for the most daily cases in the country. And there are no Covid-19 beds available in private hospitals.

In June-end , 22.6% of the 21,000 people sampled had antibodies. This proportion shot to 29.1% among the 15,000 people sampled in August, and then dropped to 25.1% among the 17,000 people sampled in September.

#### Covid-19: What you need to know today

There isn’t much information available on India’s Covid-19 vaccine game plan. We do know — HT’s Saubhadra Chatterji broke that story — that there is a vaccine committee. We also know that this committee is speaking to several vaccine developers. And we know that states have been asked to prepare a list of people who should be prioritised for a vaccine shot. There are several unanswered questions, though.

Infosys chairman and former Unique Identification Authority of India (UIDAI) head Nandan M Nilekani wrote a two-part article detailing how he thinks India should go about it, but, again, it isn’t known whether the government is thinking along those lines, or whether the people in charge have even read Nilekani’s article. I am not sure (and this is based on my own interactions) that these people are as informed of the pandemic as they should be. A long career in India’s sprawling and bureaucratic health system, or a medical degree of some vintage, don’t matter as much as an open mind, the ability to read and understand current literature on Covid, and then synthesise what that means in the Indian context. The US has Dr Anthony Fauci; we have a man who thinks the influenza and Covid viruses are from the same family. It’s the reason I recommended — Dispatch 108, titled A Million and a Manifesto, on July 18, shortly after India crossed the million-case mark — that the country appoint a Covid Commissioner. But I digress.

There are four aspects involved in vaccinating a population.

The first involves identifying and procuring a vaccine. Sure, if you are a country such as the US, you can launch a program like Warp Speed, funneling billions of dollars into companies developing vaccines; but even otherwise, it makes sense to secure supplies by striking deals, private bilateral business agreements, with companies developing the vaccines. The UK and the EU have such agreements. As have many other countries. India doesn’t, and is largely dependent for vaccines on a WHO initiative, Covax, but not all vaccine developers are part of

this equitable access platform; Pfizer, for instance, isn't (and its vaccine will likely be the first one available). India should aggressively pursue bilateral agreements, and use as a hedge, like many other countries plan to, the vaccine doses it will be eligible for under Covax. The next few years are going to be about vaccine stockpiles — most of the initial vaccines may be two-shot ones; people may need annual vaccination — and India should get serious about building its own.

The second involves funding. India needs to figure out who is eligible for a free vaccine, and who pays. The easier, but more expensive option, is to underwrite the costs of vaccination for the entire population — something that could cost tens of billions of dollars. And at least for the first few years (I'm not sure anyone has thought about this), till a one-shot-lifetime-protection vaccine is developed, this staggering amount of money may have to be spent annually. The government could also consider providing the vaccine free only to people who need it (say, those covered by the Public Distribution System), and make others pay for it.

The third involves distribution. Here the government should do the smart thing and tap the expertise of those who do this best — companies in the consumer products business such as ITC, Hindustan Unilever Ltd, Parle, the Gujarat Co-operative Milk Marketing Federation, and others. These companies are in the business of ensuring their products are available in remote corners of the country. Some even deal in perishables, and some others in products that require refrigeration.

The last involves administration. This is perhaps the most complex part of the exercise, but also the one where India has a very good template — the general elections, down to the neighborhood election booths. Just like government employees, usually school teachers, are drafted to man the polling booths, health care workers from government and private hospitals should be asked to staff the vaccination booths. The national elections, conducted in phases, in just the span of a month-and-a-half, provide the perfect template for a national vaccination drive. People know which their booths are; go there, present some ID (even a phone number will do, or a name and thumbprint in the extreme case of someone who has no ID at all), be vaccinated, get a receipt to that effect, and perhaps one of those indelible-ink marks on a finger.

## **Covid-19: What you need to know today (Hindustan Times: 20201112)**

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

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**New Cases (The Asian Age: 20201112)**

<http://onlinepaper.asianage.com/articledetailpage.aspx?id=15219330>

# Delhi's daily Covid cases cross 8,000 mark for first time

AGE CORRESPONDENT  
NEW DELHI, NOV. 11

This was the first time when daily Covid-19 cases crossed the 8,000-mark in Delhi on Wednesday as the national capital reported 8,593 cases. The total tally of the city now stands at 45,9975 and the positivity rate has jumped to 13.40 per cent. In the last 24 hours, 64,121 tested have been conducted and 85 deaths have been reported. Over 24,000 people in Delhi are now under home isolation, the health bulletin said. Earlier, the city recorded 7,830 fresh infections which was the highest till On Tuesday.

Chief minister Arvind Kejriwal has requested Union health minister Harsh Vardhan for augmenting the bed capacity in the central government-run hospitals in Delhi, in view of revised projections of up to 15,000 Covid-19 cases per day in the coming weeks under the third surge of the coronavirus infection in the national capital.

In a letter to Mr. Vardhan last week, Mr. Kejriwal cited a shortfall of around 4,900 beds in hospitals, seeking the

Union minister's direction to the hospitals run by the central government in Delhi to provide at least 1,092 additional beds, including 300 ICU beds, with the required medical staff.

The chief minister said Delhi is witnessing a renewed increase in the number of Covid-19 cases for the last few days and cited the revised response strategy 3.0 of the Dr. Paul Committee, projecting up to 15,000 coronavirus cases per day during the third surge in the upcoming weeks due to the rising pollution, celebration of festivals, wedding season and other factors.

At present, Delhi has a total bed capacity of 15,713, including ICU beds, for Covid-19 patients, he pointed out.

The Delhi government said it is increasing the number of Covid tests to help control the spread. One of these methods is "targeted testing" in markets during the festive season.

Both shopkeepers and customers who appear for festive shopping are being tested. Besides, the staff in restaurants and others are also having to undergo RT-PCR tests amid the festive rush.

# Delhi's air improves to 'very poor' from 'severe'

AGE CORRESPONDENT  
NEW DELHI, NOV. 11

After remaining in the "severe" zone for six days on the trot, Delhi's air quality improved slightly on Wednesday as a change in the wind direction reduced the contribution of stubble burning to the pollution, though it was still in the 'very poor' category.

The city recorded an air quality index (AQI) of 344. The 24-hour average AQI was 476 on Tuesday.

An AQI between 201 and 300 is considered "poor", 301-400 "very poor" and 401-500 "severe", while the AQI above 500 falls in the severe plus category.

The national capital had witnessed six consecutive 'severe' air quality days till Tuesday. It had recorded seven such days in November last year.

THE neighbouring cities of Faridabad, Ghaziabad, Noida, Greater Noida, and Gurgaon, which fall in the National Capital Region, also recorded their AQI in 'poor' and 'very poor' categories

The neighbouring cities of Faridabad (327), Ghaziabad (360), Noida (309), Greater Noida (340), and Gurgaon (288), which fall in the National Capital Region (NCR), also recorded their AQI in "poor" and "very poor" categories on Wednesday.

The Central Pollution Control Board (CPCB) ordered the closure of hot mix plants and stone crushers in Delhi-NCR till November 17 in view of a likely increase in pollution levels during the coming days, when a number of festivals will be celebrated.

It also asked the gov-

ernments of Punjab and Haryana to take immediate stringent actions to curb stubble burning and authorities in Delhi-NCR to strictly check biomass burning.

The levels of PM2.5 'which is about three percent the diameter of a human hair and can lead to premature deaths from heart and lung diseases' was 177 microgram per cubic meter ( $\mu\text{g}/\text{m}^3$ ) at 5 pm, below the emergency threshold of 300  $\mu\text{g}/\text{m}^3$ .

The safe limit is 60  $\mu\text{g}/\text{m}^3$ . On Tuesday, PM2.5 levels had soared to 528  $\mu\text{g}/\text{m}^3$  in the afternoon. PM10 level stood at 343  $\mu\text{g}/\text{m}^3$  at 5 pm.

It had peaked at 685  $\mu\text{g}/\text{m}^3$  on Tuesday, according to CPCB data. PM10 levels below 100  $\mu\text{g}/\text{m}^3$  are considered safe in India and 500  $\mu\text{g}/\text{m}^3$  is the emergency threshold.

## **Dose of optimism: On India and COVID-19 vaccine**

### **Dose of optimism: On India and COVID-19 vaccine (The Hindu: 20201112)**

<https://www.thehindu.com/opinion/editorial/dose-of-optimism-the-hindu-editorial-on-india-and-covid-19-vaccine/article33069236.ece>

India must improve its cold chain infrastructure to avail benefits of new vaccines. Multinational drug company Pfizer has announced promising results from its ongoing phase-3 trial of a potential COVID-19 vaccine. However, these early results, of the vaccine candidate being “90% protective” in the trial’s volunteers — nearly 40,000 are enrolled — is the only important detail that is public. Pfizer, which is using a vaccine candidate by German firm BioNTech, had disclosed in September that for a vaccine to be judged 60% effective, 164 volunteers would have to contract COVID-19. This includes both the vaccine and placebo groups. The claim of 90% is based on a sample of 94 volunteers but it is not known how many belonged to either group. It is also unclear if those who were eventually infected, manifested mild or moderate severity of disease. Though the results, according to Pfizer, were announced by an expert independent committee, they have not yet been announced by the standard procedure of a peer-reviewed journal. In short, there is still time to be reliably sure that the results actually hold up in a wider population.

Pfizer’s announcement may not have an immediate impact for India. Unlike ‘Covishield’ by the Serum Institute or ‘Covaxin’ by Bharat Biotech Ltd., there are no large phase-3 trials of the vaccine in India. While there were early discussions with Pfizer, there is as yet no confirmation on whether India can be assured of early access to even a fraction of the vaccine output in the event it is readied. The vaccine candidate is based on an m-RNA technology, which eschews the use of an infectious particle, such as a portion of the virus, and uses a piece of RNA that is then made into an antigen by the body’s own machinery. This reduces the odds of untoward reactions. It also does not need to be cultured in chicken eggs or other mammalian cells, allowing it be made faster and more inexpensively. Though it is at the frontier of novel vaccine production methods, there are still no commercially available m-RNA based vaccines. They also reportedly need to be refrigerated to nearly minus 70°C and India, with its limited cold chain infrastructure, lacks efficient vaccine storage capacity. However, irrespective of whether and when the Pfizer vaccine is available, there is reason for optimism. For one, it shows that scientists’ basic strategy — of developing a vaccine to target the spike protein of the virus — is correct and given that this is an approach most vaccine developers are following, the chances of several encouraging results are high. Given that another firm, Moderna, also employs an m-RNA based approach, it is likely that the new vaccine platform may prove to be a breakthrough approach in developing future vaccines. India must keep a close watch on such platform-technology and develop expertise. It must also not lose an opportunity to improve its cold chain infrastructure which currently is developed only for rudimentary vaccines.

## **Mutation in Covid genome for testing**

### **Indian researchers find new mutation in Covid genome for testing (New Kerala: 20201112)**

<https://www.newkerala.com/news/2020/197379.htm>

A team of researchers at Nitte University in Karnataka's Mangaluru have identified a new mutation in the Covid-19 genome for testing its virus strain, a top varsity official said on Wednesday.

"The novel mutation will have implications for the diagnostic RT-PCR-based detection of the Covid-19 virus, which uses screening test," Nitte senior director Iddya Karunasagar told IANS here.

In a paper submitted for publication in the prestigious Elsevier Journal "Virus Research", investigators at Nitte, a deemed to be university, said they detected partial deletions in the gene encoding the viral envelope protein (E-gene) in the genomes across Karnataka, Maharashtra, Madhya Pradesh, New Delhi and Odisha.

The research was initiated after Anusha Rohit of tertiary care hospital Madras Medical Mission in Chennai alerted the Nitte team on the observation of some labs that occasional samples may be negative for E-gene but positive for RdRp gene or N-gene, depending on the confirmatory test system.

"As most labs do screening and confirmatory tests one after the other, samples negative for E-gene will not be processed for confirmatory test and reported negative," Karunasagar said.

Nitte researchers comprising B. Krishna Kumar, Prithvisagar and Praveen Rai under the mentorship of K. Indrani, scanned the nucleotide sequence of E-gene of 2,000 viral genome sequences from the Global Initiative on Sharing All Influenza Data (GISAID).

"Partial deletion in one end of the E-gene was found in 34 viral genomes. The deletions in all states except Odisha were such that RT-PCR detection of the virus would not be affected," Karunasagar said.

In eight genomes from Odisha, however, the deletion was large enough to render the RT-PCR reaction negative.

Though it is a small proportion (8 out of 2,086) in the sample studied, it works out to 32,500 genomes, with large deletions in 8.4 million cases, detected across the country.

"Some of the test systems like Truenat from India and GenXpert from the US do simultaneous screening and confirmatory tests. Such systems can detect even viruses with these deletions," noted Karunasagar.

The finding has implications for detection of coronavirus by RT-PCR (Reverse Transcription-Polymerase Chain Reaction), which is used as gold standard for diagnosis.

"If only E-gene based screening test is used, it is possible to miss some of the cases infected with mutated virus," he reiterated.

Noting that there was a need to understand the clinical implications of the mutation, the director said as the E-gene was essential for virus structure, mutation could lead to viruses with lower infectivity.

"This needs to be, however, confirmed with clinical data from individuals who have infections with mutated viruses," added Karunasagar.

## **Stress**

### **Study reveals how kids' screen time may up stress of parents (New Kerala: 20201112)**

<https://www.newkerala.com/news/2020/197373.htm>

Researchers have found that parents who frequently plop their kids in front of the TV to give themselves a break, might actually end up more stressed.

The study, published in the International Journal of Advertising, found that the more television that kids watch, the more they're exposed to advertising messages.

The more advertising, they see, the more likely they are to insist on purchasing items and that, researchers say, may contribute to parents' overall stress levels, well beyond a single shopping trip.

"The more advertising children see, the more they ask for things and the more conflict is generated," said study author Matthew Lapierre from the University of Arizona in the US.

The findings explore the potential effects of children's television-watching habits on their parents' stress levels.

The researchers looked at the effectiveness of three types of parent-child consumer-related communication collaborative communication, control communication and advertising communication.

Collaborative communication is when a parent seeks child input on family purchasing decisions, for example, saying things such as "I will listen to your advice on certain products or brands".

Control communication is when a parent exhibits total control in parent-child consumer-related interactions, for example, saying things such as "Don't argue with me when I say no to your product request".

Advertising communication is when parents talk to their children about advertising messages, for example, saying things such as "Commercials will say anything to get you to buy something".

They found that, in general, collaborative communication is associated with less parent stress.

However, the protective effect of collaborative communication decreases as children's purchase initiation and coercive behaviours - such as arguing, whining or throwing temper tantrums - increase.

Both control communication and advertising communication are associated with more purchase initiations and children's coercive behavior, the researchers found, suggesting that engaging less in those communication styles could be beneficial.

However, when children have higher levels of television exposure, the protective effect of engaging in less advertising communication decreases.

"Overall, we found that collaborative communication between parents and children was a better strategy for reducing stress in parents," the study authors wrote.

## **Air pollution**

### **Air pollution causes 40% deaths in patients with chronic illnesses: AIIMS Director (New Kerala: 20201112)**

<https://www.newkerala.com/news/2020/197334.htm>

Noting that air pollution is a silent killer, Randeep Guleria, Director at the All India Institute of Medical Sciences (AIIMS), said that it contributes to up to 40 per cent deaths in patients with chronic illnesses and neonatal fatalities.

"The global burden disease published in Lancet shows that in 2019, air pollution was the fourth leading cause of mortality and third for disability-adjusted life years. Air pollution is a silent killer which makes it difficult for the policymakers to understand," he said.

"We must focus more on the chronic effects of pollution such as diabetes, lower respiratory tract disease, lung cancer, stroke or neonatal deaths - there is enough data to say that around 20 to 40 per cent of deaths in these diseases are caused by air pollution," Guleria said.

He was speaking at the second Good Air Summit organised by the Integrated Health and Wellbeing (IHW) Council.

Guleria also said that more than smoking tobacco, pollution contributes to developing diseases such as lung cancer, COPD and heart disease. "These are acute effects," he added.

The AIIMS chief also shared that within a few days of spike in air pollution levels, the influx of patients increased in the hospital's OPDs.

"Experience in AIIMS shows that whenever there is a spike in air pollution, the number of patients in OPDs increases in the next 5-6 days," Guleria said.

Union Minister for Environment, Forest and Climate Change, Prakash Javadekar, also attended the summit. Accepting that pollution is a sensitive issue and a serious challenge, he expressed hope that the newly-constituted Commission for Air Quality will reduce pollution in the national capital.

"We introduced the idea of measuring air quality and brought the concept of AQI. The Sameer app of the Central Pollution Control Board provides hourly update of the national Air Quality Index (AQI). I am hopeful that the Commission for Air Quality Management will reduce pollution further," Javadekar stated.

Meanwhile, Kamal Narayan, CEO, IHW, complained that air pollution did not receive the kind of response it required either from the government or the citizens, despite being an evident health emergency.

"The data from 'State of Global Air 2020' shows that 1.67 million or 17 lakh people die annually due to air pollution that comes to around 4,700 deaths per day. Which means around half a million more people fell prey to air pollution last year than the number of lives claimed by Covid-19 virus till date, globally. However, despite being a super-killer and an evident health emergency, air pollution did not get the emergency response either from the system, or from the people," he said.

Commenting on the issue, Swatanter Kumar, retired Supreme Court judge and former chairperson of the National Green Tribunal (NGT), said that protection of the environment is a constitutional obligation of both the government and the citizens.

"Protecting the environment is a constitutional obligation for the citizens and a constitutional duty of the governments. We don't need more laws but better implementation of the existing frameworks. We need holistic, pragmatic and practical solutions for intergenerational equity and examine the sources of cleaner energy as well," he said.

## **Lung fibrosis**

**Researchers develop new treatment for lung fibrosis (New Kerala: 20201112)**

<https://www.newkerala.com/news/2020/197316.htm>

a condition in which the lungs become scarred over time -- has been a concern for Covid-19 patients, say researchers, adding that they have now developed a new treatment option for lung fibrosis.

Lung fibrosis' symptoms include shortness of breath, dry cough, feeling tired, weight loss and nail clubbing. Complications may include pulmonary hypertension, respiratory failure, pneumothorax and lung cancer.

People with Idiopathic Pulmonary Fibrosis (IPF), also called lung fibrosis, have a life expectancy fewer than five years. Fibrotic diseases cause organ failure leading to nearly 45 per cent of all deaths in the U.S. Existing therapies do little to slow the progression.

Now the research team from Purdue University, US, have developed two targeted therapies for people with IPF.

The two different therapeutic approaches are published in the journals -- Science Translational Medicine and EMBO Molecular Medicine.

"This is a horrible disease that claimed the lives of my neighbour next-door and a good friend's wife," said a study author Philip S. Low of Purdue University.

"We developed two targeted therapies that allow us to use powerful drugs with high toxicities because we specifically deliver them to diseased cells without harming healthy ones," Low added.

The first of the Purdue team's novel targeted molecules are designed to slow fibrosis and extends life. The second IPF therapy suppresses fibrosis-inducing cytokine production.

The two therapies will be moving into human clinical trials within the next several months.

The developments come as a number of people with Covid-19 or who have recovered from Covid-19 experienced lung fibrosis or other related conditions.

## **Anxiety, depression**

### **Employment insecurity linked to anxiety, depression among young adults during COVID-19(New Kerala: 20201112)**

<https://www.newkerala.com/news/2020/197249.htm>

A new research shows a strong association between employment insecurity and common symptoms of anxiety and depression among young adults in America.

Among a sample of nearly 5,000 young American adults age 18 to 26, researchers found that since March 2020, young adults who lost their job or were part of a household that experienced employment loss were more likely than those with secure employment to experience four common symptoms of anxiety and depression.

This was also true of young adults who expected an employment loss in the next four weeks.

"It is clear from this study that the COVID-19 pandemic has had wide-ranging effects on young adults," said Kyle T Ganson, PhD, MSW, assistant professor at the University of Toronto's Factor-Inwentash Faculty of Social Work and lead author on the study.

"It is imperative that public policy address the economic downturns to ensure the employment security of young adults, which may subsequently address their mental health," added Ganson.

The study, published online in the Journal of Adolescent Health, found that since the start of the pandemic on March 13th, nearly 60 per cent of U.S. young adults experienced direct or household employment loss, while nearly 40 per cent expected direct or household employment loss in the coming four weeks.

"Young adults are especially affected by employment loss since they are just starting their careers," said senior author Jason M. Nagata, MD, MSc, a specialist in adolescent and young adult medicine at the University of California, San Francisco.

"Internships have been cancelled and employment offers have been rescinded during the pandemic," added Nagata.

The study also found that symptoms of anxiety and depression were common among the sample of young adults. In the seven days prior to the survey, 75 per cent reported being nervous, anxious or on edge, 68 per cent reported not being able to stop or control worrying, 67 per cent reported having little interest or pleasure in doing things, and 64 per cent reported feeling down, depressed, or hopeless.

"Young adults experiencing depression or anxiety should seek professional help early on. During the pandemic, there are more options to access telehealth and other mental health resources virtually," said Dr. Nagata.

The researchers argue that social workers and mental health professionals should be screening for employment insecurity as the pandemic continues to ensure they are providing appropriate treatment and referrals to unemployment programs and resources.

"Policymakers need to consider the long-term scarring that may occur as a result of both employment losses and poor mental health. We need to ensure that health insurance policies adequately cover mental health services for young adults," said Dr. Ganson.

## **Vitamin C's**

**Vitamin C's effectiveness against COVID may hinge on vitamin's natural transporter levels (New Kerala: 20201112)**

<https://www.newkerala.com/news/2020/197099.htm>

High doses of Vitamin C under study for treating COVID-19 may benefit some populations, but investigators exploring its potential in ageing say key factors in effectiveness include levels of the natural transporter needed to get the vitamin inside cells.

Age, race, gender, as well as expression levels and genetic variations of those Vitamin C transporters that make them less efficient, all may be factors in the effectiveness of Vitamin C therapy against COVID-19 and other maladies, investigators at the Medical College of Georgia Center for Healthy Aging report in a commentary in the journal *Aging and Disease*.

The investigators recommend that those factors be considered in the design and execution of clinical trials, and when trial results are analyzed, for COVID-19 as well as other conditions, says Dr Sadanand Fulzele, aging researcher and the article's corresponding author.

The novel nature and lack of immunity against the coronavirus have prompted a worldwide pursuit of effective treatments for COVID-19, they write. That includes repurposing drugs with known safety profiles, including Vitamin C, an established immune system booster and antioxidant, which made it a logical choice to explore in COVID-19. Both strategies are needed in response to infection with the novel coronavirus to ensure a strong immune response to stop the virus from replicating in the body, and to avoid the over-the-top, destructive immune response the virus itself can generate if it does.

There are at least 30 clinical trials underway in which Vitamin C, alone or in combination with other treatments, is being evaluated against COVID-19, some with doses up to 10 times the recommended 65 to 90 milligrams daily of Vitamin C.

Factors like whether or not Vitamin C can get inside the cell, likely are an issue in the effectiveness the therapies ultimately show, says Dr Carlos M. Isales, co-director of the MCG Center for Healthy Aging and chief of the MCG Division of Endocrinology, Diabetes and Metabolism.

In fact, without adequate transporters on a cell's surface to get the water-soluble vitamin past the lipid layer of cell membranes, particularly large doses may enable the vitamin to cluster around the outside of cells where it actually starts producing oxidants, like damaging reactive oxygen species, rather than helping eliminate them, says Isales, a study coauthor.

"We think it's important to look at transporter expression," Fulzele says.

They suspect low transporter expression is a factor in the mixed results from Vitamin C's use in a variety of other conditions. Clinical trials in osteoarthritis, for example, an autoimmune disease where a misdirected immune system is attacking the joints, has gotten mixed results, Fulzele says. However, its usage in other viral-induced problems, like potentially deadly sepsis, has shown benefit in reducing organ failure and improving lung function in acute respiratory distress syndrome, which is also a major cause of sickness and death with COVID-19.

At the time their *Aging and Disease* paper was published, there were not yet published studies of the efficacies of high-dose, intravenous vitamin studies underway for COVID-19.

Fulzele, who works on Vitamin C in ageing, and others have shown that some conditions, like osteoarthritis and even normal ageing, are associated with significant downregulation of at least one subtype of Vitamin C transporter.

In fact, part of the paradox and concern with COVID-19 is that those most at risk mostly have both lower levels of Vitamin C before they get sick and fewer transporters to enable the vitamin to be of benefit if they get more, Fulzele says.

Many of those most at risk from COVID-19, including individuals who are older, Black, male and with chronic medical conditions like osteoarthritis, hypertension and diabetes, tend to have lower levels of Vitamin C, another reason Vitamin C therapy would be considered a reasonable treatment, Isales says. The investigators also note that patients may develop a Vitamin C deficiency over the course of their COVID-19 illness since, during an active infection, vitamin C is consumed at a more rapid rate. Insufficient levels can augment the damage done by an overzealous immune response.

While not routinely done, transporter expression can be measured today using PCR technology, a method also used for novel coronavirus as well as influenza testing. While increasing transporter expression is not yet doable in humans, one of Fulzele's many research goals is to find a drug or other method to directly increase expression, which should improve the health of older individuals as well as those with other medical conditions that compromise those levels.

He notes that reduced transporter levels that occur naturally with age are a factor in the reduced immune function that also typically accompanies ageing. That means that even when a 60-year-old and 20-year-old both have a healthy diet in which they consume similarly, sufficient amounts of Vitamin C, the vitamin is not as effective at boosting the older individual's immune response. Reduced immune function in older individuals is known to put them at increased risk for problems like cancer and COVID-19.

Low Vitamin C levels also have been correlated with higher mortality in older individuals from causes like cardiovascular disease. High oxidative stress, a major factor in conditions like a cardiovascular disease as well as aging and now COVID-19, also is associated with significantly reduced expression of the Vitamin C transporter.

Isales and Fulzele doubt that taking a lot of Vitamin C is a good preventive strategy against COVID-19, except in those individuals with a known deficiency.

Vitamin C is an essential vitamin, which means people have to consume it in their food or supplements. Foods naturally high in Vitamin C include oranges, potatoes, tomatoes, broccoli and Brussels sprouts. The vitamin's diverse roles in the body also include the formation of blood vessels, collagen and cartilage.

## **Low fitness**

### **Low fitness linked to higher depression, anxiety risk: Study (New Kerala: 20201112)**

<https://www.newkerala.com/news/2020/196987.htm>

People with low aerobic and muscular fitness are nearly twice as likely to experience depression, according to a study led by University College London (UCL) researchers. Low fitness levels also predicted a 60 per cent greater chance of anxiety, over a seven-year follow-up, according to the findings published in BMC Medicine.

Lead author, PhD student Aaron Kandola (UCL Psychiatry) said "Here we have provided further evidence of a relationship between physical and mental health, and that structured exercise aimed at improving different types of fitness is not only good for your physical health, but may also have mental health benefits."

The study involved 152,978 participants aged 40 to 69 of the UK Biobank study. Their baseline aerobic fitness at the start of the study period was tested by using a stationary bike with increasing resistance, while their muscular fitness was measured with a grip strength test. They also completed a questionnaire gauging depression and anxiety symptoms.

Seven years later they were tested again for depression and anxiety symptoms, and the researchers found that high aerobic and muscular fitness at the start of the study was associated with better mental health seven years later.

People with the lowest combined aerobic and muscular fitness had 98 per cent higher odds of depression, 60 per cent higher odds of anxiety, and 81% higher odds of having either one of the common mental health disorders, compared to those with high levels of overall fitness.

The researchers accounted for potentially confounding factors at baselines such as diet, socioeconomic status, chronic illness, and mental illness symptoms.

Previous studies have found that people who exercise more are less likely to experience mental illnesses, but most studies rely on people self-reporting their activity levels, which can be less reliable than the objective physical fitness measures used here.

Senior author Dr Joseph Hayes (UCL Psychiatry and Camden and Islington NHS Foundation Trust) said "Our findings suggest that encouraging people to exercise more could have extensive public health benefits, improving not only our physical health but our mental health too. Improving fitness through a combination of cardio exercise and strength and resistance training appears to be more beneficial than just focusing on aerobic or muscular fitness."

Aaron Kandola added "Reports that people are not as active as they used to be are worrying, and even more so now that global lockdowns have closed gyms and limited how much time people are spending out of the house. Physical activity is an important part of our lives and can play a key role in preventing mental health disorders."

"Other studies have found that just a few weeks of regular intensive exercise can make substantial improvements to aerobic and muscular fitness, so we are hopeful that it may not take much time to make a big difference to your risk of mental illness."

## Natural alternatives

### Turning to natural alternatives for COVID-19 treatment (New Kerala: 20201112)

<https://www.newkerala.com/news/2020/196954.htm>

With the novel coronavirus infecting over five crore people globally, boosting immunity is the biggest concern today. A body's immune system is its defence system. When a cold or flu virus, or the coronavirus that causes COVID-19 gets into your body, your immune system mounts an attack. However, this attack needs to be balanced as an overactive immune system can cause a cytokine storm.

While there is no one specific treatment or cure which could kill the COVID causing virus, a number of anti-viral, antimalarial and inflammation-fighting medicines like HCQ (Hydroxychloroquine), Remdesivir, Favipiravir and dexamethasone are being used in the hospitals.

While these drugs were initially stated to be effective in treating COVID-19, several studies emerged which did not support their touted efficacy and safety rates. A report appeared in the 'New England Journal of Medicine' (NEJM), underlined that HCQ (Hydroxychloroquine) did not work for critically ill patients. Further, another study done in New York, stated that using HCQ did not show extensive results and even induced certain side-effects that were not seen before. Based on clinical data, doctors using Favipiravir in the trials for Covid-19 observed that the drug suppressed the symptoms in people suffering from mild attacks of corona. However, Favipiravir does not offer total safety and the disease may recur in the patient. Additionally, the Solidarity Trial conducted by the World Health Organisation (WHO) showed that Remdesivir appeared to have little or no effect on mortality or length of hospital stays among patients with the respiratory disease.

Of all the potential therapies, Vitamins A, C, D, Zinc and Iron are most known for their roles in the immune system. Recently, a meta-analysis of a clinical trial stated that these supplements do not protect against Covid-19. It says having too much vitamins and minerals can impact overall immunity.

Thus, instead of taking additional supplements, one should focus on other aspects of supporting your immune system such as exercising, hydrating, getting enough sleep and eating fruit and vegetables. Studies suggest that all these supplements had little or no effect on overall mortality, initiation of ventilation and duration of hospital stay in hospitalised patients. This leads us to ancient herbal medicine as numerous places including China, Madagascar, Ghana, Central African Republic, Kerala and Goa seem to be keeping mortality rates low by using herbs.

How Alternative Treatments Are Helping?

As the scientists and medical experts across the globe are working tirelessly to procure a treatment to contain the spread of the novel coronavirus. A groundbreaking interim result of a clinical trial of COVID-19 patients has given rise to new hopes. The patients underwent natural treatment for COVID-19 in three hospitals and it was found that the combination treatment of Ayurvedic remedy known as "Immunofree" by the Corival Life Sciences, and 'Reginmune' by Biogetica which is a Nutraceutical produced better results when compared to the conventional treatment approved by the government for COVID-19. It should be noted that none of the patients who were given the natural treatment progressed into developing severe symptoms or needed life support.

However, Ayurveda TCM and African traditional medicine focuses on lifestyle practices and immunity for cure and prevention of diseases. For instance, herbs like - Pushkarmool (Inula Racemosa), Dhamanaka (Artemisia Nilagirica), Pippali (Piper Longum), Kalmegh (Andrographis Paniculata), Bhumamalaki (Phyllanthus amarus), Ocimum Sanctum (Tulsi) and Glycyrrhiza Glabra (Liquorice), which have been used extensively in many countries and have found significant inhibition of the virus. They work on improving the body's capabilities like the body's T-cells and natural killer cells, which will greatly improve the chances of recovery when the virus catches you.

Apart from this, the Ministry of AYUSH, in its latest guidance, issued an advisory to states across the country recommending the use of traditional homeopathic drugs, Arsenicum Album 30 as a form of preventive medicine against COVID-19. Its prophylactic use has been suggested to battle some of the other symptoms associated with a flu-like infection, which have also been observed in COVID positive patients. In fact, numerous countries and states that have adopted or mandated natural treatment for Novel Coronavirus have shown mortality rates less than 1/10 of their neighbours. However, Arsenicum Album does not have data supporting it like these herbs above do from in silica, in vitro and in vivo studies.

With the anxiety around the disease, people are seeking "back to roots" or "traditional" remedies, such as immunity boosters to seek comfort. It seems like the aforementioned herbs can possibly do the body more good than harm and therefore should be taken by all during this pandemic.

## **Immune System**

**सर्दियों में मजबूत इम्यून सिस्टम पाने के लिए रोजाना इन 5 चीजों का सेवन करें (Dainik Gagan: 20201112)**

<https://www.jagran.com/lifestyle/health-eat-these-foods-to-boost-immune-system-in-winter-season-21055411.html>

विशेषज्ञों की मानें तो सर्दी के दिनों में सेहत का विशेष ख्याल रखना पड़ता है। अगर कोई कोताही बरतते हैं तो सेहत पर प्रतिकूल प्रभाव पड़ता है। इसके लिए आप अपनी डाइट में इम्यून सिस्टम मजबूत करने वाले चीजों को जरूर शामिल करें।

नई दिल्ली, लाइफस्टाइल डेस्क। कोरोना काल में स्वस्थ रहना किसी चुनौती से कम नहीं है। खासकर सर्दियों में हवा की गुणवत्ता बेहद खराब होने से सांस संबंधी बीमारियों का खतरा बढ़ जाता है। इन दिनों सर्दी, खांसी और बलगम से संबंधित मामले अधिक देखे जाते हैं। विशेषज्ञों की मानें तो

सर्दी के दिनों में सेहत का विशेष ख्याल रखना पड़ता है। अगर कोई कोताही बरतते हैं, तो सेहत पर प्रतिकूल प्रभाव पड़ता है। इसके लिए आप अपनी डाइट में इम्यून सिस्टम मजबूत करने वाले चीजों को जरूर शामिल करें। इनके सेवन से इम्यून सिस्टम मजबूत होता है और बीमारियां दूर रहती हैं। अगर आपको पता नहीं है, तो आइए जानते हैं कि सर्दी के दिनों में सेहतमंद रहने के लिए किन चीजों का सेवन जरूरी है-

**शुद्ध घी का सेवन करें**

लोगों में यह धारणा है कि घी के सेवन से फैट बढ़ता है। गाय के दूध से बने शुद्ध घी के सेवन से शरीर में उर्जा और गर्मी का संचार होता है। सर्दी के दिनों में इसके सेवन से आप सेहतमंद रह सकते हैं। साथ ही आपकी त्वचा और बाल भी स्वस्थ रह सकते हैं। शुद्ध घी में विटामिन ए, के, डी, ओमेगा-3 और ओमेगा-9 फैटी एसिड पाए जाते हैं। इसके लिए रोजाना एक चम्मच घी का सेवन करें।

पेट की चर्बी घटानी है तो, सुबह करनी होगी बस ये दो एक्सरसाइज

**Belly Fat Exercise:** पेट की चर्बी घटानी है तो, सुबह करनी होगी बस ये दो एक्सरसाइज

यह भी पढ़ें

गुड़ खाएं

सर्दी के दिनों में गुड़ डाइट का अहम हिस्सा माना जाता है। गुड़ शरीर में गर्मी का उत्पादन करता है। इसके सेवन से रक्त धमनियां सुचारू रूप से काम करने लगती हैं। साथ ही गुड़ फेफड़ों को स्वस्थ और साफ़ करने में मदद करता है। जबकि डॉक्टर्स डायबिटीज के मरीजों को चीनी के बदले गुड़ खाने की सलाह देते हैं। इसके सेवन से बुखार में भी आराम मिलता है। इसके लिए गुड़ को अदरक और अजवाइन का जूस बनाकर सेवन करें।

**मूंगफली की चिककी खाएं**

आयुर्वेद में मूंगफली को दवा माना जाता है। इसके सेवन से कई बीमारियों में आराम मिलता है। खासकर डायबिटीज और बढ़ते वजन के लिए दवा समान है। साथ ही सर्दी के दिनों में मूंगफली और गुड़ के सेवन से इम्यून सिस्टम मजबूत होता है। इसके लिए आप मूंगफली की चिककी का सेवन करें। इसमें कई महत्वपूर्ण पोषक तत्व जैसे जिंक, आयरन, मैग्नेशियम पाए जाते हैं। हालांकि, बाजार में बिकने वाले चिककी को खाने से परहेज करें। इसके बदले में घर पर चिककी बनाकर सेवन करें।

शुगर की बीमारी है तो इस तरह रखें दिवाली पर शुगर कंट्रोल

**Diabetes Control Tips:** दिवाली के मौके पर शुगर के मरीज इन 5 बातों का ख्याल रखेंगे तो शुगर कंट्रोल रहेगी

यह भी पढ़ें

पंजरी का सेवन करें

पंजरी के सेवन से इम्यून सिस्टम मजबूत रहता है। साथ ही सर्दी और खांसी में आराम मिलता है। पंजरी से शरीर में गर्मी का संचार होता है और सर्दियों में आप सुरक्षित रहते हैं। आप चाहे तो सत्तू और घी से बने लड्डू का भी सेवन कर सकते हैं।

**मसाला चाय का सेवन करें**

मसाला चाय के सेवन से सर्दी और खांसी का खतरा कम हो जाता है। खासकर कोरोना काल में इम्यून सिस्टम मजबूत करने के लिए मसाला चाय का जरूर सेवन करें। इसके लिए एक कप पानी में अजवाइन, सौंफ, जीरा को उबाल लें। अब इसमें शहद मिलाकर सेवन करें। आप चाहे तो तुलसी चाय का भी सेवन कर सकते हैं।

एक प्राकृतिक उपचार है Hamdard Joshina सिरप . . .

सर्दी-खांसी के लिए एक असरदार प्राकृतिक उपचार - Hamdard Joshina

यह भी पढ़ें

डिस्क्लेमर: स्टोरी के टिप्स और सुझाव सामान्य जानकारी के लिए हैं। इन्हें किसी डॉक्टर या मेडिकल प्रोफेशनल की सलाह के तौर पर नहीं लें। बीमारी या संक्रमण के लक्षणों की स्थिति में डॉक्टर की सलाह जरूर लें।