



a weekly publication from ICMR-NIRT Library

2022 | Vol.5 | Issue No.1&2

news **bulletin** Library



NEWS BULLETIN

3&10 Jan 2022 | Vol.5 | #1&2

A weekly publication from NIRT Library

THE  HINDU

Battling Omicron, the Tamil Nadu way

Serena Josephine M
JANUARY 09, 2022 01:07 IST



How is Tamil Nadu bracing for the third wave of the COVID-19 pandemic as cases are surging by the thousands every day? A battle-weary front-line force needs to handle yet another surge. The health managers, however, say the lessons learnt from the last two waves and the rapid expansion of health infrastructure will stand the State in good stead

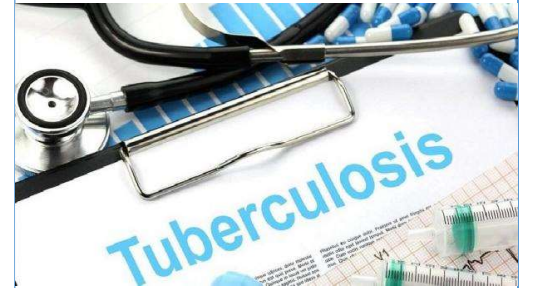
In three weeks after reporting the first confirmed Omicron case, Tamil Nadu is in the grip of the highly transmissible and fast-spreading variant of SARS-CoV-2. Fresh COVID-19 cases have jumped seven times since the start of New Year, marking the beginning of yet another long-haul for the State's health infrastructure and its workforce.

The State is now in the midst of an exponential rise in infections, as indeed is most of the world. The number of daily cases

இந்து தமிழ் திசை

பணியிடங்களிலிருந்து
காசநோய் ஒழிப்பைத்
தொடங்கலாமே!

Published : 08 Jan 2022 20:06 pm
பாரதி ஆனந்த்



"தொற்றுநோய்களைப்
பொறுத்தவரையில் 50% பரவல்
பணியிடங்களில்தான்
நடக்கின்றன.
எனவே காசநோய் பரவல்
சங்கிலியை உடைக்க இது ஒரு
சிறந்த தீர்வாக இருக்கும் என
ஆராய்ச்சியாளர்கள்
கருதுகின்றனர்".....

Continued in page no.11

It's dangerous to take
Omicron lightly.....

Page no.41

started increasing on December 29 when 739 persons tested positive and quickly surged to over 10,000 on January 8.

For health officials and public health experts, the rapid surge was on expected lines, and as the predictions pointed out — inevitable. Compare this: It took 58 days in the first wave for the daily count in the State to peak from 1,000 cases to nearly 7,000. In the second wave, it took 26 days for the cases to jump from 1,000 to nearly 7,000. It took another 38 days for the cases to peak at 36,000. In contrast, it has just taken 7 days for the daily cases to jump from 1,000 to 7,000. As the graph accompanying this article shows, the emerging curve of the third wave appears to rise more vertically — rather like a wall than a wave.

In no time, Chennai has turned into a hotspot, driving the surge. Chengalpattu, Coimbatore, Tiruvallur, Tiruppur, Erode, Kancheepuram, Salem, Thoothukudi and Vellore are the other districts of concern because of the high caseload. Lessons learnt from the second wave, which wreaked havoc on the State as it ran out of beds and oxygen, has put the Health Department on guard.

Now, the State's twin aims are to prevent the spread of the disease and strengthen clinical management, Health Secretary J. Radhakrishnan said. "From the experience in the past week and what is observed globally, it is clear that the present surge is fuelled by the Omicron variant, while Tamil Nadu has residual cases from the Delta variant. In the last three months, whole genome sequencing revealed that 99.9% of the samples were of the Delta variant. With the situation changing rapidly, it was 65% Omicron and 35% Delta earlier this week. According to experts, the dominance of Omicron is likely to be swift and it is likely to swamp all fresh positive cases," he explained.

Gearing up

It was on December 15 that the State reported its first Omicron case. A Chennai resident, who

had travelled from Nigeria through Doha, tested positive for the new variant. A total of 185 persons — of whom 68 had no links with international travellers — tested positive for Omicron in the State.

At the Government Corona Hospital, where the first patient was admitted on December 11, the initial panic among those who tested positive for the new variant — international travellers and their contacts — quickly faded as the symptoms subsided in a couple of days. There were no recurrent symptoms, no requirement for oxygen support or higher drugs, said its director K. Narayanasamy. The hospital has treated 40 confirmed Omicron cases, and has so far seen nearly 200 persons with suspected symptoms.

As the cases surged, the State quickly updated its triage and treatment protocol to guide its response to the new variant. The updated protocol provided for home isolation of the fully vaccinated asymptomatic persons and other categories and took the vaccination status as one of the deciding factors for hospitalisation. From January 6, the government brought in new restrictions — weekend curbs at places of worship, night curfew and a total lockdown on Sunday, among others.

After the second wave tested the health infrastructure, the Health Department ramped up bed and medical oxygen capacities. As of now, the State has nearly 1.20 lakh beds, with 50,000 beds being added at COVID-19 Care Centres, while the present oxygen storage capacity was 1,730 metric tonnes.

While it took nearly a month during the initial phase of the second wave to increase the number of RT-PCR tests from less than 50,000 to more than one lakh a day, the State is already testing more than one lakh persons a day during the third wave.

"Considering the inevitable surge, instead of the number of cases, we are conscious of the number of people who actually need

hospitalisation. Asymptomatic patients who are fully vaccinated should not be hospitalised but monitored clinically through home isolation and at COVID-19 Care Centres. We have asked every district to set up war rooms, encourage the setting up of screening centres and follow the triaging protocol so that oxygen-supported beds and intensive care unit beds at government and private hospitals are free for those who need treatment," Dr. Radhakrishnan said.

"Our health system is well prepared to handle the crisis — not only the health infrastructure, including oxygen availability, but also trained human resources, clear-cut protocols on triage, clinical management, monitoring of home isolation and discharge. Sufficient drugs and consumables are stocked to manage the situation," T.S. Selvavinayagam, Director of Public Health and Preventive Medicine, added. "Based on the experiences across the globe, we anticipate a steep rise in cases in Tamil Nadu, but our efforts are made in such a way that we will slow down the speed of the rise and flatten the curve so that our health system is not overwhelmed and there is no excess mortality or morbidity," he pointed out.

As a way ahead, sequencing of samples would continue to identify the circulating variants and the emergence of new ones from all potential clusters. It was a continuous process of monitoring, Dr. Selvavinayagam said. But he quickly added: "But whatever be the variant, we need to follow the basic COVID-19 appropriate behaviour and get vaccinated so that even if there is infection you are protected from severe illness and death."

The pattern observed in Tamil Nadu, especially in Chennai, was similar to that of cities such as Mumbai and Delhi, said Prabhdeep Kaur, deputy director, Indian Council of Medical Research-National Institute of Epidemiology. "So, this is not totally unexpected. The rise is consistent with how Omicron behaves globally, in other

countries and thickly populated big cities in India. The faster transmission suggests that the Delta variant will be pushed behind by Omicron."

What doctors see?

Based on his experience of treating several COVID-19 patients during the last two waves, a senior government doctor in Chennai said the strain seemed to be milder, with the number of patients needing oxygen support being fewer. Fever with chills and sore throat are the commonly seen symptoms lasting for a maximum of three days. "We should be able to cope with this wave better than last time. But the strain on healthcare due to excess fever cases may be high. Wave after wave, there seems to be no respite, and we are exhausted. Most of the triaging could be done at zonal healthcare facilities so that tertiary care centres need not be overburdened. We can have fever camps, either streetwise or wardwise. If fever persists beyond three days, they can be tested and admitted to a tertiary care centre," he said. He added a word of caution: "We need not panic seeing the number of positive cases. It is going to be very high. The number of patients at the intensive care units and fatalities could be a better indicator of the wave rather than the total number of cases."

S-gene dropout study

While medical management of cases is vital, doctors of the State's largest government hospital — Rajiv Gandhi Government General Hospital (RGGGH) — are taking a closer look at patients in whom S-gene dropout, a marker for Omicron, was observed. It has taken up studies on how many with S-gene dropout tested positive for Omicron, antibody titre for those who are reinfected and symptomatology of patients with S-gene dropout.

RGGGH Dean E. Theranirajan said that from December 17 to January 6, the hospital saw 231

persons in whose samples S-gene dropout was identified. Of them, 22 were asymptomatic — no fever, cold or cough. They were contacts of patients. A total of 38 had mild flu-like illness, while 171 persons had fever for two days with cold and cough. A total of 17 persons required oxygen of less than five litres.

Of the 231, 51 were healthcare workers. “We identified 127 persons who were clear about the day of the onset of symptoms. When we tested them after five days from the onset of symptoms, 79 were negative for the infection. Of the remaining, many tested negative on the sixth or seventh day of the onset of symptoms,” he explained.

The doctors went on to check the vaccination status of patients. They found that 194 persons were vaccinated — 176 fully vaccinated and 18 with a single dose. The remaining 37 were not vaccinated. “None of the persons with S-gene dropout is in the intensive care unit. The Delta variant is still in circulation. We have 13 patients in the intensive care unit — all of them with the Delta variant. Of them, only two are vaccinated and have co-morbidities. A majority of patients are in room air. The situation is not alarming, but we need to stay cautious. When the number rises exponentially, our health infrastructure could get strained,” he said.

Areas of concern

But the two major areas of concern are poor compliance with the mask mandate and the low second-dose vaccination coverage. “Even after two years, the message on masking has not reached. There is poor mask compliance, especially in indoor settings... Wherever people come together in a close setting, the spread is fast. Persons with co-morbidities should wear good quality masks — a three-layer cloth mask or surgical mask,” Dr. Kaur said.

Dr. Radhakrishnan is of a similar view. “Despite clear indications of Omicron cases increasing,

there is a general tendency to treat the surge lightly. People need to understand that if we allow the number to spiral vertically, the corresponding increase in absolute number of cases, especially those with co-morbidities, might lead to an increased number of hospitalisation. It is a struggle as the awareness among people is not accompanied by willingness to change to safe behaviour. People are taking masking and adherence to the standard operating procedures casually. We need massive public support,” he said.

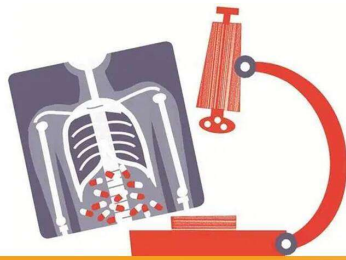
While vaccination coverage has improved, the second dose coverage is another challenge. As of now, 60 lakh persons are yet to receive the first dose, while 90 lakh-odd are due for the second dose. Dr. Kaur stressed the need to identify persons who are due for their second dose and take up targeted vaccination, especially of high-risk groups such as persons aged above 60 with co-morbidities.

Which other areas require attention? Triaging of patients is one. She added that triaging would identify who needs hospitalisation. “We need to preserve beds for those who require oxygen support and stand the risk of a severe disease.” Avoid all gatherings and get tested if symptomatic. Do not rush for CT scans or expensive tests or hospitalisation. If fully vaccinated, monitor oxygen saturation and get a teleconsultation, she said. “We should not rush to declare lockdowns because of rapid transmission. We need to assess our health system’s capacity. The situation needs to be closely monitored, and panic is definitely not the solution,” she said.

THE  HINDU

India set to become hub for antiviral generics: Fitch

NEW DELHI, JANUARY 09, 2022 04:19 IST



THE NEGLECTED CRISIS

VANDANA CHAVAN



It cites nod to molnupiravir for COVID

India will become the largest global hub for COVID-19 antiviral generic drug production after the drug controller granted emergency-use authorisation to several pharmaceutical companies in the country to manufacture and market generic versions of molnupiravir, Fitch Solutions said on Friday.

Increased access to molnupiravir will keep hospitalisations and deaths in India to a manageable level as Omicron infections rise, Fitch Solutions said in a report.

Those granted authorisation by the Drugs Controller General of India (DCGI) include Dr. Reddy's Laboratories, Torrent Pharmaceuticals, Cipla, Sun Pharma, Natco Pharma, Viatrix, Hetero Drugs and Mankind Pharma.

Following the authorisation, Cipla, Sun Pharma, and Dr. Reddy's Laboratories are set to release molnupiravir capsules in the coming weeks, and the rest of the companies will follow.

"This will make India the largest global hub for COVID-19 antiviral generic drug production," it said.

 **The Indian EXPRESS**

We can't afford to neglect TB care

The pandemic has caused massive disruptions to the TB programme. This must now get back on track if we want a 'TB-mukt' India.

Written by [Vandana Chavan](#) |

Updated: January 10, 2022 9:21:11 am



AMIT CHAKRAVARTY

For the TB mitigation strategy to be effective, it is important to increase levels of awareness of people about the disease. (Representational)

While the [Covid-19](#) pandemic has wreaked havoc on lives and health systems across the world, it has also forced governments globally to become more cognisant of the public health blueprints of their countries. In her budget speech for 2021-2022, Finance Minister [Nirmala Sitharaman](#) announced the government's policy to bolster support for holistic health and well-being. The policy revealed a strong commitment to tackling infectious diseases by pledging to fund four new national virology institutes, nine new high-containment laboratories for studies on highly infectious pathogens, and a National Institute of One Health to coordinate research and surveillance on animal and human infections and several measures to control the spread of Covid. Unfortunately, it did not address other infectious diseases like tuberculosis that have taken a large toll on the country's population in recent decades.

According to the WHO's Global TB Report 2021, an 18 per cent decline in case notifications is perhaps the biggest indicator of the pandemic's impact on global tuberculosis programmes.

India reported a substantial drop in notifications — the country reported 18 lakh tuberculosis cases in 2020 compared to 24 lakh cases in 2019. The report observes that with a total estimated incidence of 25.9 lakh TB cases, India is home to a quarter of the global burden of the disease. Since 2016, India has been on a mission mode to eliminate TB by 2025, five years ahead of the global target. With a four-fold increase in the budget to tackle the disease and a patient-centric National Strategic Plan for TB elimination, India had taken enormous strides towards reaching its goal. However, the pandemic has caused massive disruptions since resources, both human and technical, were diverted to control the spread of SARS-CoV2.

Fear of Covid lockdowns and economic stress discouraged people from visiting medical facilities to get tested. This exacerbated the pre-existing health-seeking behaviour of people who, under normal circumstances too, would shy away from getting medical care. For the TB mitigation strategy to be effective, it is important to increase levels of awareness of people about the disease. It is also crucial to ensure that the people affected by the disease overcome social insecurities and access TB care and utilise the government's TB programme. To this end, the Active Case Finding (ACF) drives organised by the National TB Elimination Programme merit mention. These drives, implemented for systematic screening of TB among vulnerable populations or regions since 2017, have helped in early case detection. Even during the pandemic, in 2020, approximately 17.9 crore people were screened, and 52,273 TB cases were identified, according to the India TB Report 2021.

While ACF drives have helped identify TB patients at the district/sub-district level, public participation and community ownership remain intrinsic to any sustainable strategy for TB elimination. It is time for a people's movements for the elimination of TB. Elected representatives'

initiative and participation can certainly help to amplify the right messages about available care services, destigmatise the disease and encourage people to seek care. This could be achieved by supporting grassroots workers such as ASHAs, anganwadi workers and self-help groups who strive hard to sustain a responsive health system at the local level.

As a public representative, I have had the opportunity to work closely with several SHGs in Pune. In my experience, empowering these groups with accurate information and enhancing their ability to communicate effectively can transform how health programmes deliver at the grassroots level.

We will have to fill in the gap created by nearly one and a half years of Covid. While it remains essential to push for more finances and supportive policies at a national level, any tangible impact inevitably happens when the fundamentals of any movement are robust. In this case, the fundamentals are the people and community leaders. Collectively, we must keep alive this jan andolan against TB till the most vulnerable can secure themselves a safer future. Only then will we as a people achieve the ultimate objective of a "TB-mukt Bharat".

 **The Indian EXPRESS**

Centre says no mix-and-match of vaccines for third 'precaution dose'; doctors elucidate

As such, those above the age of 60 and with co-morbidities as well as health workers who received Covishield will get a third dose of the same, while those who were administered Covaxin will get a dose of that vaccine.

By: [Lifestyle Desk](#) | New Delhi |
January 6, 2022 3:50:32 pm

Strengthening the fight against [Covid-19 and its variants](#), Prime Minister [Narendra Modi](#), in a televised address to the nation, announced that a “precaution dose” for frontline workers, and people with co-morbidities above 60 years of age, would be administered from January 10, 2022.

Now, in an update on the same, the Central government has announced that the same vaccine will be administered as the third dose of booster [vaccine](#), and no mix and match will be allowed as of now. However, Niti Aayog member (health) and head of the [Covid-19](#) task force Dr VK Paul, during a press briefing, said that there is no issue in mixing vaccines. “As more data is received about a heterologous approach in the administration of [vaccines](#), decisions will be taken going forward,” the Centre stated.

Heterologous strategy is believed to “mitigate supply shocks or shortages that might otherwise reduce the speed of vaccine roll-out”, according to a study published by *The Lancet* in May 2021.

As such, those above the age of 60 and with [co-morbidities](#) as well as health workers who received Covishield will get a third dose of the same, while those who were administered [Covaxin](#) will get a dose of that vaccine.

The other vaccines approved so far — ZyCov-D from Zydus Cadila, [Corbevax](#) from Biological E, and Serum Institute of India’s Covovax — will not be part of the third dose plan as of now.

As per Dr Shuchin Bajaj, founder director, Ujala Cygnus Group of Hospitals, it is for the “simplification” of the process. “We are confident that in the next phase, March onward, we will see other vaccines also being allowed as

a booster dose. As of now, taking a different dose will only create confusion,” said Dr Bajaj.

According to Dr Sulaiman Ladhani, consulting chest physician, MD Chest and Tuberculosis, Masina Hospital, Byculla, Mumbai, same vaccine is normally preferred because it is found to have a better neurogenic effect and elicits a good antibody response if given after a certain period of time, in this case 9-12 months.

“Mixing is also possible but, here, we have limited options of vaccine availability. So, the government has decided to go on with the same vaccine because we do not have enough robust scientific data on the available vaccines here to allow mix and match, unlike other countries where mixing of vaccines is permitted. In other countries you are allowed to mix vaccines, like a booster dose of another vaccine can be taken,” said Dr Ladhani.

In an earlier interview Dr Vikas Maurya, head of department and director, pulmonology, Fortis Hospital, Shalimar Bagh had said, “Researchers are already studying the effects of mixing the [vaccine shots](#). Further research is required to understand if doing this will boost the immune response or reduce it. For now, what we can say is a Covaxin shot should be followed by a booster dose of Covaxin only; the same applies for Covishield.”

But what if someone has taken [different vaccines](#) as first and second dose? As per Dr Bajaj, doing so is not allowed in India. “So there is no confusion regarding what the third dose will be, as on the Cowin platform, you are allowed to take only the same dose as the first and second shots,” he said.

According to PM Modi, 61 per cent of India’s adult population has received both doses while 90 per cent has received the first dose.

The third dose or booster shot will be given 9-12 months after the second dose.

"India will, most likely, be advising a gap of [9-12 months](#) because we are still looking to get the second dose for a lot of people in the country as only 61 per cent have received the second dose. So there is automatically a big gap needed to cover the entire adult population. We also need to give vaccination to 15 to 18 year old. So, right now that interval is required," Dr Bajaj explained.

What are the benefits of a booster shot?

As per studies, approximately after nine months, the immunity starts going down, and the protective effects and the antibody levels start decreasing, explained Dr Ladhani. "So the protective dose is needed for the vulnerable groups like senior citizens or patients with co-morbidities like diabetes, blood pressure, or [cancer](#), and healthcare workers, etc, who are at high risk. The benefits of the precautionary dose is that, when the antibody levels go down, the precautionary dose will elicit a more robust antibody response, which will at least offer protection from severe infections," said Dr Ladhani.



BMC ropes in TB survivors to counsel patients, sees reduced dropout rates

The volunteers are called 'Saksham Sathi' and their job is ensure improved adherence to DOTS treatment, curb dropouts, bring back defaulters and increase recovery rate.

Written by [Rupsa Chakraborty](#) | Mumbai |
Updated: January 2, 2022 7:42:39 am

In 2018, Seema Kunchikorne contracted pulmonary multidrug resistant Tuberculosis (MDR-

TB). From 65kg, her weight dropped to 45kgs and she slipped into depression. Her husband packed her off to her mother's house and eventually she was admitted to Sewri TB hospital.

"I was on oxygen support and doctors had also given up all hopes. I didn't give up due to my son who I had not seen for two years. I pushed myself to eat. Within three months at the hospital, I gained 8kgs and in 2020, I was declared TB-free," said Kunchikorne.

Now divorced, the Dharavi resident is among 24 TB survivors, which the Brihanmumbai Municipal Corporation (BMC), in a first-of-its-kind initiative, has hired to counsel other patients to ensure better adherence to treatment regime. Started in November 2021, the initiative has yielded encouraging response already by decreasing the dropout rates despite the surge in [Covid-19](#) in the third wave, officials said.

The volunteers are called 'Saksham Sathi' and their job is ensure improved adherence to DOTS treatment, curb dropouts, bring back defaulters and increase recovery rate.

Kunchikorne said her journey of recovery made her realise the unspoken issues that TB patients go through, which often affects their mental health and treatment regime.

"This is a first-of-its-kind initiative taken in India. TB survivors are role models for the active patients. By talking to them, the patients earn the belief that they can also recover from the disease, which is curable with proper medication," said Dr Pranita Tipre, Mumbai's TB officer.

Along with smart tablets, the TB survivors are given Rs 10,000 under the initiative every month along with a sum of Rs 500 to recharge their devices.

Dr Tipre said that earlier, many patients used to refuse to give their bank details for the monthly Rs 500 incentive provided for their nutrition.

“These TB survivors explain to the patients the importance of nutrition in their recovery. With this, we have been able to collect bank details of many patients,” she added.

A study — assessment of prevalence of depression and its associated factors among tuberculosis patients in Ernakulam district, Kerala — found that one-sixth of TB patients suffer from depression with the prevalence higher in those with MDR TB.

A person suffering from TB can develop depression due to several factors such as long duration of treatment, social stigma and lack of family support, officials said.

Talking to [The Indian Express](#), another ‘Saksham Sathi’, Yashwant Amrut Marathe, 23, said TB survivors can connect with patients better as they have faced similar kind of stigmatisation and discrimination.

“To patients who worry about their career gaps due to the disease, I share with them my story, how I have sprung back and am now doing well in my life. We are like their friends who can actually relate to them, without giving fake sympathy,” said the Santa Cruz resident who had contracted TB in 2017.

At present, the survivors, trained by the civic body, are counselling the patients over the phone.

“Soon, we will start community engagement where along with group counselling of patients, we will also involve their relatives,” said Dr Tipre.

BMC to start compulsory screening of relatives of pulmonary TB patients

Mycobacterium tuberculosis, the bacteria that causes TB, can live in the body without evidence of clinically evident active TB. This is called LTBI

Written by [Rupsa Chakraborty](#) | Mumbai |
January 1, 2022 1:40:32 am

FOR THE early detection of latent tuberculosis infection (LTBI) among households in Mumbai, the Brihanmumbai Municipal Corporation (BMC) is for the first time initiating compulsory screening of family members of active pulmonary tuberculosis (TB) patients from January 1, 2022. This could be a game changer by reducing the TB burden by half in the city.

Mycobacterium tuberculosis, the bacteria that causes TB, can live in the body without evidence of clinically evident active TB. This is called LTBI. In most people who breathe in TB bacteria and become infected, the body is able to fight the bacteria to stop them from growing. People with LTBI have no symptoms.

Earlier, BMC had started a pilot project where around 500 samples of family members of 125 pulmonary TB patients were collected to detect LTBI. Now the TB department has decided to make the surveillance mandatory for all the pulmonology TB patients’ kin across 24 wards in Mumbai. In Mumbai, over two-third of the TB patients have pulmonary infection.

Under this, close contacts of the TB patient will be screened for sensitivity of 4S complex — current cough, fever, weight loss and night sweats. “Along with this, we will ascertain the presence of the Mycobacterium through X-ray,

blood test (Interferon-Gamma Release Assays, called IGRA) that gauges an individual's immune reactivity to TB bacteria. If anyone is found positive with the bacteria, we will start their prophylactic treatment so that the bacteria doesn't become active in them," said Dr Pranita Tipre, Mumbai's TB officer.

So far, this TB preventive therapy was limited to children under five years who were exposed to any active TB in the household and people living with HIV who generally have low immunity.

The Indian EXPRESS

No travel history, just scratchy throat: Should you get tested for the Omicron variant?

Omicron is said to exhibit milder symptoms in people who have had both doses of the vaccines

By: [Lifestyle Desk](#) | New Delhi |
Updated: December 30, 2021 11:31:35 am



A scratchy throat, or just a sore throat without cough/cold symptoms like a runny nose or congestion, are some of the earliest signs of the [Omicron](#) variant. As such, amid rising cases

of [Omicron](#) and [Covid-19](#) in India, many people presenting with just one of these symptoms are wondering if they should get tested for the 'variant of concern'.

"We have found that one of the [symptoms](#) — identified in these cases — is a scratchy throat," said Dr Sulaiman Ladhani, consulting chest physician, MD Chest and Tuberculosis, Masina Hospital, Byculla, Mumbai.

However, he was quick to add that "just having a sore throat doesn't indicate that you are infected with Omicron". "But, if you have been in contact with people who have travelled or if you have a sore throat with running nose fever or body ache, then you should get tested for Covid. Otherwise just having a sore throat does not indicate that you have Omicron. It could just be seasonal flu. There is no need to panic," said Dr Ladhani.

From what we know so far, Omicron appears to spread faster than the Delta variant which has been attributed to the surge in cases across the world in the last several months, Dr Poonam Khetrpal Singh, Regional Director, WHO South-East Asia Region said in a statement.

As per a PTI report, Delhi Minister Satyendar Jain noted that people with no travel history found infected with Omicron means "it's gradually spreading in community".

However, Omicron is said to exhibit milder symptoms in people who have had both [doses](#) of the vaccines.

"Omicron-related infections are very mild, and include throat issues, loss of appetite, and generalised weakness. The conventional symptoms like cough, cold, breathlessness, loss of sense of smell and taste are not seen in majority of cases, as per national and international data. In this scenario, with the slightest symptoms related to the throat, or body pain, it is better to avoid unnecessary testing at

least without any direct travel history, or without any possible exposure concern," Dr Gopi Krishna Yedlapati, consultant interventional pulmonologist, Yashoda Hospitals, Hyderabad told indianexpress.com.

When such **throat** ache is related to seasonal changes, intake of warm liquids, keeping yourself covered, and saltwater gargles can help soothe your throat.

To stay protected, experts urge that universal precautions of **social distancing**, proper usage of masks, frequent hand sanitiser use, and proper ventilation of living area and vaccination can help fight against any variant of Covid-19.

Continued from the page no.1

பணியிடங்களிலிருந்து காசநோய் ஒழிப்பைத் தொடங்கலாமே!

..... உலக அளவில் காசநோயை, 2030-க்குள் ஒழித்துவிட வேண்டும் எனும் எல்லைக் கோட்டை நிர்ணயித்துள்ளது. உலக சுகாதார நிறுவனம். 2025-க்குள், இந்தியாவில் காசநோயை ஒழிப்பதுதான்

தேசிய அளவிலான குறிக்கோள் என்று மத்திய அரசு அறிவித்துள்ளது. 'காசநோய் இல்லாத இந்தியா' எனும் திட்டத்தை பிரதமர் நரேந்திர மோடியும் தொடங்கி வைத்துள்ளார்.

இந்நிலையில், **காசநோய்** ஒழிப்பைப் பணியிடங்களிலிருந்து தொடங்க வேண்டிய அவசியத்தைப் பற்றியும், காசநோயாளிகளுக்குப் பணியிடங்களில் சமூகப் புறக்கணிப்பிலிருந்து பாதுகாப்பை உறுதி செய்வது எப்படி என்பது குறித்தும் இக்கட்டுரையில் பார்க்கவிருக்கிறோம்.

ஏன் பணியிடத்தில் இருந்து தொடங்க வேண்டும்?

காசநோயால் தினமும் 198 நாடுகளில் 4,000 பேர் இறக்கின்றனர். அன்றாடம் 28,000 பேர் புதிதாக

காசநோயால் பாதிக்கப்படுகின்றனர். உலகின் காசநோயாளிகளில் பாதிப் பேர் வங்கதேசம், சீனா, இந்தோனேசியா, நைஜீரியா, பாகிஸ்தான், பிலிப்பைன்ஸ், தென் ஆப்பிரிக்கா ஆகிய 8 நாடுகளில் இருக்கின்றனர். உலக காசநோயாளிகளில் 27% பேர் இந்தியர்கள். காசநோய் பாதிப்புக்கு ஏழை, பணக்காரர், ஆண், பெண், மூன்றாம் பாலினத்தவர், குடிசைப் பகுதி, மாட மாளிகை வசிப்பிடம் என எந்த பேதமும் இல்லை. யாருக்கு வேண்டுமானாலும் **காசநோய்** வரக்கூடும். ஆனால், காசநோய்க்கும் பணியிடச் சூழலுக்கும், காசநோய்க்கும் ஊட்டச்சத்துக்கும் ஒரு தொடர்பு இருக்கிறது.

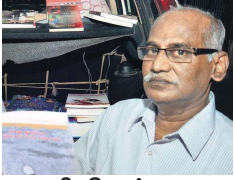
காசநோய், காற்றின் வழியாகப் பரவக்கூடிய 'மைக்கோபாக்டீரியம் டியூபர் குளோசிஸ்' என்கிற பாக்டீரியாவால் உண்டாகிறது. இந்தியாவில் 40 % மக்களுக்குக் காசநோய்த் தொற்று இருக்கிறது. ஆனால், அது நோயாக மாறாத - உள்ளூறைந்த தொற்றாக - உடலில் மறைந்திருக்கிறது. இதை 'லேட்டன்ட் டிபி' (latent TB) என மருத்துவர்கள் கூறுகின்றனர். உடலில் நோய் எதிர்ப்பு சக்தி குறையும்போது, இவர்களுக்கு **காசநோய்** ஏற்பட்டுவிடும்.

உலக சுகாதார நிறுவனம் மற்றும் சர்வதேசத் தொழிலாளர் அமைப்பின் கணிப்பின் படி, எண்ணெய் மற்றும் எரிவாயு தொழிற்சாலைகள், சுரங்கத் தொழிற்சாலைகள், சிறைச்சாலைகள், மருத்துவமனைகள், சிலிக்கா தொழிற்சாலைகள், புலம்பெயர்ந்த தொழிலாளர்கள் அதிகம் உள்ள தொழிற்சாலைகள் ஆகியவற்றில் வேலை செய்பவர்களுக்கு **காசநோய்** ஏற்படுவதற்கான ஆபத்து அதிகமாக உள்ளது. சுகாதாரமற்ற வேலைவாய்ப்புச் சூழல், காற்று மாசு ஆகியன நோய்க்கான வாய்ப்பை அதிகரிக்கின்றன.

இந்தியாவில் உள்ள பீடித் தொழில்துறை, செங்கல் சூளைகள், கல் அரவைத் தொழிற்சாலைகள், ஜவுளி (சணல் மற்றும் பருத்தி), போக்குவரத்துத் துறை ஊழியர்களும் **காசநோய்** தாக்கத்திற்கு உள்ளாவதற்கு அதிக வாய்ப்புள்ளதால் இவற்றையும் உலக சுகாதார நிறுவனம் ஹை ரிஸ்க் தொழில் பட்டியலில் சேர்க்க வேண்டும் என்ற கோரிக்கை முன்வைக்கப்பட்டுள்ளது.

தினக்கூலிகளாக இந்தத் தொழிற்சாலைகளில் வேலை பார்க்கும் தொழிலாளர்களுக்கு ஊட்டச்சத்துக் குறைபாடும் இயல்பாகவே இருக்கும் சூழலில் நோய்க்கான வாய்ப்பும் அதிகமாகிறது.

காசநோய் ஒழிப்பில் முக்கியத்துவம் வாய்ந்தது, நோயை அதன் ஆரம்பக் காலத்திலேயே அறிந்து ஒழிப்பது. ஆகையால் [காசநோய்](#) ஏற்படும் அதிக அபாயம் உள்ள இந்தத் தொழிற்சாலைகளில் பணிபுரிவோருக்காக மருத்துவ விழிப்புணர்வு முகாம் நடத்தலாம். அவர்களுக்கு பொது மருத்துவப் பரிசோதனைகள் செய்யலாம். அவர்களின் யாருக்கேனும் அறிகுறி தெரிந்தால் முறையான அனைத்துப் பரிசோதனைகளையும் செய்து சிகிச்சையைத் தொடங்கலாம்.



இதுகுறித்து பொது மருத்துவர்க்கணைசன் கூறியதாவது:

காசநோயை அது பரவும் அபாயம் உள்ள பணியிடங்களைக் கண்டறிந்து அங்கிருந்தே ஒழிப்பு முயற்சியை மேற்கொள்வது நல்லதொரு நடவடிக்கையாக அமையும். புலம்பெயர்ந்த தொழிலாளர்கள், கல்குவாரி, சுரங்கத் தொழிலாளர்கள் பலர் பணியிடத்திலேயே தங்குவது வழக்கம். [காசநோய்](#) பரிசோதனைக்குக் காலையில் எழுந்ததும் முதல் முறை வெளியேற்றப்படும் சளியைப் பரிசோதனை செய்வது முக்கியம். CBNAAT பரிசோதனை ஆரம்பநிலை காசநோயைக் கண்டுபிடிக்க உதவும். நெஞ்சு எக்ஸ்-ரே பரிசோதனை அடுத்த முக்கியம். தொழிற்சாலைகளுக்கு நேரடியாகச் சென்று இவற்றை மேற்கொள்ள முடியும். இப்போதெல்லாம் நடமாடும் எக்ஸ்-ரே வாகனங்கள் நடைமுறையில் உள்ளன.

சிலிக்கோசிஸ் நோய்:

சிலிக்கான் டைஆக்ஸைடு தூசு காற்றில் கலந்து நம் சுவாசப் பைகளுக்குச் சென்று இந்த நோயை ஏற்படுத்துகிறது. முக்கியமாக, தங்கச் சுரங்கத் தொழிலாளிகளுக்கு இது ஏற்படுகிறது. தவிரவும், நிலக்கரிச் சுரங்கம், மைக்கா, சில்வர், துத்தநாகம், காரீயம், இரும்பு, செராமிக் போன்ற உலோகத் தொழிற்சாலைத் தொழிலாளர்களிடமும் காணப்படுகிறது. இந்த நோய் வந்தவர்களுக்கு நுரையீரல்கள்

நிரந்தரமாக பாதிக்கப்படும். அதனால் கடுமையான இருமலும் மூச்சிளைப்பும் நாட்பட்டுத் தொல்லை தரும். இந்த நோய் கண்டவர்களுக்குக் காசநோயும் ஏற்படலாம்.



காசநோய் தாக்குதல் அதிகமாக இருக்கும் பணியிடங்கள் 1.பஞ்ச தூசு நிறைந்த இடங்களில் பணிபுரிபவர்கள், 2.சிமெண்ட் ஆலைத் தொழிலாளிகள், 3.சர்க்கரை ஆலைத் தொழிலாளிகள், 4. நிலக்கரிச் சுரங்கத்தொழிலாளிகள், 5.தங்கச் சுரங்கத் தொழிலாளிகள்., 6.ஆஸ்பெஸ்டாஸ், சிலிக்கான், கண்ணாடித் தொழிற்சாலைத் தொழிலாளிகள், 7.மணல் குவாரி, கல்குவாரி தொழிலாளிகள், 8. சிறைக் கைதிகள், 9.வறுமையில் உள்ளவர்கள், வீடற்றவர்கள், 10.காற்றோட்டம் இல்லாத குடியிருப்புகளில் வசிப்பவர்கள், 11. சாலையோரம் குடியிருப்பவர்கள், 12. மக்கள் நெருக்கம் அதிகமுள்ள இடங்களில் வசிப்பவர்கள்,13. சத்துக்குறைவு உள்ளவர்கள்,14. நீரிழிவு, ஹெச்.ஐ.வி உள்ளவர்கள்,15. நோய் எதிர்ப்பு சக்தி குறைந்தவர்கள்,16. புகைப் பிடிப்பவர்கள், மது அருந்துபவர்கள்,17. நாட்பட்ட சிறுநீரக நோய் உள்ளவர்கள்,18. நாட்பட்டு ஸ்டிராய்டு மருந்துகள் பயன்படுத்துபவர்கள்,19. புற்றுநோய் உள்ளவர்கள்,20. உறுப்பு மாற்று அறுவை சிகிச்சை செய்துகொண்டவர்கள் என மருத்துவர்கணைசன் நீண்ட பட்டியலிட்டார்.

இந்தத் தகவல்களின் அடிப்படையில் பணியிடங்களில் இருந்தே [காசநோய்](#) ஒழிப்பை ஆரம்பிக்கலாம். நோய்நாடி நோய்முதல் நாடி அதுதணிக்கும் வாய்நாடி வாய்ப்பச் செயல் என்ற குறளுக்கு இணங்க, பணியிடங்களில் [காசநோய்](#) ஒழிப்பைத் தொடங்க வேண்டும் [Ending Workplace TB](#) (EWTB) என்ற கருத்துருவை, 2020ஆம் ஆண்டு

உலகப் பொருளாதாரக் கூட்டமைப்பு தனது வருடாந்திரக் கூட்டத்தில் முன்வைத்தது.

தொற்றுநோய்களைப் பொறுத்தவரையில் 50% பரவல் பணியிடங்களில் தான் நடக்கின்றன. எனவே, [காசநோய்](#) பரவல் சங்கிலியை உடைக்க இது ஒரு சிறந்த தீர்வாக இருக்கும் என ஆராய்ச்சியாளர்கள் கருதுகின்றனர்.



மேலும், பணியிடங்களிலேயே [காசநோய்](#) ஒழிப்பு பைத் தொடங்குவதால் 4 நன்மைகள் இருக்கின்றன.

* விழிப்புணர்வை ஏற்படுத்தி சமூகப் பரவலைத் தடுக்கலாம்.

* பணியிடங்களிலேயே தொற்றைக் கண்டறிவதால் பணி வழங்குநரையும் சிகிச்சைக்கு உதவ வைப்பதால், நோயாளிக்குச் செலவு குறையும்.

* பணியிடத்திலேயே மருத்துவ சிகிச்சை வசதியை ஏற்படுத்தித் தர முடியும்.

* சமூகப் புறக்கணிப்புகளைக் கணிசமாகக் குறைக்க முடியும்.

காசநோயாளிகள் பணியிடங்களில் எதிர்கொள்ளும் சவால்கள்:

காசநோயைப் பணியிடங்களில் ஒழிப்பது எவ்வளவு அவசியமோ அதே அளவுக்குக் கவனம் செலுத்தப்பட வேண்டிய விஷயம் காசநோயாளிகள் பணியிடங்களில் எதிர்கொள்ளும் சவால்களுக்குத் தீர்வு காண்பதென்பது. [காசநோய்](#) பாதிக்கப்பட்டோர் அமைப்பு சார்ந்த, அமைப்பு சாரா, ஏன் கார்ப்பரேட் என எந்த மாதிரியான பணியிடச் சூழலில் இருந்தாலும் வேலையிழப்புக்கு வாய்ப்புள்ளது. ஆகையால், காசநோயால் பாதிக்கப்பட்ட நபருக்கு வேலை உறுதியை நிர்வாகம் அளிக்க வேண்டும். அந்த நபர்

சிகிச்சை முடிந்து பூரண குணமடைந்து திரும்பும் வரை எல்லா வகையில் பணி வழங்குநர் உதவ வேண்டும் என்பது அரசாங்கத்தின் கொள்கையாகவே இருக்கிறது. பணி நேரத்தை மாற்றிக் கொடுத்தல், ரெஸ்ட் பிரேக்ஸ் எனப்படும் ஓய்வுக்கான அனுமதி, மருத்துவப் பரிசோதனைகளுக்காக அலுவல் நேரத்திலும் கூட அனுமதி வழங்குதல், நோய் விடுமுறைகளில் சலுகை, சிகிச்சை முடிந்து திரும்பும் ஊழியரைப் புறக்கணிக்காமல் வேலைக்கு அமர்த்துவது ஆகியனவற்றைக் கடைப்பிடிக்க வேண்டும் என மத்திய சுகாதார அமைச்சகம் மற்றும் தொழிலாளர் நல அமைச்சகம் தெரிவித்துள்ளது.

மேலும், காசநோயால் பாதிக்கப்பட்ட நோயாளிக்குப் பணியிடத்தில் மனரீதியான சமூக ரீதியான ஆதரவை நல்க வேண்டும் என அரசாங்கம் கூறுகிறது. சிகிச்சையின் போது சம்பளப் பிடித்தம், குறைப்பு இல்லாமல் ஊதியத்தை வழங்க வேண்டும். நீண்ட நாள் விடுப்பு எடுத்தாலும் கூட சம்பளத்தைப் பிடிக்காமல் தரலாம், தேவைப்படும் நேரத்தில் ஊட்டச்சத்தான உணவு, மருத்துவ சிகிச்சைக்கான போக்குவரத்தையும் பணியிடமே உறுதி செய்யலாம்.

பணியிடங்களில் புறக்கணிப்பு குறையும்போது நோயாளி சிகிச்சையை முழுமையாக முடிக்க இயலும். அவ்வாறு ஆரம்ப நிலையிலேயே சிகிச்சை

கொடுக்கப்படும்போது [காசநோய்](#) அடுத்தகட்டமான மருந்துக்குக் கட்டுப்படாத காசநோயாக மாறும் அபாயம் குறையும்.

காசநோய் வேலையில் எதிர்மறை தாக்கத்தை ஏற்படுத்தும். [காசநோய்](#) பாதிப்பு அபாயம் அதிகமாக இருக்கும் தொழிற்சாலைகள் தங்கள் பணியாளர்களுக்குப் பணியிடத்தில் காற்றோட்டமான, இட வசதியான சூழலை ஏற்படுத்திக் கொடுக்க வேண்டும். ஊழியர்களுக்கு [காசநோய்](#) விழிப்புணர்வை ஏற்படுத்தி அவர்களுக்கு அவ்வப்போது மருத்துவ முகாம் நடத்தி ஸ்க்ரீனிங் செய்ய வேண்டும். இல்லாவிட்டால் அதிகமான ஊழியர்கள் அடிக்கடி நோய்வாய்ப்படுவதால் தொழிற்சாலையின் உற்பத்தித் திறனை பாதிக்கும். அதேபோல் அடிக்கடி புதிதாகத் தொழிலாளர்களை மாற்றுவது அனுபவம் வாய்ந்த தொழிலாளர்கள் இல்லாத நிலையை உருவாக்கும்.

காசநோய் கொண்டோரைப் பணியிடங்களிலேயே ஆரம்ப நிலையில் கண்டறிவதும், அவர்களின் குடும்பத்தாரையும் பாதுகாப்பு வளையத்திற்குள் கொண்டுவருவதும் ஊக்குவிக்கப்பட வேண்டும்.

20,000 ஊழியர்களைக் கொண்ட ஒரு பணியிடம் ஒரு காசநோய் மருத்துவமனை அமைக்கப்படுவதற்கான தேவை உள்ள தளம் என உலக சுகாதார அமைப்பும், சர்வதேச தொழிலாளர் அமைப்பும் கூறியுள்ளது. அப்படியான தொழிற்கூடங்கள் இந்தியாவில் ஏராளம். அதனால்தான் பணியிடங்களில் காசநோய் ஒழிப்பை முறைப்படுத்தி, ஊக்கப்படுத்தி, நடைமுறைப்படுத்துவது அவசியமாகிறது

"காசநோயை இந்தியாவில் முடிவுக்குக் கொண்டு வராவிட்டால் உலக அளவிலும் அந்த நோயை அகற்ற முடியாது" என்று டெல்லியில் உள்ள காசநோய் மற்றும் நுரையீரல் நோய்களுக்கு எதிரான சர்வதேச ஒன்றியத்தின் அலுவலக இயக்குநர் கடந்த சில ஆண்டுகளுக்கு முன்னரே கூறியது இங்கே நினைவுகூரத்தக்கது.

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THE HINDU

Use only Covaxin for 15-18 age group, says vaccine maker

NEW DELHI, JANUARY 09, 2022 00:00 IST

WHO urges strict implementation of COVID-19 protocols

COVID-19 vaccine maker Bharat Biotech has appealed to healthcare workers to be "highly vigilant and ensure that only Covaxin is administered to individuals in the 15-18 years age group".

The appeal was issued late on Friday night and comes following reports of other COVID-19 vaccines being administered to this cohort

இந்து தமிழ் திசை

2021இல் மருத்துவம்: தொடரும் கரோனாவும் துளிர்க்கும் நம்பிக்கையும்

முகமது ஹுசைன் | Published : 01 Jan 2022 12:22 pm

கரோனா இரண்டாம் அலை

தேர்தல் பரப்புரைகள், லட்சக்கணக்கில் மக்கள் கூடிய மத நிகழ்வுகள், அரசின் மெத்தனம், கரோனா தடுப்பு நடவடிக்கைகளைப் பின்பற்றுவதில் மக்களின் ஒழுங்கின்மை, தடுப்பூசி வதந்திகள் போன்றவை கரோனா இரண்டாம் அலைக்கு வித்திட்டன. மருத்துவ மனையில் இடம் கிடைப்பது சிக்கலானது. இடம் கிடைத்தாலும் ஆக்சிஜன் படுக்கைக்கு வழியில்லை. உயிர் காக்கும் மருந்துகளுக்குப் பெரும் தட்டுப்பாடு நிலவியது. இடுகாட்டில் நீண்ட வரிசையில் சடலங்கள் காத்திருந்தன. புனித ஆறான கங்கையில் சடலங்கள் பெருமளவில் வீசப்படன. வரலாற்றின் கறுப்புப் பக்கங்கள் அவை.



மருத்துவ ஆக்சிஜன் பற்றாக்குறை

இரண்டாம் அலையின் உச்சத்தில், 'இன்னும் சில மணி நேரத்திற்குத் தேவை யான ஆக்சிஜன் இருப்பு மட்டுமே எங்க ளிடம் இருக்கிறது. நோயாளிகளின் உயிருக்கு ஆபத்து' என்று

டெல்லியிலிருக்கும் ஒரு மருத்துவமனை சமூக ஊடகத்தில் பகிர்ந்த பதிவு நாட்டை உலுக்கியது. விரைவில், அந்த நிலை நாடெங்கும் இருக்கும் மருத்துவமனைகளுக்கும் ஏற்பட்டது. நீதிமன்றங்கள் தலையிட்டு உத்தரவு பிறப்பித்த பின்னரும் ஒன்றும் செய்ய முடியாத நிலையில் ஒன்றிய அரசு இருந்தது. ஆரம்பத்தில் சற்று தடுமாறிய தமிழக அரசு, பின்னர் இந்தப் பிரச்சினையைத் திறம்படக் கையாண்டது.

பூஞ்சை நோய்கள்

கரோனா இரண்டாம் அலையின் முடிவில், கறுப்புப் பூஞ்சை நோய்த் தொற்று (மியூகோமைகோசிஸ்) அதிகரிக்கத் தொடங்கி பேசுபொருளானது. இந்தியாவில் இதனால் பாதிக்கப்பட்டவர்களின் எண்ணிக்கை 30,000க்கு மேல் சென்றது. சில வட மாநிலங்களில் 'கறுப்புப் பூஞ்சை'யைப் போலவே 'வெள்ளைப் பூஞ்சை' (Candidiasis) நோயும் பரவத் தொடங்கியது. மத்தியப் பிரதேசத்தில் கரோனாவிலிருந்து மீண்டவருக்குப் பச்சை பூஞ்சை நோய்ப் பாதிப்பு ஏற்பட்டது. கரோனாவைவிட ஆபத்தான இந்த நோய்கள் இந்தியாவில் பெரிய அளவில் பாதிப்பை ஏற்படுத்தவில்லை என்பதே ஓர் ஆறுதல்.

நீடிக்கும் கோவிட்

பொதுவாக, நோயின் தீவிரத்தைப் பொறுத்து இரண்டு முதல் மூன்று வாரங்களுக்குள் கரோனாவினால் பாதிக்கப்பட்டவர்கள் மீண்டு விட்டனர். நோய்த் தொற்றின் கடுமையான கட்டத்துக்குப் பிறகும் சிலருக்கு மட்டும் கரோனா பாதிப்புகள் தொடர்ந்தன. இது 'நீடிக்கும் கோவிட்' என அழைக்கப்பட்டது. கரோனாவின் தீவிர பாதிப்பிலிருந்து மீண்ட பலரும், இதன் பாதிப்புக்கு ஆளாகினர். 'நீடிக்கும் கோவிட்'டை மருத்துவ உலகம் கூடுதல் கவனத்துடன் கையாண்டது. தமிழக அரசும் சென்னை கிண்டி அரசு கரோனா மருத்துவமனையில் 'கோவிட்டுக்குப் பிந்தைய சிகிச்சை மைய'த்தை நிறுவினது.

இந்தியாவில் தடுப்பூசி

இந்தியாவில் 'கோவிஷ்ட்', 'கோவேக்ஸின்' ஆகிய இரண்டு தடுப்பூசிகளுக்கு முதலில் அனுமதி அளிக்கப்பட்டது. தடுப்பூசி போடும் பணிகள் ஜனவரி 16இல் தொடங்கப்பட்டன.

ஆரம்பத்தில் தடுப்பூசி குறித்துப் பரவிய சந்தேகங்களும் வதந்திகளும் தடுப்பூசித் திட்டத்துக்குப் பெரும் சவாலாக இருந்தன. இருப்பினும் கரோனா உயிரிழப்புகளால் மக்களிடையே ஏற்பட்ட அச்சம், அரசின் முன்னெடுப்புகள் போன்றவை தடுப்பூசிகளுக்குத் தட்டுப்பாடு நிலவும் வகையில் நிலைமையை மாற்றியமைத்தன. தற்போது இந்தியாவில் 84 கோடி பேருக்கு ஒரு டோஸ் தடுப்பூசி போடப்பட்டுள்ளது, 60 கோடி பேருக்கு இரண்டு டோஸ் போடப்பட்டுள்ளது.

கரோனா வைரஸுக்கு மாத்திரைகள்

கரோனாவுக்கான சிகிச்சையில் புதிதாக இரண்டு மாத்திரைகள் வெளியாகியுள்ளன. அட்லாண்டாவில் உள்ள எமோரி பல்கலைக்கழக ஆய்வாளர்களால் உருவாக்கப்பட்ட 'மோல்னுபிரவிர்' (Molnupiravir). மெர்க் நிறுவனம், ரிட்ஜ்பேக் பயோதெரபியூடிக்ஸ் நிறுவனத்துடன் இணைந்து தயாரித்த இந்த மாத்திரைக்கு பிரிட்டன் அரசு அவசரகால பயன்பாட்டுக்கு அனுமதி அளித்தது. இரண்டாவது, பைசர் நிறுவனம் தயாரித்த 'பேக்ஸ்லோவிட்' (Paxlovid). இவை கரோனா தொற்றை ஆரம்பநிலையிலேயே தடுத்து, தொற்றாளருக்கு இறப்பு ஏற்படுவதைப் பெருமளவு தவிர்த்துவிடும் ஆற்றல் கொண்டவை.

ஓமைக்ரான் கரோனா

இந்தியாவில் கண்டறியப்பட்ட, இரண்டாம் அலைக் குக் காரணமான டெல்டா அல்லது பி.1.617.2 வேற்றுரு வில் ஏற்பட்ட மாறுபாடு காரணமாக உருவான புதிய டெல்டா பிளஸ் வேற்றுரு கண்டறியப்பட்டது. இதனால் அக்டோபரில் மூன்றாம் அலை ஏற்படக்கூடும் என எச்சரிக்கை விடுக்கப்பட்ட நிலையில், டெல்டா பிளஸ் வேற்றுருவின் பரவல் இந்தியாவில் குறைவாகவே இருந்தது. இந்த நிலையில், நவம்பர் மாத இறுதியில் தென்னாப்பிரிக்காவில் கண்டறியப்பட்ட 'ஓமைக்ரான்' (Omicron) எனும் புதிய கரோனா வேற்றுருவம் (Variant) மக்களை அச்சத்தில் ஆழ்த்தியுள்ளது.

மருத்துவ நோபல் 2021

வெப்பநிலை, தொடுதல் ஆகியவற்றினால் உடலில் நடக்கும் மாற்றங்களுக்குக் காரணமாக இருக்கும் உணரிகளைக் கண்டறிந்த தற்காக அமெரிக்காவைச் சேர்ந்த விஞ்ஞானிகள்

ஆர்டெம் பாட்டபூட்டியான், டேவிட் ஜூலியஸ் ஆகிய இருவரும் இந்த ஆண்டு மருத்துவத்துக்கான நோபல் பரிசைப் பெற்றார்கள். வெப்பம், குளிர், இயந்திர சக்தி போன்றவை, நம் உடலின் நரம்பு மண்டலத்தில் உணர்ச்சித் தூண்டலை எவ்வாறு ஏற்படுத்துகின்றன என்பது குறித்த இவர்களின் ஆராய்ச்சி, வலி நிவாரணி மருந்துகள் உருவாக்கத்தில் புதிய பாதையைக் காட்டும் என்று எதிர்பார்க்கப்படுகிறது.

இன்சலின், பி.சி.ஜி. தடுப்பூசிக்கு 100 வயது

நீரிழிவு நோயை எதிர்கொள் வதில் இன்சலினின் பங்களிப்பு அளப்பரியது. முதலாம் வகை நீரிழிவு நோயாளிகளுக்கு இன்சலின்தான் ஒரே மருந்து. ஆயுள் முழுவதும் இன்சலின் போட்டுக் கொண்டவர்கள் 90 வயது வரை வாழ்ந்துள்ளனர். பி.சி.ஜி. தடுப்பூசி குழந்தைகளுக்கு ஏற்படும் காசநோயை மட்டுமல்லாமல் பலதரப்பட்ட வைரஸ் நோய்கள், சுவாசக் கோளாறுகள், வயிற்றுக் கோளாறுகள் போன்றவற்றையும் தடுக்கும். நெஞ்சகக் காசநோயைத் தடுப்பதைவிட மூளைக் காசநோய் போன்ற மோசமான காசநோய் வகைகளைப் பெரிதும் தடுக்கும். இது ஏற்கெனவே செலுத்தப்பட்ட நாடுகளில் கரோனா சார்ந்த இறப்பும் குறைவாக உள்ளது.

நோரோ, ஜிகா, பறவைக் காய்ச்சல்

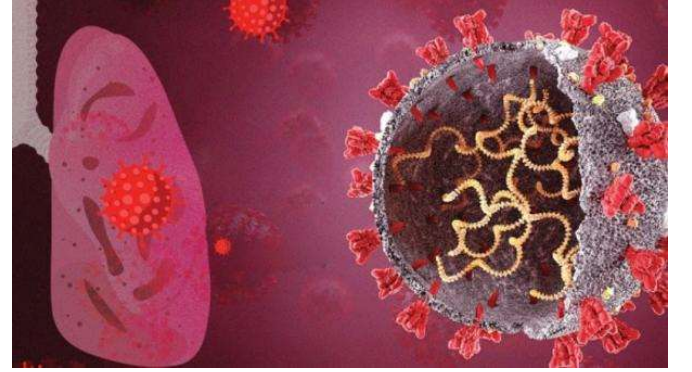
2021இன் தொடக்கத்தில், வட இந்திய மாநிலங்கள் / யூனியன் பிரதேசங்களில் பறவைக் காய்ச்சல் திடீரென வீரியத்துடன் பரவியது. பெரும் எண்ணிக்கையிலான பண்ணைக் கோழிகள் கொல்லப்பட்டன. ஏடிஸ் எஜிப்தி கொசுக்கள் கடிப்பதால் பரவும் ஜிகா வைரஸால், கேரளத்தில் 20-க்கும் அதிகமானோர் பாதிக்கப்பட்டனர். வயநாடு மாவட்டத்தில் பூக்கோடு கிராமத்தில் உள்ள கால்நடை மருத்துவக் கல்லூரி மாணவர்களில் 13 பேருக்குத் திடீரென்று வாந்தி, வயிற்றுப்போக்கு, வயிற்றுவலி ஆகியவை ஏற்பட்டு மருத்துவமனையில் சேர்க்கப்பட்டனர். அவர்களுக்கு நோரோ வைரஸ் பாதிப்பு உறுதியானது. கரோனா வைரஸ் ஆட்டிப்படைத்துக்கொண்டிருந்த நேரத்தில் இந்த வைரஸ்களும் பரவியது அச்சத்தை அதிகரித்தது.

ஓமைக்ரான் பாதிப்பு குறைவா? -

கூடுதல் எச்சரிக்கை அவசியமில்லையா?

Published : 08 Jan 2022 12:40 pm

2021ஆம் ஆண்டுடன் கரோனா விடை பெற்றுவிடும் என்று நினைத் திருந்த நிலையில், கரோனாவின் தாக்கம் மீண்டும் உச்சமடைந்துவருகிறது. 2021 டிசம்பர் பிற்பகுதியில் [ஓமைக்ரான்](#) (Omicron) சென்னையில் நுழைந்ததால், புத்தாண்டுக் கொண்டாட்டங்களுக்குத் தமிழகத்தில் தடை விதிக்கப்பட்டது. பத்தாம் வகுப்புக்குக் கீழுள்ள மாணவர்களுக்குப் பள்ளிகள் மூடப்பட்டன. பல மாநிலங்களில் இரவு ஊரடங்கு அமலுக்கு வந்தது.



இரண்டாம் அலையின் உச்சத்தைச் சரியாகக் கணித்த கேம்பிரிட்ஜ் பல்கலைக்கழகத்தின் பால் கட்டுமன், [ஓமைக்ரான்](#) பரவலின் வளர்ச்சிப் போக்கை 'அதிவேகம்' என்கிறார். தினசரி கரோனா பாதிப்பு பத்துநாட்களுக்குள் நான்கு மடங்காக, அதாவது நாற்பதாயிரமாக உயர்ந்திருக்கிறது. பாதிக்கப்பட்டவர்களின் எண்ணிக்கை அபரிமிதமாக அதிகரித்தபோதும், மருத்துவமனையில் அனுமதிக்கப்படுவோர் எண்ணிக்கை குறைவாகவே உள்ளது. [ஓமைக்ரான்](#) வேற்றுருவால் கடுமையான பாதிப்பு ஏற்படும் சாத்தியம் குறைவு என்பதை இது உணர்த்தினாலும், இதில் நிறைய ஆபத்துகள் மறைந்தும் இருக்கலாம். ஓமைக்ரானின் வீரியத்தை இந்த நேரத்தில் குறைத்து மதிப்பிடுவது பேராபத்தில் முடியக்கூடும்.

ஓமைக்ரான் பாதிப்பு

பொதுவாக, வைரஸ் எப்படிப்பட்ட தாக்கத்தை இனிமேல் ஏற்படுத்தும் என்பதை முழுமையாகக் கணிக்க முடியாது. இருப்பினும், ஆய்வக விலங்குகள் மீதும் மனித திசுக்களின் மீதும் நடத்தப்பட்ட புதிய ஆய்வுகள், மற்ற வேற்றுருக்களைப் போல் 'ஓமைக்ரான்' வேற்றுரு நுரையீரலுக்குள் தீவிரமாகப் பரவாது என்று கணித்துள்ளன. எலிகள், வெள்ளெலிகள் ஆகியவற்றின் மீதான ஆய்வுகளில், [ஓமைக்ரான்](#) தொற்று குறைவான பாதிப்புகளையே ஏற்படுத்தியது. அந்தப் பாதிப்பும் மேல் சுவாசக்குழாய், மூக்கு, தொண்டை, மூச்சுக்குமாய் ஆகியவற்றில் மட்டும் பெரும்பாலும் இருந்துள்ளது. நுரையீரலுக்குக் குறைவான தீங்கையே விளைவித்திருந்தது. சுவாச மண்டலத்தின் மேல்பகுதியையே [ஓமைக்ரான்](#) பாதிக்கும் என்கிற கருத்துக்கான தொடக்கப்புள்ளி இது.

கரோனா பாதிப்பைப் பொறுத்தவரை, அது மூக்கு, வாய், தொண்டை ஆகியவற்றில் ஏற்படுத்தும் பாதிப்பினால் பெரிய ஆபத்து ஏற்படுவதில்லை. நுரையீரலுக்குள் நுழையும்போதுதான் உயிருக்கு ஆபத்தானதாக மாறுகிறது. கடந்த புதன் அன்று, ஓமைக்ரான் பாதிப்புக்கு உள்ளாக்கப்பட்ட எலிகள், வெள்ளெலிகள் குறித்து ஜப்பான், அமெரிக்கா ஆகிய நாடுகளின் ஆராய்ச்சியாளர்கள் கூட்டாக வெளியிட்ட அறிக்கை, ஓமைக்ரானால் அவற்றின் நுரையீரல் லேசாகப் பாதிக்கப்பட்டுள்ளது, அவற்றின் எடை குறையவில்லை, மரணத்துக்கான சாத்தியம் மிகவும் குறைவாக உள்ளது என்று தெரிவிக்கிறது.

ஓமைக்ரான் பாதிப்பு நுரையீரலில் ஏன் குறைவு?

நுரையீரல் செல்களின் மேற்பரப்பில் TMPRSS2 எனும் புரதம் இருக்கிறது. இந்தப் புரதமே நுரையீரலுக்குள் கரோனா வைரஸ் நுழைவதற்கு வழிவகுக்கிறது. ஆனால், [ஓமைக்ரான்](#) வைரஸ் இந்தப் புரதத்தை இறுக்கமாகப் பற்றிக்கொள்ளவில்லை. இதன் விளைவாக, டெல்டா வேற்றுருவைப் போல், [ஓமைக்ரான்](#) வேற்றுருவால் நுரையீரலுக்குள் ஊடுருவிப் பாதிப்பை ஏற்படுத்த முடியவில்லை. நுரையீரலுக்குள் நுழைந்தால் வைரஸ் அழிக்கப்படும் என்பதாலோ என்னவோ, [ஓமைக்ரான்](#) இந்தப்

புரதத்தைப் பற்றிக்கொள்ளும் இயல்பற்றதாகத் தன்னைத் தகவமைத்துக்கொண்டிருக்கலாம்.

TMPRSS2 புரதம் இல்லாத செல்களைக் கொண்டிருக்கும், சுவாசக் குழாய், மூக்கு, தொண்டை ஆகியவற்றில் மட்டும் ஓமைக்ரான் பாதிப்பு அதிகமாக இருப்பதால், அது எளிதாகவும் அதிவேகமாகவும் பரவுகிறது. ஆனால், இது ஆரம்பக்கட்ட சிந்தனையே, இந்தக் கருதுகோளை அங்கீகரிப்பதற்கு இன்னும் கூடுதல் ஆய்வுகள் மேற்கொள்ளப்பட வேண்டும்.

கள உண்மை நிலவரம்

இரண்டாம் அலையின் உச்சத்தில் தினசரி பாதிப்பு நான்கு லட்சமாக இருந்தது. அதனுடன் ஒப்பிடும்போது, தற்போதைய தினசரி பாதிப்பு குறைவாக இருப்பதைப் போலத் தோன்றலாம். குறைவான அரசுப் பதிவுகள், பெரிய நகரங்களில் அதிகமாகப் பரவும் முறை உள்ளிட்ட காரணங்களால், தினசரி பாதிப்பு எண்ணிக்கை உண்மையான களநிலவரத்தைப் பிரதிபலிக்காது.

பிசிஆர் பரிசோதனை விகிதமே உண்மையான ஆபத்தை உணர்த்தும். இரண்டாம் அலையின் உச்சத்தில் பிசிஆர் பரிசோதனையின் நேர்மறை முடிவுகளின் விகிதம் 25 சதவீதம் என்றிருந்தது. டிசம்பர் 27 அன்று 0.5 சதவீதத்துக்கும் கீழே சென்றிருந்த அது, தற்போது மும்பையில் 17 சதவீதத்தை நெருங்கிவிட்டது. மற்ற நகரங்களிலும் அதிவேகமாக உயர்ந்துவருகிறது. [ஓமைக்ரான்](#) எவ்வளவு வீரியத்துடன் பரவுகிறது என்பதற்கு இதைவிட வேறு சான்று தேவையில்லை.

தடுப்பாற்றலும் தயார்நிலையும்

புதிய அலை அச்சுறுத்தலாக விளங்கினாலும், அதை எதிர்கொள்வதற்குத் தற்போது நாடு தயார் நிலையில் இருப்பது நம்பிக்கையளிக்கிறது. இந்தியாவில் 44 சதவீத மக்களுக்கு இரண்டு தவணைத் தடுப்பூசியும் போடப்பட்டிருக்கிறது. இத்துடன் கோடிக்கணக்கானோர் முந்தைய தொற்றினால் பெறப்பட்ட நோயெதிர்ப்பாற்றலையும் கொண்டிருக்கின்றனர். முக்கியமாக ஜூன், ஜூலை ஆகிய மாதங்களில் நடத்தப்பட்ட தேசிய செரோ-சர்வேயில் 68 சதவீதத்தினர் ஏற்கெனவே கோவிட் ஆண்டிபாடிகளைக் கொண்டிருந்தனர்.

சமீபத்திய சர்வேயில், அது இன்னும் அதிகரித்திருக்கிறது.

ஒப்பீட்டளவில் நாட்டின் மருத்துவக் கட்டமைப்பும் தயார் நிலையில் உள்ளது. இரண்டாம் அலையில் கற்ற பாடங்கள், மருத்துவர்களையும் சுகாதாரக் கட்டமைப்பையும் கூடுதல் திறன்மிக்கவையாக மாற்றியுள்ளன. தமிழ்நாடு அரசும் கோவிட் சிறப்பு மருத்துவமனைகளைத் தயார்நிலையில் வைத்திருக்கிறது.

எச்சரிக்கை தேவை

ஓமைக்ரான் தொற்றால் கடுமையான பாதிப்போ மரணமோ ஏற்படும் சாத்தியம் குறைவாக இருப்பது போல் தோன்றினாலும், மிகுந்த எச்சரிக்கையுடன் இருக்க வேண்டிய அவசியத்தை மருத்துவர்கள் தொடர்ந்து வலியுறுத்திவருகிறார்கள்.

ஓமைக்ரான் வேற்றுருவின் ஆரம்ப கட்டத்தில் பாதிக்கப்பட்டவர்களில் பெரும்பான்மையோர் இளம்வயதினர், அவர்களுக்குக் கடுமையான பாதிப்பு ஏற்படும் சாத்தியம் முந்தைய வேற்றுருக்களிலும் குறைவாக இருந்தது. மேலும், முந்தைய கரோனா தொற்றாலோ தடுப்பூசியாலோ நோயெதிர்ப்பாற்றல் பெற்றவர்களையே [ஓமைக்ரான்](#) பெருமளவில் பாதித்திருக்கிறது. எனவே, தடுப்பூசி போடப்படாத வயதானவர்களை [ஓமைக்ரான்](#) எவ்வாறு பாதிக்கும் என்பது குறித்த தெளிவு இல்லை. குறிப்பாக இந்திய மக்கள்தொகை, நெரிசலான வாழ்க்கை முறை, அதிக ஊட்டச்சத்துக் குறைபாடு, நீரிழிவு, காசநோய் போன்ற காரணிகள் மக்களை அதிக ஆபத்தில் தள்ளக்கூடும்.

சமூகப் பொறுப்புணர்வு அவசியம்

கரோனா இரண்டாம் அலை, அதிகார வர்க்கத்தின் போதாமையையும் அரசியல்வாதிகளின் இயலாமையையும் வெட்ட வெளிச்சமாக்கியது. தடுப்பூசி போதுமான அளவு கிடைக்காத நிலையிலும், அது இந்தியாவில் தயாரிக்கப்பட்டது என்கிற பெருமிதம் எஞ்சியிருந்தது. மிகப் பெரும் எண்ணிக்கையில் மக்கள் கூடிய மதநிகழ்வுகளும், தேர்தல் பரப்புரைகளும் ஊக்குவிக்கப்பட்டன.

புதிய ஆண்டில் உருவாகிவரும் புதிய அலையின் காலகட்டம் இரண்டாம் அலையின் காலகட்டத்துடன் ஒத்துப்போகிறது. தற்போதும், பல மாநிலங்கள் தேர்தலை எதிர்கொண்டிருக்கின்றன. இந்தப் பின்னணியில் நாம் அனைவரும் சமூகப் பொறுப்புணர்ந்து செயலாற்ற வேண்டும். தனிமனித இடைவெளி, முகக்கவசம் அணிதல், கைகளை சோப்பால் கழுவுதல், கூட்டங்களைத் தவிர்த்தல், தடுப்பூசி செலுத்திக்கொள்ளுதல் உள்ளிட்ட கரோனா தடுப்பு நடைமுறைகளை அனைவரும் பின்பற்ற வேண்டும்.

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மக்கள் நல்வாழ்வில் இரண்டாம் இடம்: பெருமையும் பின்னடைவுகளும்

Published : 30 Dec 2021 06:34 am

நிதி ஆயோக் சமீபத்தில் வெளியிட்டுள்ள 2019-20-ம் ஆண்டுக்கான சுகாதாரக் குறியீடுகளில் 19 பெரிய மாநிலங்களில் கேரளத்தையடுத்து [தமிழ்நாடு](#) இரண்டாம் இடத்தில் உள்ளது. மத்திய சுகாதார மற்றும் குடும்பநல அமைச்சகம், உலக வங்கி ஆகியவற்றுடன் இணைந்து [நிதி ஆயோக்](#) மேற்கொண்ட இந்த ஆய்வில் 2018-19-ஐ அடிப்படை ஆண்டாகக் கொண்டு இந்த முடிவுகள் பெறப்பட்டுள்ளன. குழந்தைகள் பிறப்பு விகிதம், பிரசவ இறப்பு விகிதம், பிறக்கும் குழந்தைகளின் பாலின விகிதம், முழுமையான அளவில் தடுப்பூசிகள் போடப்பட்டுள்ள விகிதம், மருத்துவமனைகளில் நடந்த பிரசவங்களின் விகிதம், கண்டறியப்பட்டுள்ள காசநோய் பாதிப்புகள், அந்நோயிலிருந்து வெற்றிகரமாக மீண்டவர்களின் விகிதம், கருத்தடை சாதனங்களின் பயன்பாடு முதலியவற்றை அளவீடுகளாகக் கொண்டே மக்கள் நல்வாழ்வில் இரண்டாவது இடம் [தமிழ்நாட்டுக்கு](#) அளிக்கப்பட்டுள்ளது.

பிறந்த குழந்தைகளின் இறப்பு விகிதத்தைப் பொறுத்தவரையில் **தமிழ்நாடு** 1 புள்ளி குறைந்துள்ளது; ஐந்து வயதுக்குட்பட்ட குழந்தைகளின் இறப்பு விகிதத்தில் 2 புள்ளிகள் குறைந்துள்ளது; பிரசவ இறப்பு வீதம் 3 புள்ளிகள் குறைந்துள்ளது. இந்தப் பின்னடைவு அடுத்தடுத்த ஆண்டுகளில் சரிசெய்யப்பட வேண்டியவை. காசநோயைக் கண்டறிவதிலும் முழுமையாகக் குணப்படுத்துவதிலும் தமிழ்நாட்டின் நிலை திருப்திகரமான அளவில் உள்ளது. அது போலவே, எச்ஐவியால் பாதிக்கப்பட்டவர்களுக்கான சிகிச்சைகளும் ஒப்பீட்டளவில் சிறப்பாகவே உள்ளன. கருவுற்ற பெண்களுக்கான சிகிச்சைகள், நவீனக் கருத்தடை முறைகளைப் பின்பற்றுதல் ஆகிய அளவீடுகளிலும் **தமிழ்நாடு** சிறந்து விளங்குகிறது என்றாலும் பிரசவத்துக்குப் பிறகு தாய்மார்களைக் கவனிப்பதில் பின்தங்கியே உள்ளது.

தமிழ்நாடு உடனடியாகக் கவனத்தில் கொள்ள வேண்டிய சில விஷயங்களையும் இந்த அளவீடுகள் உணர்த்துகின்றன. முழுமையாகத் தடுப்பூசி போடப்பட்டவர்களின் விகிதமானது தமிழ்நாட்டில் 85.16%-ஆக உள்ளது. மகாராஷ்டிரத்தில் இது 98.94% -ஆகவும் உத்தர பிரதேசத்தில் 95.99% -ஆகவும் உள்ளது. மருத்துவமனையில் நிகழும் பிரசவங்களின் எண்ணிக்கை தமிழ்நாட்டில் 83.87% என்ற அளவில்தான் உள்ளது. தெலங்கானாவில் இந்த விகிதம் 96.31% -ஆக உள்ளது. பிறக்கும் குழந்தைகளின் பாலின விகிதம், அதாவது பிறக்கும் 1,000 ஆண் குழந்தைகளுக்குப் பெண் குழந்தைகளின் எண்ணிக்கை குறைவாக இருக்கும் மாநிலங்களில் தமிழ்நாடும் ஒன்று. 2018-19-ல் 907 ஆக இருந்த பாலின விகிதம் அதற்கடுத்த ஆண்டில் 908 ஆக மட்டுமே உயர்ந்துள்ளது. கேரளத்தில் பிறக்கும் குழந்தைகளின் பாலின விகிதம் 957-ஆக உள்ளது என்பது இங்கு குறிப்பிடப்பட வேண்டியது. இமாச்சல பிரதேசம் (930), அஸ்ஸாம் (925), மத்திய பிரதேசம்(925), ஜார்க்கண்ட் (923), ஆந்திரப் பிரதேசம் (920) ஆகிய மாநிலங்கள் தமிழ்நாட்டைக் காட்டிலும் பிறக்கும் குழந்தைகளில் அதிக பாலின விகிதத்தைக் கொண்டிருக்கின்றன. **தமிழ்நாடு** ஏற்கெனவே பெண்சிகக் கொலைகளைத் தடுக்க ஏராளமான விழிப்புணர்வு நடவடிக்கைகளை மேற்கொண்டுவந்தாலும் இந்த நிலை

தொடர்வதற்கு என்ன காரணம் என்பதைக் கண்டறிந்து கண்காணிப்பதற்கு மேலும் அதிக அளவிலான நடவடிக்கைகளை மேற்கொள்ள வேண்டும். மக்கள் நல்வாழ்வில் தேசிய அளவில் முன்னிலை வகிப்பதற்காகப் பெருமைகொள்ளும் **தமிழ்நாடு** அதைத் தக்கவைத்துக்கொள்ள வேண்டும் எனில், பின்னடைவுகளைச் சரிசெய்யும் நடவடிக்கைகளையும் உடனடியாகத் தொடங்கிட வேண்டும்.



காசநோயும் தடுப்பூசியும்:
கரோனாவுக்குப் பின்னர் எழும் கேள்விகள்!

Published : 29 Dec 2021 20:34 pm
[பாரதி ஆனந்த்](#)



கரோனா எனும் பெருந்தொற்று மனித சமுதாயத்தை ஆட்கொண்ட ஒருசில மாதங்களிலேயே ஆராய்ச்சியாளர்கள் தடுப்பூசியை நோக்கிய நகர்வைத் தொடங்கிவிட்டனர். இன்று 2 வயதுக் குழந்தையில் தொடங்கி உலகின் மிக மூத்த மனிதர் போட்டுக் கொள்ளும் அளவுக்கு கரோனா வைரஸுக்கு எதிரான தடுப்பூசிகள் வந்துவிட்டன. இன்னமும் கூட முதல் தடுப்பூசியைக் கண்டறிந்த ஆக்ஸ்போர்டு பல்கலைக்கழகம் தனது ஆராய்ச்சிகளை

முடித்துவிடவில்லை. கரோனா எப்படி உருமாறினாலும் அதனை எதிர்கொள்ளும் வகையில் நிரந்தரமான தடுப்பூசி ஒன்றை தயாரிக்கும் முனைப்பில் இருக்கின்றது. அப்படித்தான் ஃபைஸர், மாடர்னா, ஜான்சன் அண்ட் ஜான்சன், நம்மூரின் சீரம் இன்ஸ்டிடியூட், பாரத் பையோடெக் ஏன் இந்திய அசராங்கத்தின் டிஆர்டிஓ எனப் பலமுனைகளிலும் கரோனாவை எதிர்கொள்ள தடுப்பூசிகள் மேம்படுத்தப்பட்டுக் கொண்டே இருக்கின்றன.

ஆனால் மனித சமுதாயத்தை 1400 ஆண்டுகளாக அச்சுறுத்திக் கொண்டிருக்கும் காசநோய்க்கான தடுப்பூசியின் தற்போதைய நிலை என்னவென்பதை, [காசநோய்](#) தடுப்பூசி கண்டுபிடிக்கப்பட்டு நூற்றாண்டு விழா கொண்டாடும் இவ்வேளையில் நாம் தெரிந்துகொள்வது அவசியம்.

அடிப்படை புள்ளிவிவரம்: 2020ஆம் ஆண்டு உலக சுகாதார நிறுவனம் வெளியிட்ட புள்ளிவிவரத்தின்படி 27 லட்சம் இந்தியர்கள் காசநோயாளிகள். அவர்களில் தினமும் 1,200 பேர் இறப்பதாகக் கணக்கிட்டுள்ளனர். தினமும் 198 நாடுகளில் 4,000 பேர் காசநோயால் இறக்கின்றனர். 28,000 பேர் புதிதாக காசநோயால் பாதிக்கப்படுகின்றனர். உலக காசநோயாளிகளில் 30% பேர் இந்தியர்கள்.

உலக சுகாதார நிறுவனத்தின் புள்ளிவிவரங்களை சற்றே இன்னு ஆழ அகலப் பார்த்தோம் என்றால் இன்னும் மருத்துவ உலகம் உடனடியாக கவனிக்கத்தக்க தகவல்கள் கிடைக்கும்.

ஆண்டுதோறும் உலகம் முழுவதும் 1 கோடி பேர் காசநோயால் பாதிக்கப்படுகின்றனர். தடுக்கக்கூடிய குணப்படுத்தக்கூடிய நோயாக இருந்தும் கூட காசநோயால் ஆண்டுதோறும் 15 லட்சம் பேர் இறக்கின்றனர். இன்றும் உலகின் மிகக் கொடிய தொற்றுநோயாக [காசநோய்](#) இருக்கின்றது. எச்ஐவி தொற்றால் பாதிக்கப்படுவோரில் பெரும்பாலானோர் காசநோயால் இறக்கின்றனர். ஆப்பிரிக்காவில் மட்டும் எச்ஐவியால் பாதிக்கப்பட்டவர்களில் 32% பேர் [காசநோய்](#) தீவிரத்தால் உயிரிழக்கின்றனர்.

காசநோய் பாதிப்பு குறைந்த வருவாய் கொண்ட நாடுகளிலேயே அதிகமாக இருக்கிறது.

ஆனாலும், [காசநோய்](#) உலகம் முழுவதும் இருக்கின்றது. உலகின் காசநோயாளிகளில் பாதிப் பேர் வங்கதேசம், சீனா, இந்தோனேசியா, நைஜீரியா, பாகிஸ்தான், பிலிப்பைன்ஸ், தென் ஆப்பிரிக்கா ஆகிய 8 நாடுகளில் இருக்கின்றனர்.

உலக மக்கள் தொகையில் 4-ல் ஒரு பங்கு [காசநோய்](#) கிருமியின் தொற்றுக்கு ஆளாகிறது. ஆனால், இவர்களில் 5 முதல் 15% பேர் மட்டுமே காசநோயாளிகள் ஆகின்றனர். மற்றவர்களுக்கு [காசநோய்](#) தொற்று இருந்தாலும் அவர்களுக்கு அது நோயாகாமல் மற்றவர்களுக்கு மட்டுமே பரப்பக்கூடியவர்களாக இருக்கின்றனர்.

ஆனால், முறையான, சரியான ஆன்டிபயாடிக் மருந்துகள் மூலம் காசநோயை முற்றிலும் குணப்படுத்த முடியும். இது மட்டுமே நம்பிக்கை தரும் செய்தி.

இந்த நம்பிக்கையைக் கொண்டே 2025-ம் ஆண்டு 'காசநோய் இல்லாத இந்தியா' எனும் இலக்கை நோக்கி மத்திய அரசு முயற்சிகளை மேற்கொண்டு வருகிறது. காசநோயை ஒழிப்பதற்கான உலக இலக்கும் 2030 என நிர்ணயிக்கப்பட்டுள்ளது.

இந்தச் சூழலில்தான் அந்த முக்கியமான கேள்வி எழுகிறது?



மேம்படுத்தப்பட்ட தடுப்பூசியின் அவசியம், அவசரம் என்ன? காசநோய்க்கு தற்போது உலகம் முழுவதும் [பிசிஜி](#) [தடுப்பூசி](#) பயன்படுத்தப்படுகிறது. 20ஆம் நூற்றாண்டின் தொடக்கத்தில் ஆல்பர்ட் கால்மெட் (Albert Calmette), கமில் கியூரான் (Camille Guérin) எனும் இரண்டு பிரெஞ்சு அறிவியலாளர்கள் பி.சி.ஜி. தடுப்பூசியைக் கண்டுபிடித்தனர்.

பிசிஜி (BCG) தடுப்பூசி கண்டுபிடிக்கப்பட்டு 2021ஆம் ஆண்டுடன் 100 ஆண்டுகள் நிறைவடைந்துள்ளன. 1921-ல் முதன்முதலாக மனிதர்களுக்கு **காசநோய்** தடுப்பூசி செலுத்தப்பட்டது. கரோனாவுக்கான தடுப்பூசி போல் அதிவேகமாகக் **காசநோய்** தடுப்பூசி கண்டுபிடிக்கப்படவில்லை. 13 ஆண்டுகளாக கடும் பிரயத்தனத்திற்குப் பின்னரே இந்தத் தடுப்பூசி கண்டுபிடிக்கப்பட்டது. **பிசிஜி தடுப்பூசி** கண்டுபிடிக்கப்பட்ட நூறு ஆண்டுகளைக் கொண்டாடும் வேளையில் மேம்படுத்தப்பட்ட தடுப்பூசியின் அவசியம், அவசரத்தைப் பற்றிப் பேசுவோம்.



பிசிஜி தடுப்பூசி குறித்து மதுரை அரசு மருத்துவமனை நுரையீரல் துறை மருத்துவ நிபுணர் இளம்பரிதி கூறியதாவது:

"பிசிஜி தடுப்பூசியானது குழந்தைகளை கொடுத்தொற்றுக்களில் இருந்து தற்காக்கிறது. குருணைக் **காசநோய்** (Miliary Tuberculosis) தொடங்கி, நுரையீரலுக்கு வெளியான காச நோய் (ExtraPulmonary Tuberculosis), டிபி மெனின்ஜிடிஸ் (TB Meningitis) எனப்படும் மூளை **காசநோய்** ஆகியனவற்றில் இருந்து குழந்தைகளைத் தற்காக்கிறது. இதைத் தாண்டி **காசநோய்** ஏற்படாமலேயே **பிசிஜி தடுப்பூசி** தடுக்கிறது என்று அறுதியிட்டுக் கூறும் அளவுக்கு ஆய்வு முடிவுகள் ஏதுமில்லை.

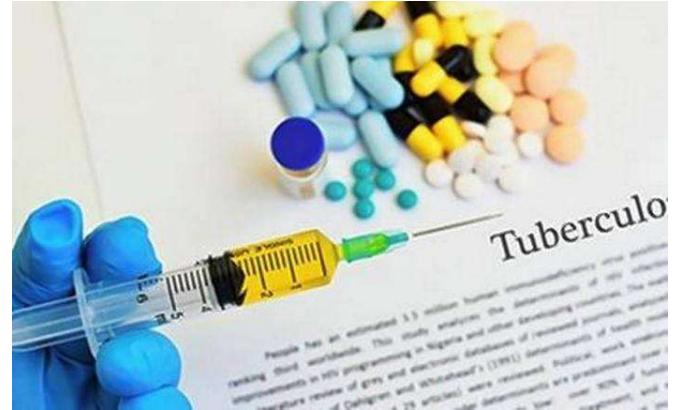
உலக அளவில் **காசநோய்** தடுப்பு குறித்த ஆராய்ச்சிகளுக்குப் போதுமான நிதி இல்லாததும் காசநோய்க்கான மருந்துகள், தடுப்பூசி கண்டுபிடிப்பு தொடர்பான ஆராய்ச்சிகள் பின் தங்கியிருப்பதற்கு ஒரு காரணம். **காசநோய்** சிகிச்சையைப் பொறுத்தவரையில் இன்றைக்கு சிகிச்சைக்கான மாத்திரை, மருந்துகள் நிறைவாகவே இருக்கின்றன. அவற்றை நோய் பாதித்தோர் முறையாக, இடையில் சிகிச்சையை நிறுத்தாமல் மேற்கொண்டாலே காசநோயை குணப்படுத்திவிடலாம். இன்னும், மேம்படுத்தப்பட்ட சிகிச்சைகளுக்கான ஆராய்ச்சி நடக்க வேண்டும், தடுப்பூசி வர வேண்டும் என்பதுதான் என்னைப் போன்றோரின் விருப்பமும் எதிர்பார்ப்பும் கூட".

இவ்வாறு அவர் கூறினார்.

பிசிஜியின் செயலாற்றல் - ஒரு பார்வை:

ஒரே ஒரு டோஸ் **பிசிஜி தடுப்பூசி** காசநோய்க்கு மட்டுமல்லாமல் பல நெஞ்சக நோய்களுக்கும் தீர்வாக இருக்கிறது. ஏன் தொழுநோயைக் கட்டுப்படுத்தவும் உதவுகிறது. சிறுநீரகப்பை புற்றுநோய்க்கும் (bladder cancer) அங்கீகரிக்கப்பட்ட சிகிச்சையாக இருக்கிறது.

காசநோய் கிருமி எங்கெல்லாம் இருக்கிறதோ, எங்கெல்லாம் நோயாளிகள் அதிகமாக இருக்கிறார்களோ அங்கெல்லாம் பிசிஜி தடுப்பூசியை உலக சுகாதார நிறுவனம் பரிந்துரைக்கிறது. அதன்படி உலகம் முழுவதும் 64க்கும் மேற்பட்ட நாடுகளில் **பிசிஜி தடுப்பூசி** கட்டாயமாக்கப்பட்டுள்ளது. உலகம் முழுவதும் உள்ள 195 நாடுகளில் 167 நாடுகளில் **பிசிஜி தடுப்பூசி** செலுத்தும் பழக்கம் இருக்கிறது. உலகிலேயே அதிகம் பயன்படுத்தப்படும் தடுப்பூசியாக பிசிஜி தடுப்பூசிதான் இருக்கிறது. **பிசிஜி தடுப்பூசி** மிகவும் விலை குறைந்த தடுப்பூசியாகவும் இருக்கின்றது.



அப்புறம் ஏன் மேம்படுத்தப்பட்ட தடுப்பூசி தேவை என்ற சந்தேகம் உண்டாகலாம். அதில் பூகோளச் சிக்கல் இருக்கிறது. புவிமையக் கோடு (பூமத்தியரேகை, Equator) இது பூமியை தெற்கு, வடக்கு எனப் பிரிக்கிறது. இந்தக் கோட்டில் இருந்து விலகி நிற்கும் நாடுகளில் பிசிஜி தடுப்பூசியின் ஆற்றல் அதிகமாகவும் இந்தக் கோட்டை ஒட்டியுள்ள நாடுகளில் இதன் தடுப்பாற்றல் சற்று குறைவாகவும் உள்ளது. இதனால்தான், இந்தோனேசியா, நைஜீரியா, பாகிஸ்தான், பிலிப்பைன்ஸ், தென் ஆப்பிரிக்கா ஆகிய 8 நாடுகளில் குறிப்பாக ஆப்பிரிக்க நாடுகளான கென்யா, மலாவி ஆகியனவற்றில் 15, 16 வயதுக்கு மேல்

குழந்தைகளுக்கு [காசநோய்](#) பாதிப்பு ஏற்படுவது அதிகமாக இருக்கிறது. அதேவேளையில் அண்மையில் அமெரிக்காவின் அலாஸ்காவில் மேற்கொள்ளப்பட்ட ஒரு பரிசோதனையில் ஒரு தடவை அளிக்கப்படும் பிசிஜி தடுப்பூசியானது 60 வயது வரை பாதுகாப்பை அளிப்பதாகக் கண்டறியப்பட்டுள்ளது.



உலக அளவில் ரத்த அழுத்தத்துக்கும், நீரிழிவு நோய்க்கும் ஆண்டுக்கு ஒரு புது மருந்து

வருகிறது. அவற்றிற்கு மருந்து நிறுவனங்கள் நிர்ணயிக்கும் விலைதான் இறுதியானது. இந்த நோயால் பாதிக்கப்படுபவர்கள் எவ்வளவு விலையிருந்தாலும் வாங்கிக் கொள்ளும் சக்தி கொண்டுள்ளனர். ஆனால், [காசநோய்](#) பெரும்பாலும் குறைந்த வருவாய் கொண்ட நாடுகளின் மக்களையே தாக்குகிறது. அப்படியிருக்க அதில் மருந்து நிறுவனங்கள் ஆராய்ச்சிக்காக அதிகம் செலவழிக்க வாய்ப்பில்லை. மேலும், காசநோய்க்கான மருந்தின் விலையை அரசுதான் நிர்ணயிக்கும். வணிக ரீதியாக லாபம் பார்க்க முடியாது என்பதாலேயே உலகில் [காசநோய்](#) மருந்து, தடுப்பூசியில் பெரிய அளவில் முதலீடுகள் இல்லை.

மைக்ரோசாஃப்ட் நிறுவனத் தலைவர் பில் கேட்ஸ் இனி தனது கவனம் முழுவதையும் காசநோய், மலேரியா ஒழிப்பில் செலுத்தப் போவதாகக் கூறி உள்ளார். ஆகையால் இதுபோன்ற தொண்டுள்ளம் கொண்டவர்களின் உபயத்தால் [காசநோய்](#) ஒழிப்பு சாத்தியப்படும் என்பதில் ஐயமில்லை.

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ஓமைக்ரானைத் தொடர்ந்து சைப்ரஸ் நாட்டில் 'டெல்டாக்ரான்' வைரஸ் பாதிப்பு கண்டுபிடிப்பு

Published : 10 Jan 2022 07:43 am

நிக்கோஸியா: மத்திய தரைகடல் நாடான [சைப்ரஸ்](#) நாட்டில் புதிய வகை [கரோனா வைரஸ்](#) பாதிப்பு கண்டுபிடிக்கப்பட்டுள்ளது. அதற்கு ஆராய்ச்சியாளர்கள் [டெல்டாக்ரான்](#) எனப் பெயர் சூட்டியுள்ளனர்.

கடந்த 2021 நவம்பர் மாதம் தென் ஆப்பிரிக்க நாட்டில் கண்டறியப்பட்ட [ஓமைக்ரான்](#) வைரஸ் இப்போது உலகம் முழுவதும் ஆதிக்கம் செலுத்தி வருகிறது. இதனால் இந்தியாவில் 3வது அலை [கரோனா வைரஸ்](#) பாதிப்பு ஏற்பட்டுள்ளது என்று சொல்லும் அளவிற்கு பாதிப்பு அன்றாடம் அதிகரித்து வருகிறது

இந்நிலையில், [சைப்ரஸ்](#) நாட்டில் 25 பேருக்கு [டெல்டாக்ரான்](#) என்ற புதிய வைரஸ் பாதிப்பு உறுதியாகியுள்ளது. இது குறித்து [சைப்ரஸ்](#) பல்கலைக்கழகத்தின் உயிரியல் துறை பேராசிரியர் லியோண்டியோஸ் காஸ்ட்ரிக்ஸ் கூறியதாவது: தற்போது கரோனாவால் பாதிக்கப்பட்டுள்ள சிலருக்கு [ஓமைக்ரான்](#) மற்றும் டெல்டா வைரஸ் என இரண்டு வைரஸ்களின் பாதிப்பும் உள்ளது. இந்த இரண்டு பாதிப்பும் இணைந்து இருப்பதை [டெல்டாக்ரான்](#) வைரஸ் என அழைக்கிறோம். இதில் ஓமைக்ரானின் மரபணு அடையாளங்களும், டெல்டா வைரஸின் மரபணுத் தொகுதியும் உள்ளன.

இந்த வகை [டெல்டாக்ரான்](#) வைரஸ் பாதிக்கப்பட்டவர்கள் 25 பேரைக் கண்டறிந்துள்ளோம். கரோனாவால் பாதிக்கப்பட்டு மருத்துவ சிகிச்சை தேவைப்படும் சூழலில் அனுமதியாகும்

நோயாளிகள் மத்தியில் தான் இந்தப் பாதிப்பு தெரிகிறது.

25 பேரிடமும் இருந்து சேகரிக்கப்பட்ட ஸ்வாப் மாதிரிகளை குளோபல் இன்ஃப்லூயன்ஸா சர்வைலன்ஸ் அண்ட் ரெஸ்பான்ஸ் சிஸ்டம் (GISAI) என்ற அமைப்பின் ஆய்வுக்காக அனுப்பியுள்ளோம்.

இந்த வகை வைரஸ் வேகமாகப் பரவக்கூடியதா உள்ளிட்ட கூறுகளை இந்த அமைப்பு பகுப்பாய்வு செய்து தெரிவிக்கும். ஆனால், எனது தனிப்பட்ட கணிப்பின்படி, [ஓமைக்ரான்](#) வைரஸை இன்னும் அதிகமான பாதிப்பை ஏற்படுத்தும் [ஓமைக்ரான்](#) பிளஸ் திரிபு தான் மேலோங்கி நிற்கும்.

இவ்வாறு அவர் கூறியுள்ளார்.

கடந்த 5 வாரங்களாக உலக அளவில் [ஓமைக்ரான்](#) வைரஸ் பாதிப்பு வேகமாக அதிகரித்து வருகிறது. இதுபோல கரோனா தொற்றும் வேகமாக பரவுகிறது.

ஆனாலும், இதன் பாதிப்புகறைவாக உள்ளது. பெரும்பாலும் அறிகுறிகள் இல்லாமலோ அல்லது லேசான அறிகுறியோ உள்ளது. தொற்றால் தீவிரமாக பாதிக்கப்பட்டு மருத்துவமனையில் சிகிச்சைக்காக சேர்க்கப்படுவோர் 1 முதல் 2 சதவீதமாக உள்ளது. கரோனா 2-வது அலையுடன் ஒப்பிடும்போது இது மிகவும் குறைவு என்பது ஆறுதல் தரும் விஷயம்.



Over nine crore people vaccinated in Tamil Nadu

The Minister for Medical and Family Welfare, who inspected the vaccination exercise in the city, said over 90 per cent of people in Chennai have received the first dose.

By: [PTI](#) | Chennai |

Updated: January 9, 2022 10:40:11 am



Kanyakumari: A student receives a dose of Covid-19 vaccine during a vaccination drive at a school at Nagercoil Municipal Corporation area, in Kanyakumari district, Saturday, Jan 8, 2022. (PTI Photo)

The total number of beneficiaries who received vaccinations against [Covid-19](#) breached nine crore on Saturday, with 17.34 lakh more people receiving the shots at the 18th Mega Vaccination Camp, Tamil Nadu Minister Ma Subramanian said.

The Minister for Medical and Family Welfare, who inspected the vaccination exercise in the city, said over 90 per cent of people in Chennai have received the first dose.

Referring to those in the 15 and 18 years group, Subramanian said till date, 22,50,444 in the category were administered the vaccines.

According to him, there were 33.46 lakh eligible beneficiaries (between 15-18 years) to receive the doses of which 22,50,444 have received the jobs.

Chief Minister M K Stalin formally launched the [vaccination drive for the 15-18 age groups on January 3](#).

Subramanian said in Chennai 92 per cent of the population have received the first dose, while 71 per cent the second dose. "Till date we have vaccinated 9,00,42,020 people in Tamil Nadu (overall)", he said.

To a query, he said there would be another round of meetings led by senior government

officials to discuss about Covid-19 enforced lockdown on January 10.

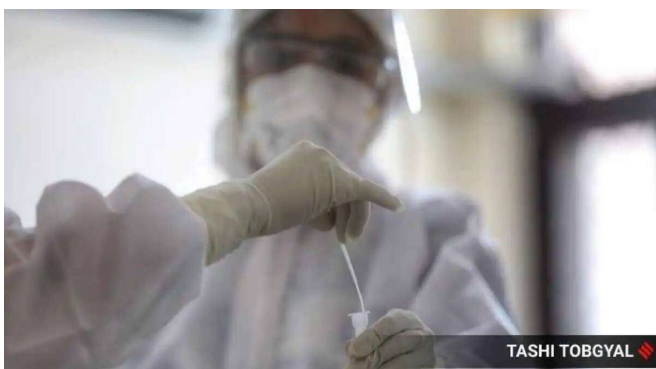
Tamil Nadu on January 5 announced night curfew between 10am and 5pm from January 6 and total lockdown on Sundays to contain the spread of Covid-19.



Strict implementation of public health and social measures a must: WHO official

"All preventive and protective measures must be implemented with full earnestness by one and all. Authorities must implement situation-specific measure to arrest further spread of the virus. People must adhere to these measures. Masks, hand hygiene, cough etiquette, ventilation, and physical distancing is an absolute must," said Dr Poonam Khetrapal Singh, Regional Director, WHO South-East Asia Region.

By: [Express News Service](#) | Pune |
January 9, 2022 3:49:23 am



"It's time to do all we can, to arrest the current surge," the Regional Director said. (Representative image)

A top official of World Health Organisation has called for stringent implementation of public health and social measures as [Covid-19](#) cases

have increased in most countries of South-East Asia Region, with some witnessing an exponential rise.

"All preventive and protective measures must be implemented with full earnestness by one and all. Authorities must implement situation-specific measure to arrest further spread of the virus. People must adhere to these measures. Masks, hand hygiene, cough etiquette, ventilation, and physical distancing is an absolute must," said Dr Poonam Khetrapal Singh, Regional Director, WHO South-East Asia Region.

"Though [Omicron](#) variant may appear to be less severe, it should not be dismissed as 'mild'. Emerging as the most predominant variant, this highly infectious variant is already overwhelming health systems around the world. Globally we are seeing hospitalisation and deaths from Omicron," she said.

"We must also not forget that not every Covid-19 case is an Omicron infection. Other variants, including Delta, are also circulating, which, as we know cause severe infections and deaths," she said.

Each positive case of Covid-19 should hence be a cause of concern.

We are aware that the Covid-19 virus spreads mainly between people who are in close contact with each other, for example at a conversational distance. The virus can also spread in poorly ventilated indoor setting or crowded settings.

Often, people who are infectious do not always have symptoms or know that they are carrying the virus. So it is important to ensure good ventilation by opening windows and doors, if possible, when sharing an indoor space with other people.

It is extremely important for people to wear well-fitting masks and avoid crowds and big gatherings, along with taking other measures.

“Scaling up Covid-19 vaccination coverage is another key preventive measure against Covid-19, and all efforts must continue to ensure that the high-risk population is protected at the earliest. Even after being fully vaccinated, people must continue to take all preventive and protective measures. To save lives, we must prevent overburdening of our health systems. An overburdened health system would neither be able to save preventable deaths from Covid-19 nor would it be able to deliver essential services to save lives from other diseases for which people may need surgery and urgent critical care.



Precautionary dose from Jan 10, high turnout for 60+ expected

Even though there will be no challenge in identifying the healthcare workers and frontline workers because a separate database had been created when the vaccination drive was first rolled out in January last year, the official said all those above the age of 60 can get the shot if they verbally confirm that a doctor had suggested it.

Written by [Anonna Dutt](#) | New Delhi |
Updated: January 9, 2022 1:56:17 am

Even as the union health ministry said bookings for the “precaution dose” will open on Saturday, the slots for Delhi did not become available till late evening. The precaution dose will be administered to all healthcare and frontline workers, and those above the age of 60 years with co-morbidities at existing centres starting

Monday, according to a Delhi government official.

The precaution dose will be administered to all



healthcare and frontline workers, and those above the age of 60 years with co-morbidities at existing centres starting Monday, according to a Delhi government official. (Representational)

“The slots will open up tonight; a separate option called precaution dose will become available on the CoWIN portal along with the option of Dose 1 and Dose 2. Those who received their second dose nine months ago will be able to book these slots. The vaccines will be administered at the existing sites; the capacity of the sites will be increased by 20% for precaution dose,” the official said.

Even though there will be no challenge in identifying the healthcare workers and frontline workers because a separate database had been created when the vaccination drive was first rolled out in January last year, the official said all those above the age of 60 can get the shot if they verbally confirm that a doctor had suggested it.

“There will be no need for a medical prescription; the beneficiaries will just be asked if their doctor recommended getting the shot. If they say yes, they will be given the dose. The central government estimates that 20% of those above the age of 60 years will be co-morbid and need the precaution dose. However, we are going with the assumption that many more will turn up because of the [omicron](#) scare,” the official said.

The official added that centres will be given 20% more vaccine doses on Monday for the precaution shots, with the capacity of increasing it by another 10% if many people turn up at the centre. "If there are more persons, then the sites can get more doses from their cold chain which is always nearby," the official said.

Any healthcare or frontline worker who may have received their shot when the vaccination drive was opened up for the general public can now get registered as a healthcare or frontline worker by showing their official ID card to get the precaution dose.

The Indian EXPRESS

India's R-naught value recorded at 4, Covid-19 peak expected between Feb 1-15: IIT Madras analysis

Explaining further, Dr Jayant Jha, Assistant Professor, Department of Mathematics, IIT Madras, said R0 depends on three things - - transmissibility probability, contact rate and the expected time interval in which infection can happen.

By: [PTI](#) |

Updated: January 8, 2022 12:50:49 pm

India's R-naught value which indicates the spread of [Covid-19](#) was recorded at 4 this week, suggesting a very high infection transmission rate, according to a preliminary analysis by IIT Madras predicting the peak of the third wave between February 1-15.

R-naught or [R0](#) indicates the number of people an infected person can spread the disease to. A pandemic is considered to end if this value goes below 1.

Based on preliminary analysis by computational modeling done by IIT Madras, which was shared with PTI, the R0 value was close to 2.9 nationally in the past week (December 25 to December 31). The number was recorded at 4 this week (January 1-6).



A teenager getting the Covid-19 vaccine in Gujarat.

Explaining further, Dr Jayant Jha, Assistant Professor, Department of Mathematics, IIT Madras, said R0 depends on three things — transmissibility probability, contact rate and the expected time interval in which infection can happen.

"Now, with the increase in quarantine measures or restrictions, maybe the contact rate will go down and then in that case R0 can decrease. So, based on our preliminary analysis, which is just based on the last two weeks, we can tell these numbers, but again, these numbers can change based on how much affirmative action is taken with respect to social gathering and all," he told PTI.

The Union Health Ministry on Wednesday said India is seeing an exponential rise in the number of [coronavirus](#) cases, which is believed to be driven by the [Omicron](#) variant. It also highlighted that the country's R naught value is 2.69, higher than the 1.69 recorded during the peak of the pandemic's second wave. Jha said the ministry's estimates are based on a different time interval than IIT Madras which has done the preliminary analysis from the past two

weeks.

He further said that as per their estimate, the peak in the current wave is expected to come between February 1-15 and it is expected to be sharper than earlier peaks.

“What we expect from the exploratory data analysis is that the peak will happen somewhere between February 1-15 and our analysis also shows that as compared to previous waves, there will be a sharper increase to the peak,” Jha said.

He said this wave will be different from the previous waves because of vaccination and factors like less [social distancing](#) seen this time. Responding to how it is estimated that there is less social distancing in this wave, he said during the first wave many restrictions were imposed but right now despite having a high number of cases there are not many restrictions imposed yet.

“But the advantage here is that almost 50 per cent of the population this time has got vaccinated,” Jha added.

The preliminary analysis has been done jointly by IIT Madras’ Department of Mathematics and Centre of Excellence for Computational Mathematics and Data Science headed by Prof Neelesh S Upadhye and Prof S Sundar.

India saw a single-day rise of 1,41,986 new coronavirus cases, raising the tally to 3,53,68,372, which included 3,071 cases of Omicron variant reported across 27 states and union territories so far, the Union Health Ministry said on Saturday.

How COVID-19 changed the way we shop – and what to expect in 2022 and beyond

As we emerge from the worst of the pandemic, it seems the right time to reflect on the most important changes in consumer behaviour we’ve seen, and to make some predictions about COVID-19’s lasting and pervasive effects on how we shop.

By: [The Conversation](#) | Sydney |
January 8, 2022 9:10:27 am



Here's how the pandemic changed the way we shop.
(Photo: Pexels)

[COVID-19](#) has dramatically changed how businesses and consumers behave. We’ve seen panic buying, the rise of the homebody economy and a strong shift towards contactless shopping.

As we emerge from the worst of the pandemic, it seems the right time to reflect on the most important [changes in consumer behaviour](#) we’ve seen, and to make some predictions about COVID-19’s lasting and pervasive effects on how we shop.

Pandemic purchasing

One of the first impacts of COVID-19 was supermarket shelves being repeatedly stripped of [toilet paper](#) and other products ahead of lockdowns.

One debate this behaviour sparked was about how much it could be considered irrational panic buying or if it was rational to stockpile in response to the irrational behaviour of others. It was a real-life lesson in game theory. Decisions that make perfect sense for individuals can add up to a bad outcome for the community.

Spending less, spending more

Spending more money at the supermarket was at least possible. Consumption patterns changed significantly due to closed borders, restricted shopping, stay-at-home orders and general uncertainty. Data from the Australian Bureau of Statistics shows large drops in spending on transport, accommodation, recreation and entertainment services, and catering.

Spending on food increased marginally, and on alcohol even more. The main reasons cited for increased drinking, according to one study, were stress (45.7%), increased [alcohol availability](#) (34.4%) and boredom (30.1%). Spending also increased on home-related electronics, streaming services, furnishings, hardware and pet-related items. Interest increased in traditional activities such as cooking, reading and gardening.

It is too early to tell to what extent these pandemic-driven shifts will translate into permanent behavioural change. However, research published that last month, based on surveying 7,500 households in France, Germany, Italy, the Netherlands and Spain, supports the likelihood of at least some long-term sectoral shifts in consumer behaviour.

Predictions of a shopping splurge

As restrictions relax, some marketing experts are predicting revenge spending shopping sprees with abandon. Certainly many higher-income households have the money to splash out on a holiday, or new car, or home renovation, with Australians banking an estimated A\$140 billion in extra savings during the pandemic.

Other research, such as the National Australia Bank's quarterly Consumer Sentiment Survey, suggests the pandemic has engendered greater caution. In its most recent survey, 37% said they were mindful or careful of where they spent their money (42% of women and 33% of men). In terms of purchasing influences, 43% nominated supporting [local businesses](#), compared with 15% environmental issues and 14% social concerns such as labour practices.

Some have wondered if, in the wake of COVID-19, we are about to experience another Roaring Twenties emulating that period of economic prosperity and cultural dynamism in the 1920s following the deprivations of the first world war and the [Spanish flu](#) epidemic. The circumstances are not exactly analogous. But new technologies and changes in habits are likely to drive several long-term changes in the way we shop.

Going contactless

Our desire to reduce physical contact accelerated contactless payment methods. Research (from the Netherlands) suggests this will, for most, be a permanent change, accelerating a steady decline in the use of cash for shopping. Technology enabling payments using smartphones, such as supermarkets introducing a way to pay by scanning a QR code, will contribute to this shift.

Ways to buy things without ever having to step inside a shop such as curbside pick-up and

home delivery should also continue. In 2021 we've seen a number of startup businesses promising grocery deliveries in 15 minutes.

Omni experiences

Increasingly our buying behaviour will be shaped by what marketing experts call [omnichannel shopping](#) a fancy word meaning using a variety of experiences to make a purchase. You might, for instance, go into a store to try out headphones, then go online to read third-party reviews and compare prices from different retailers.

Technologies such as augmented reality will facilitate this trend. For example, IKEA's Place app allows you to see how furnishing will fit into your space. More and more what were once physical experiences will have their digital variants, from attending university to having an appointment with a health professional to taking a tour of the British Museum or exploring the Grand Canyon.

Though these cannot replicate the real experience, they will be an increasingly common way to try before you buy. The future of shopping will gradually merge the digital and physical. But whatever changes, some things will remain constant: the human desire to make experiences convenient, fun and meaningful.



Paracetamol after Covid-19 vaccine: Only if doctor advises it

Like any vaccine, Covid-19 vaccines can cause side effects, most of which are mild or moderate and go away within a few days.

Written by [Anuradha Mascarenhas](#) | Pune |
Updated: January 8, 2022 11:05:23 am



A beneficiary gets vaccinated by a health worker at Rajawadi Hospital in Mumbai. (Express Photo: Amit Chakravarty)

On Wednesday, Hyderabad-based manufacturer Bharat Biotech, whose vaccine [Covaxin](#) is being administered to adolescents, said [no paracetamol or painkillers are recommended](#) after being vaccinated with Covaxin.

Like any vaccine, [Covid-19](#) vaccines can cause side effects, most of which are mild or moderate and go away within a few days. While many may feel tempted to use a painkiller or paracetamol, experts advise against routine use of these.

In a tweet, Bharat Biotech said, "We have received feedback that certain immunisation centres are recommending taking three paracetamol 500 mg tablets along with Covaxin for children. No paracetamol or painkillers are recommended after being vaccinated with Covaxin."

It said that through its clinical trials on 30,000 individuals, about 10-20% reported side effects. "Most were mild and resolved within one or two days and do not require medication. Medication is only recommended in consultation with a physician," it said.

A company spokesperson quoted a study published in The Lancet in November 2021 which said that Covaxin has been well tolerated. "Unless specifically recommended by doctors for certain recipients, paracetamol is not required."

The spokesperson said based on data available from studies in adults and trials in children (2-18 years), the measured adverse events were similar to other inactivated vaccines and much lower than vaccines using other platforms.

The reasoning

“Basically, one can make better antibody responses if there is a bit of inflammation. If one gives an anti-inflammatory drug immediately after vaccination, then antibody response may be less. There are studies that have documented giving paracetamol or any other anti-inflammatory drug immediately after vaccination will suppress the immune response a little bit,” leading immunologist Dr Gagandeep Kang said.

Dr Sanjay Pujari, member of the Indian Council of Medical Research (ICMR) national task force for Covid-19, said side effects from vaccines are not very frequent, and are mostly mild, resolving within 1-2 days. It is not known how drugs like paracetamol and other anti-inflammatories might affect how well the vaccine works. Hence routine use of these drugs either before or after taking vaccines is not advisable, he said.

Children and paracetamol

Paediatrician Dr Umesh Vaidya, regional medical director (West) Cloudnine Hospitals, said: “Unless there is fever beyond a particular temperature, paracetamol is not routinely given.” He said children tolerate vaccines much better than adults. About paracetamol, he said: “This drug has been in use in children for more than 100 years. It is the safest medicine in paediatrics. So there is no harm in giving paracetamol for any local or systemic febrile reaction post vaccination.”

According to infectious diseases consultant Dr Amit Dravid, in children there could be concern about hepatotoxicity of paracetamol. It is a liver toxic drug. Hence it should not be a blanket rule

and the drug should only be administered if there are symptoms post vaccination.

Why side effects

Side effects from the vaccine are a normal sign that the body is building protection. These may affect one’s ability to do daily activities but mostly go away in a few days. Some people have no side effects and allergic reactions are rare, according to a December 16, 2021 update from the US Centers for Disease Control and Prevention (CDC).

Common side effects are pain, redness, swelling, headache, muscle pain, fever and nausea. The CDC says one needs to talk to a doctor for taking over-the-counter medicine such as ibuprofen, acetaminophen, aspirin (only for people age 18 and above) or antihistamines for any pain and discomfort experienced after getting vaccinated. It is not recommended to take medicines before vaccination hoping to avoid side effects. According to the CDC, it is not known how these medications might affect how well the vaccine works. However if the medications are regularly taken for other reasons they should be taken before vaccination.



Explained: What a study has found on effects of Covid-19 vaccines on menstrual cycles

A new study has looked at the effects of Covid-19 vaccines on women's menstrual cycles. Here are the findings

By: [Explained Desk](#) | New Delhi |
Updated: January 8, 2022 11:27:31 am



A woman gets a shot of a Covid-19 vaccine. (Express File Photo by Amit Chakravarty)

A new study published in the journal *Obstetrics & Gynecology* published this week has analysed the data of nearly 4,000 US based individuals regarding the effects of [Covid-19](#) vaccines on women's menstrual cycle.

So far the effects of vaccines on menstrual cycles have been known only anecdotally and this study is one of the first ones to document if vaccines affect the cycles.

The study says that some people may experience slight, but temporary changes in the length of their monthly menstrual cycles following Covid-19 vaccination. This means that for some women who receive Covid-19, their [menstrual cycles may start a day later](#) than they are supposed to.

What does the study say?

The study analysed menstrual cycle data using an application called 'Natural Cycles'. All the individuals are US residents between the ages of 18 and 45 years and had normal menstrual cycles (between 24-38 days) for three consecutive cycles before the first dose of a COVID-19 vaccine.

Out of the 4,000 individuals, 2,403 were vaccinated and about 1,500 were unvaccinated. Most of the vaccinated individuals received the Pfizer-BioNTech vaccine (55 percent) and about 35 percent received the

Moderna vaccine. 7 percent received the single-dose Johnson and Johnson vaccine.

Overall, the researchers found that the Covid-19 vaccines being administered in the US were associated with a less than a one day change in the cycle length for both vaccine-dose cycles compared with pre-vaccine cycles.

According to the lead investigator of this study Alison Edelman, the average change is less than one day in the cycle where vaccination has occurred. However, according to Edelman, in some rare instances in which an individual receives two vaccine doses within the same menstrual cycle, the change in cycle length may increase to two days.

Such variances resolve quickly during the next menstrual cycle, according to Edelman. Significantly, the study did not find that the vaccines impact the length of periods or on bleeding.

Limitations of this study

Researchers note that the results of the study may not be generalised to the US population since most users of the Natural Cycles application are likely to be White, college educated and also have lower BMIs than the national distributions and they also do not use hormonal contraception.

Secondly, the scientists note that they chose to analyse a cohort with consistent normal cycle lengths so that they are able to analyse associations between cycle and menses length with Covid-19 vaccines. "We recognize that many individuals who menstruate do not fit into this normal category," the study says. Therefore, it cannot be said with certainty if other populations experience similar changes in the cycle length.

Thirdly, the study notes that while the results suggest that individuals receiving two doses in a

single cycle return to baseline cycle length quickly, the data does not include enough subsequent cycles without vaccines to fully investigate the vaccinated cohort used for this study.



Explained: Will ‘forever boosting’ beat the coronavirus?

Humbled repeatedly by a virus that has defied expectations, scientists are reluctant to predict the future. But nearly a dozen said that whatever happens, trying to boost the entire population every few months is not realistic. Nor does it make much scientific sense.

By: [New York Times](#) |
January 7, 2022 1:26:16 pm



Medical workers, who received their third dose, rest at a vaccination centre in Japan, Thursday, Jan. 6, 2022. (AP Photo/Eugene Hoshiko)

Written by Apoorva Mandavilli

A year ago, just two doses of a [COVID-19](#) vaccine — or even one, in the case of Johnson & Johnson's formulation — were thought to offer sufficient protection against the [coronavirus](#).

Now, faced with the extraordinarily contagious [omicron](#) variant, Israel has begun offering [fourth doses](#) to some high-risk groups. On Wednesday, the Centers for Disease Control and Prevention expanded eligibility for boosters to adolescents and backed away from describing anyone as “fully vaccinated” because two shots no longer seem adequate.

Instead, one's vaccination status will now be “up to date” — or not. It's no surprise that many Americans are wondering: Where does this end? Are we to roll up our sleeves for booster shots every few months?

Humbled repeatedly by a virus that has defied expectations, scientists are reluctant to predict the future. But in interviews this week, nearly a dozen said that whatever happens, trying to boost the entire population every few months is not realistic. Nor does it make much scientific sense.

“It's not unheard-of to give vaccines periodically, but I think there are better ways than doing boosters every six months,” said Akiko Iwasaki, an immunologist at Yale University. Other strategies, she said, could “get us out of this forever-boosting kind of a situation.”

For starters, persuading people to line up for shots every few months is probably a losing proposition. About 73% of American adults are fully vaccinated, but so far just over a third have opted for a booster.

“This doesn't seem to be a sustainable long-term strategy, for sure,” said Deepta Bhattacharya, an immunologist at the University of Arizona.

Just as important, there are no data to support the effectiveness of a fourth dose of the current vaccines. (The calculus is different for people with impaired immune systems, who might well benefit from a fourth dose.)

Booster shots undoubtedly increase antibody levels and help to prevent infection — and, as a result, may relieve pressure on the health care system by temporarily slowing the spread of the virus. The experts all said that given the omicron surge, Americans should get a third dose as soon as possible.

But the immunity boost is transient; already preliminary studies are showing a decline in antibody levels just weeks after a third dose. And even at peak antibody levels, the boost does not uniformly prevent infection with omicron, which is less vulnerable to the body's immune defenses.

“Even with that amount of antibody, it's very hard to stop the virus for very long,” said Shane Crotty, a virus expert at the La Jolla Institute for Immunology in California. “It's a much higher bar now than before, and maybe an omicron-specific vaccine would do a better job.”

Pfizer-BioNTech, Moderna and Johnson & Johnson have all said that they are testing vaccines targeting omicron that may become available in a few months.

“It doesn't make sense to keep boosting against a strain that's already gone,” said Ali Ellebedy, an immunologist at Washington University in St. Louis. “If you are going to add one more dose after three, I would definitely wait for an omicron-based one.”

If the goal is to boost immunity against omicron or future variants, other tactics would be better than continual boosts of a vaccine designed to recognize the original virus, experts said.

Some research teams are developing a so-called pan-coronavirus vaccine designed to target parts of the virus that would change very slowly or not at all.

The current vaccines could be combined with boosters of nasal or oral vaccines, which are better at preventing infection because they

coat the nose and other mucosal surfaces — the entry points for the virus — with antibodies.

And simply allowing more time between vaccine doses might also strengthen immunity, a lesson scientists learned in fights against other pathogens.

Many experts were initially opposed to the idea of a booster shot at all. Some believed the original vaccine regimens were enough to keep most people out of the hospital, and that this should be the true measure of a vaccine's success.

Others felt it was unfair for wealthy countries to hoard the vaccine for booster shots when millions worldwide had yet to receive a first dose.

But the perspective shifted when scientists saw omicron's rapid and unrelenting march across the world. “Omicron really did change my thinking about this,” said Scott Hensley, an immunologist at the University of Pennsylvania.



People wait during an observation period in a vaccination centre, in Nantes, western France, Thursday, Dec. 30, 2021. (AP Photo/Jeremias Gonzales)

“People that are vaccinated really are doing very well in terms of hospitalization,” said Michel Nussenzweig, an immunologist at Rockefeller University in New York. Omicron has made it clear that preventing all infections is a lost cause, he added.

If the vaccines prevented infection and spread of the virus, regular boosters might make sense.

“But with omicron, what’s the point?” Nussenzweig said. “The endgame is keeping people out of the hospital.”

Last fall, Dr. Anthony Fauci, the nation’s top pandemic adviser, repeatedly spoke of the importance of preventing symptomatic infections. But in recent days he, too, has been saying that it is hospitalizations that truly matter.

In order to prevent infections, booster shots must be exquisitely timed to a variant’s circulation in the population. Many people who got a third dose early in the fall, for example, were left vulnerable to omicron because the immune boost had already subsided.

Generally, people are told to get vaccinated against influenza just before the virus starts circulating in winter. If the coronavirus settles into a flulike seasonal pattern, as it seems possible, “you can imagine a scenario where we simply give boosters before the winter each year,” Hensley said.

Some experts have raised concerns that getting boosters too often — as some people are doing on their own — may even be harmful. In theory, there are two ways in which it could backfire.

Most immunologists now dismiss as improbable the first possibility, in which the immune system is exhausted by repeated stimulation — a condition called “anergy” — and stops responding to coronavirus vaccines. “We’re not really seeing these weird memory cells that are indicative of anergy or dysfunction,” Bhattacharya said.

The second worry, called “original antigenic sin,” seems more plausible. In this view, the immune system’s response is tailored to the first version of the virus, and its responses to subsequent variants are much less powerful.

With more than 50 mutations, omicron is different enough from previous variants that antibodies

made for the original version of the virus struggle to recognize the latest version.

“We have enough clues that it could be a problem,” said Dr. Amy Sherman, a vaccine expert at Harvard University. “We’ve certainly seen evolution in a short period of time.”



China’s latest lockdown shows stubborn resolve on zero-COVID

China’s ability to control the virus has come a long way since the pandemic started: It has inoculated nearly 1.2 billion people and set up a nationwide electronic health database for contact tracing.

By: [New York Times](#) | January 7, 2022 11:36:41 am



Authorities are nevertheless worried, in a country that has stridently stuck by its zero-COVID policy — and held up its success fighting the virus as proof that its authoritarian style of leadership saves lives. (Representational)

Written by Alexandra Stevenson

Every two days at the University of Xi’an in China, cleaners dressed in white hazmat suits taped tight to their bodies disinfect the dormitory hallways. Zhang Shengzi, a 24-year-old student,

said the smell is so pungent she has to wait some time after they have gone before she will open her door again.

She can barely leave her room, let alone campus, and all her classes are online.

Zhang's university, like the rest of Xi'an, has been under a citywide lockdown since Dec. 22. It is the longest lockdown in China since the first one in Wuhan, where the [coronavirus](#) outbreak began almost two years ago.

In scenes recalling the early days of the pandemic, hungry residents have traded coffee for eggs and cigarettes for instant noodles. A pregnant woman and an 8-year-old boy suffering from leukemia are among those who have been denied medical care. People in need of lifesaving medications have struggled to obtain them.

China's ability to control the virus has come a long way since the pandemic started: It has inoculated nearly 1.2 billion people and set up a nationwide electronic health database for contact tracing.

Yet it has continued to rely on the same authoritarian virus-fighting methods from early 2020, including strict quarantines, border closings and lockdowns. These have led to food and medical shortages and growing questions about how much longer its zero-COVID strategy, the last in the world, can continue.

Despite the frustration, authorities in Xi'an on Wednesday declared the city's battle with the virus a victory. Fourteen days into the lockdown, city officials said that Xi'an had achieved "zero COVID on a societal level," though its 13 million residents remained unable to leave home.

"The district security guards are like prison guards and we are like prisoners," said Tom Zhao, a Xi'an resident. Zhao, 38, said he had joined dozens of chat groups last week searching for anyone who

could help him find medicine for his mother, who has early-stage diabetes.

Even big multinational companies in the city have been affected. Two of the world's largest memory chipmakers, [Samsung](#) and Micron, said they have had to adjust operations at their manufacturing bases in Xi'an because of the restrictions, potentially roiling the already fragile global supply chain.

Xi'an has reported 1,800 cases in its latest outbreak, stunningly low compared with the daily case count in the United States. And as the world struggles to contain the spread of [omicron](#), in China officials have reported only a few local cases of the variant and none in Xi'an.

Authorities are nevertheless worried, in a country that has stridently stuck by its zero-COVID policy — and held up its success fighting the virus as proof that its authoritarian style of leadership saves lives.

The Beijing Winter Olympics and the Lunar New Year holiday are a few weeks away, and China's vaccines appear to be less effective than their Western competitors, particularly against variants. The country has yet to approve mRNA technology for its vaccines, and while booster shots are now widely available, their takeup in the country has been slower than the initial jabs.

"The Xi'an epidemic is the most serious after Wuhan was shut down," said Zeng Guang, a Chinese public health researcher who visited Wuhan in the early days of the pandemic and was quoted in state media Wednesday. "People across the country should give Xi'an a lot of support, hoping that Xi'an will accumulate new experience in epidemic prevention."

So far, the experiences have been grim. Tens of thousands of people have been relocated to centralized quarantine facilities to stop the spread. Several top city officials have been fired

and the head of Xian's big data bureau was suspended.

On Tuesday, the vast health code system used to track people and enforce quarantines and lockdowns crashed because it could not handle the traffic, making it hard for residents to access public hospitals or complete daily routines like regular COVID testing.

Many were incensed when a woman in the city, eight months pregnant, lost her baby after she was made to wait for hours at a hospital because she was unable to prove she did not have [COVID-19](#). (Authorities responded by firing officials and requesting an apology from the hospital.)

Days into the lockdown, residents began to post on social media about how hard it was to get groceries or order food. After being reassured by officials that it was unnecessary to stock up, residents across the city were caught off guard when an initial policy allowing one member of each household to leave every two days was eliminated.

Officials later acknowledged the mistake and quickly posted images of volunteers delivering groceries. But by then, residents were already complaining online that officials had put the pursuit of eliminating the outbreak above the well-being of citizens.

Zhao, who moved in with his parents before the lockdown to help take care of them, watched as their neighbors bartered for food. Several days ago, officials came in trucks to deliver vegetables, announcing their arrival on loudspeaker. Zhao and his parents received two plastic bags: a white radish, a head of cabbage, three potatoes, a carrot and two zucchinis.

They fared much better than others.

Zhao said a friend who lived in a different district did not get any food, and another told him that

her building elevator was turned off except for one hour a day when residents were allowed to do compulsory testing and walk their pets.

As the situation worsened across the city, people posted videos and heartfelt appeals for help. "SOS," wrote one resident whose father could not get medical care when he suffered a heart attack. He later died, according to a post from his daughter, who shared the story on Weibo, a major social media platform in China.

Zhao Zheng, the father of an 8-year-old boy with acute lymphoblastic leukemia, found himself battling with staff at several hospitals in Xi'an after his son's Dec. 28 appointment was canceled. Each hospital asked for proof that he was no longer in quarantine and documentation that Zhao and his family had not recently been exposed to the virus.

"Nobody could issue this document for us at all," said Zhao, 43, who until recently had owned a small construction company. Eventually, with the help of local reporters, Zhao and his wife were able to find a hospital on Jan. 2. Their son is now undergoing weekly treatment.

Amid the outcry, the government this week created special "green channels" for pregnant women and patients with "acute and critical illnesses" to get medical care more easily.

By Thursday, top officials moved further to try to douse public anger. Liu Shunzhi, head of the city's health commission, apologized for the stillbirth and for wider problems during the lockdown. Sun Chunlan, a vice premier overseeing the central government's efforts to contain COVID-19, ordered local health authorities to ensure there was no repeat of deadly delays in hospital treatment.

"It's extremely painful that problems like this have occurred and we feel deep remorse," Sun said, according to Chinese state media. "This has

revealed sloppiness in prevention and control efforts, and the lessons are profound.”

To critics, the pain, suffering and confusion caused by the lockdown has made Beijing's virus strategy appear increasingly unsustainable.

“In this world, nobody is an island,” wrote Zhang Wenmin, a former investigative journalist who lives in Xi'an. Zhang, better known by her pen name Jiang Xue, published an account of her first 10 days in lockdown on social media.

“The death of any individual is a death of all,” she wrote.



Mutated Omicron variant of Covid-19: Mild and yet dangerous

Omicron is less likely to infect the lungs and, therefore, causes less severe disease in most people. But it is much more contagious than Delta, and its great threat lies in the huge numbers it infects.

Written by [Anonna Dutt](#) | New Delhi |
Updated: January 7, 2022 4:55:59 pm



People wait in queue to be tested for Covid-19 amid the third wave, fuelled largely by Omicron. (File photo)

The heavily mutated [Omicron](#) variant is smashing daily case records, but [hospitalisations and deaths are fewer](#) compared to the peaks driven by Delta last year.

The US and the world reported a record 5.85 lakh and 18.95 lakh new infections on January 5 (7-day rolling average), a 14-day change of almost 250% and 165% respectively. But the respective numbers of deaths that day were around 1,300 and 6,100 — down by about 3% and 9% from 14 days ago.

Omicron, first isolated in South Africa on November 24, has 32 mutations on the spike protein. With several of these associated with higher transmissibility and immune evasion, Omicron was swiftly declared a Variant of Concern by the World Health Organization (WHO). As South Africa braced for a tsunami of sick patients, however, hospitalisations dropped — even as Omicron cases picked up.

Is Omicron really mild?

A study from South Africa published in JAMA Network reported that only 41.3% of Covid-positive people visiting hospital emergency required admission during the Omicron wave as compared to 68-69% during the Delta wave. The proportion requiring oxygen therapy was 17.6% in the Omicron wave, significantly lower than the 74% in the Delta wave.

HOW THE VARIANTS DIFFER	
DELTA	OMICRON
SYMPTOMS last about 10 days	SYMPTOMS last about 4-5 days
HIGH FEVER , 101-103F	FEVER: Low to moderate, 99.5-100F EXTREME fatigue
LOSS of smell (anosmia) and taste (ageusia)	DIZZINESS and nausea
LUNG ENTRY within couple of days of infection	NO LUNG pneumonia or apparent damage reported so far
HYPER IMMUNE response in the second week of infection in some	MOST patients were fully vaccinated, breakthrough infection rates very high
BREATHING is difficult, pain in the chest	<small>Based on broad clinical observations; specific cases will differ. Older or immunocompromised patients and those with comorbidities are impacted more, and are at greater risk of more severe disease in all cases.</small>
OXYGEN saturation levels fall	
LUNG DAMAGE visible in CT scan	
MOST PATIENTS were unvaccinated, breakthrough infection occurred mostly in healthcare workers	

Delta vs Omicron: How the variants differ

An analysis of a large volume of data from the UK Health Security Agency published in the BMJ said persons infected with Omicron were 50-70% less likely to be admitted to hospital than those infected with Delta.

“The severity of disease with Omicron seems to be 66-80% less based on data from the UK and South Africa. South Africa’s experience also gives assurance that a country like India that has already seen high levels of infections and has vaccination comparable to countries in the west with very little vaccine hesitancy, is likely to fare better,” said Dr Anurag Agrawal, an expert in lung disease and director of the CSIR-Institute of Genomics and Integrative Biology, New Delhi.

“That, however,” he cautioned, “does not mean that Omicron is harmless; people are still landing up in ICUs”.

What has been India’s experience so far?

Even though cases are rising sharply — India reported almost 91,000 new cases on Thursday (previous 24 hours) compared to just 6,358 cases 10 days earlier — doctors across the country say almost all patients are coming in with mild symptoms: moderate fever, sore throat, headache, bodyache, and fatigue. Some patients have diarrhoea, nausea, and dizziness.

At AIIMS in New Delhi — where, Delhi Health Minister Satyendar Jain said on Monday, 81% of sequenced samples were of Omicron — no patient has developed pneumonia due to [Covid-19](#), and none has needed oxygen or ventilator support solely for the [coronavirus](#) infection. Doctors have also reported that symptoms are resolving in about four to five days at most — much sooner than the average infection with Delta.

“There are 75 Covid-19 patients admitted in the hospital; however, nearly all of them are

admitted either because they are suffering from some other condition that needs hospital care, or because they are staff members who did not have space for isolation at home. There are a couple of people on ventilators but again, they were already sick with other diseases when they contracted Covid-19,” Dr Anjan Trikha, head of the clinical management group at AIIMS trauma centre, which is a dedicated Covid-19 treatment centre, told [The Indian Express](#) on Wednesday.

“I have not seen a single patient with pure Covid-19 pneumonia or damaged lungs as we saw during the Delta wave (of April-May 2021),” he said.

He said that barring a couple of cases, almost all patients admitted to AIIMS have received at least one vaccine dose, and most are fully vaccinated.

Doctors in Mumbai have reported a similar trend. Maharashtra has the highest number of Omicron cases in the country — 797, according to data released by the Union Health Ministry on Thursday.

“Most hospitalisations are initially because of other conditions, and the patients then test positive for Covid-19,” said Dr Lancelot Pinto, epidemiologist and pulmonologist at P D Hinduja Hospital in Mumbai.

“These are early days, but we haven’t seen severe cases yet. There is a very low possibility of a drop in oxygen saturation as the Omicron variant mainly affects the upper respiratory tract,” Dr Pinto said.

Does this mean we need not worry about Omicron?

No, it does not. Omicron may cause less severe disease in most individuals, but because of its very high transmissibility, hospitals may get flooded with those who remain unimmunised,

those living with comorbidities, or those with suppressed immune systems.

Omicron is at least 1.5-2 times more transmissible than Delta, which has resulted in the very large numbers of infections around the world in a very short time. It is also 2-3 times more capable than Delta of infecting those who have been fully vaccinated, or those who have had a previous infection.

“The risk of severe disease is less than Delta, but that is not saying much. I am not concerned about Delhi or Mumbai which have already seen huge Delta waves, and where health systems are fairly robust. The problem will be when Omicron spreads to places where the healthcare system is patchy, and there haven’t been Delta infections,” Dr Agrawal said.

“Also, in the initial phase of a wave, younger people who are out and about are more likely to catch the infection, but the disease is also less severe in them. We will understand the problem only when it starts affecting the old and vulnerable,” he said.

Dr G C Khilnani, a former head of pulmonology at AIIMS who is now the head of pulmonary, critical care, and sleep medicine at PSRI Hospital in New Delhi, said: “If the denominator gets big enough, then we will start seeing an increase in hospitalisation. It will target those who haven’t been vaccinated, those who haven’t had the infection, or those who have comorbidities in the community.”

Also, the highly infectious and immune-evasive variant is affecting doctors and healthcare staff — at least 120 doctors have tested positive in Delhi and are isolating or quarantining at four major hospitals. If cases continue to rise sharply for an extended period, more healthcare personnel will be infected, and hospitals could see staff shortages.

What is it about Omicron that makes it more transmissible but less dangerous for the patient?

Over the last one month, several major cell culture and animal model studies have suggested that Omicron is principally an upper airway disease — it prefers to replicate in the upper respiratory tract rather than deep in the lungs, which is where coronaviruses do the worst damage.

Separate teams at the University of Cambridge and the University of Glasgow have concluded that TMPRSS-2, a protein found in many lung cells, which is used by coronaviruses for viral entry and spread, does not have much affinity with Omicron.

“Indeed we showed that in lung cells expressing TMPRSS2, live Omicron virus demonstrated significantly lower replication in comparison to Delta,” said the Cambridge study, led by Dr Ravindra Gupta.

But the higher replication rate of the virus in the upper respiratory tract also means that it is easier for it to be passed on to others when an infected person coughs, sneezes, or talks. Scientists are also studying factors such as whether the variant is more stable, or is better able to infect new people in air.

Dr Agrawal cautioned that while Omicron is “less likely to infect deep in the lungs, it still can” — and “it is not a simple upper respiratory tract infection”. And this distinction becomes more important as the denominator increases, he said. “Omicron is not a risk-free natural vaccine.”

Anti-Covid pill Molnupiravir: Approved, not recommended

Molnupiravir, an anti-viral drug developed by US companies Merck and Ridgeback, has been kept out of the treatment protocol recommended by the Indian Council of Medical Research (ICMR). A look at the drug, the risks, and what now

Written by [Amitabh Sinha](#), [Harikishan Sharma](#) | New Delhi, Pune |
Updated: January 7, 2022 8:43:26 am



Molnupiravir, developed by US-based biotechnology company Ridgeback Biotherapeutics in collaboration with US Pharma giant Merck, is now being made by 13 Indian drug manufacturers.

Barely a week after it was [approved for early-stage Covid-19 patients](#), molnupiravir, an anti-viral drug developed by US companies Merck and Ridgeback, has been kept out of the treatment protocol recommended by the Indian Council of Medical Research (ICMR). Dr Balram Bhargava, head of ICMR, said on Tuesday that the drug had “major safety concerns”. This has resulted in a awkward situation: The drug is approved for use, but not recommended.

The drug

[Molnupiravir](#) is a repurposed [Covid-19](#) drug, originally developed to treat influenza. It is meant for mild or moderately ill Covid-19 patients who are at risk of developing serious illness. The pill, if administered during the first five days after contracting the infection, has the potential to prevent serious illnesses.

The pill is among the first few therapeutics now being deployed for treatment of Covid-19. Molnupiravir was first cleared for use in the UK in November, and more recently in the US.

The concerns

There have been concerns on two counts — low effectiveness, and some potential side-effects. Both were taken into account by drug regulating agencies while approving them.

Molnupiravir was found to be only 30% effective in trials, much lower than earlier indications. Besides, there have been worries over its mechanism: The drug molecule incorporates itself into the RNA of the virus, inducing mutations with the objective of hampering replication. But this carries the risk of introducing mutations that can make the virus stronger and more dangerous. A bigger worry is the risk of the drug creating mutations in the human DNA itself.

Risk vs benefit

These risks, very low by all accounts, have been considered by the drug regulators while approving the drug, which means that these have not been assessed to be significant enough. The prescribed five-day dosage is not considered large enough to pose any serious health concern.

Also, N K Ganguly, former head of ICMR, pointed out, there are several drugs for other diseases in the market that pose similar risks.

“Those drugs are frequently prescribed in specific situations based on the clinical

assessment of the patients, if the benefits from the drugs are considered by the doctor to be outweighing these risks," he said.

In the case of molnupiravir, it seems, going by the argument of Dr Bhargava, the benefits do not very clearly outweigh the risks, considering the low effectiveness of the drug.

What now

It is now likely that doctors would still prescribe it in some situations based on the clinical assessment of the patient. In any case, it can be useful only in very specific situations, during the first five days of infection, and among mild or moderately sick patients.

"We must not treat this as a wonder drug. Molnupiravir is known to have low effectiveness. It can still work in some cases, so I would not be surprised if some doctors prescribe it. But at the same time, patients and their families need not insist on getting this drug," said Dr Raman Gangakhedkar, a former head of epidemiology at ICMR.



It's dangerous to take Omicron lightly

T. Jacob John, M S Seshadri write: The variant causes mild infections in young and healthy but can assume severe form in old and vulnerable.

Written by [T. Jacob John](#), [M S Seshadri](#) | Updated: January 7, 2022 9:36:24 am



A young girl receives a dose of the Covid vaccine in New Delhi. (Express Photo: Amit Mehra)

The upsurge of Covid cases driven by the [Omicron](#) variant of the [coronavirus](#) has started in India, within a month of its first detection in Karnataka. For almost six months, from early July to the last week of December, India enjoyed a period of low daily cases, after the massive second wave caused by the [Delta variant](#) settled down to an endemic state. During most of November and December, the daily numbers were consistently below 10,000.

More than 13,000 cases were recorded on December 29 and by January 6, the daily case count had crossed 90,000. The number of tests conducted daily has remained stable, but the test-positivity rate has risen, confirming that the third wave of the pandemic has begun in the country. Kerala, Sikkim, and Arunachal Pradesh, the three states which witnessed a late onslaught of the Delta variant and late epidemic peaks, are exceptions to this trend.

The WHO declared Omicron a Variant of Concern (VOC) on November 26. The premier global health agency issued a timely alert to all countries to expect the next wave with massive numbers of infections. The only comforting news was that the disease numbers were a much smaller proportion of the infections — a watered-down version of Covid caused by the Delta variant. Fever, pneumonia and hypoxia are far less frequent than in the earlier waves. However, the elderly and those with immune-compromising ailments or therapies are at a high

risk of severe disease and could need hospitalisation; they have a high risk of mortality.

We could face a rapid spread of infection and a disease wave of unpredictable proportions — it is likely to be less than the second wave but more than or equal to the first wave. Many in India tend to trivialise the new avatar of the virus as “the vaccine that scientists could not design” because of the mild form taken by the disease in the majority. That notion is dangerous because compared to the hospitalisation of vaccinated people for serious adverse reactions, the numbers who need intensive hospital care for severe disease will be much larger. For the young and healthy, the risk of severe disease with Omicron is indeed very low, but not zero. Inaction due to this misconception is unscientific and unethical.

We had no vaccine to flatten the first curve. We had vaccines three months before the onset of the second wave, but could not flatten the curve because there was insufficient vaccine stock and an ineffective distribution plan. Many of us lost loved ones and our economy suffered. The low and middle-income families faced — many continue to face — severe financial stress. But when the WHO alerted us about Omicron and the case count began to rise in European countries, we had a unique opportunity to attempt to minimise the disease burden and even mitigate the onslaught of infections.

We are at a loss to understand why policymakers waited for a month before making decisions that are disappointingly far too little to reduce the need for hospitalisations or slow the spread of infection. We had the choice of rapidly building up boosted immunity, both hybrid (prior infection plus vaccination) and vaccine-induced, by quickly initiating a massive booster vaccination campaign. For reasons unknown, the political will was lacking.

Two properties of Omicron prompted the WHO to declare it a Variant of Concern within two days of notification by South African scientists: Extremely high transmission efficiency, far more than that of Delta, and the propensity to evade immunity induced by past infections and vaccinations. These properties are conferred by a large number of mutations on its spike protein gene. While Delta has two mutations on the receptor-binding domain of the spike protein, Omicron has 15. This has resulted in evasion from antibody binding, necessary for protection. Neutralising antibodies against the spike protein of the original virus, induced by all available vaccines (mRNA or adenovirus-vectored) are relatively ineffective against Omicron. However, recent experience shows that very high levels of antibodies that result from booster doses offer protection, especially from severe disease needing hospitalisation. This opportunity, our only hope to mitigate the otherwise risk-ridden disease wave, was squandered.

The UK's experience strongly supports booster doses. Vaccine effectiveness with any of the shots in current use in the UK — real-world, real-time protection against Covid caused by Omicron, requiring hospitalisation — was 72 per cent during two to 24 weeks after the second dose, but only 52 per cent after 25. But this shot up to 88 per cent two weeks after a booster dose. By the time such data becomes available in India, the wave would have naturally receded in the country.

Vaccination of children was the other part of mounting a wall of immunity against Omicron. The new policy offers vaccination for only a small proportion of the large segment of our population under 18. It is now too late to pursue this line because the Omicron wave may peak within weeks and building immunity with vaccines will take six weeks from the time the first dose is administered.

Everyone must strictly adopt personal prevention measures, double masks, hand hygiene, and good ventilation indoors and avoid crowds and non-essential travel.



Made-in-India test kit to detect Omicron gets ICMR nod

Apart from identifying the B.1.1.529 (Omicron) variant, the kit can also detect any other circulating SARS-CoV-2 variants.

Written by [Aksheev Thakur](#) | Bengaluru | January 6, 2022 8:48:26 pm



OmiSure is the first test to use a combination of two S-gene viral targets to identify Omicron. (File)

India's home-grown testing kit OmiSure, developed by the Tata Medical and Diagnostics (Tata MD) to identify the [Omicron](#) variant of [Covid-19](#) in samples taken from the nose and throat, was approved by the Indian Council of Medical Research (ICMR) Wednesday and will be available for commercial use from January 12.

Apart from identifying the B.1.1.529 (Omicron) variant, the kit can also detect any other circulating SARS-CoV-2 variant.

The company said the unique test design developed by scientists at Tata MD is a single tube, fully multiplexed test (provisional patent application filed). Therefore, it has two checks in place for Omicron detection without compromising the ability to detect other SARS-CoV-2 variants.

The kit evaluated in partnership with the ICMR reported 100 per cent sensitivity and 99.25 per cent specificity for detection of variants of SARS-CoV-2, including Omicron.

OmiSure is the first test to use a combination of two S-gene viral targets to identify Omicron. The first target is based on S-gene dropout or S-gene target failure (SGTF) and the second target is based on S-gene mutation amplification (SGMA).

The company said that they have begun working to scale up the production capability, supply chain and raw material inventory to deliver two lakh OmiSure tests per day.

"It can help cut half the cost and complexity of first-line Covid-19 testing and Omicron screening. Most states have adopted a dual-testing strategy at the point of first-line testing, where samples are first tested with cost-effective regular Covid-19 RT-PCR tests and then, positive samples are screened for Omicron with a more expensive SGTF assay and prioritised for sequencing," the company said.

The kit developed by a team headed by Bengaluru-based Dr V Ravi, former head of neurovirology, NIMHANS, and currently head of R&D, Tata MD, is listed on the ICMR website as the only kit approved specifically for Omicron detection.

Speaking with [The Indian Express](#), Ravi said, "It is not a home testing kit. There are a lot of misconceptions. OmiSure is not a self-test kit. It detects viral genetic material and not viral antigen. It is not a Rapid Antigen Test (RAT).

Why Paracetamol is not recommended for teenagers post Covid vaccination

As per the ministry of health's revised vaccination guidelines, beneficiaries in the 15-18 years of age would only be administered "Covaxin".

By: [Lifestyle Desk](#) | New Delhi |
Updated: January 7, 2022 9:46:05 am



Vaccination for teenagers is going on (Source: Express Photo by Arul Horizon)

Ever since [vaccination](#) for teenagers in the age group of 15-18 years started in India, there has been some confusion about the requirement to take paracetamol or any painkiller to help ease the side-effects. Clearing the air, experts state that there is no need for any medicine after the Covid jab.

In an official statement, vaccine manufacturer of [Covaxin](#) Bharat Biotech said, "We have received feedback that certain immunisation centres are recommending taking three paracetamol 500 mg tablets along with Covaxin for children. No paracetamol or pain killers are recommended after being vaccinated with Covaxin."

Polymerase Chain Reaction (PCR) can only be done in laboratories. It requires special equipment, trained people and a certain amount of bio-safety. PCR has been done right from the beginning of the pandemic. OmiSure is a real-time PCR so it is not available for public use at home."

"I started working on the development of the kit just a couple of days after Omicron was announced, which was roughly by the end of November 2021. Right after the first case of Omicron was reported, we had submitted the kit for an ICMR evaluation. This is the fastest-developed kit globally. From the specimen collection to the reporting like other PCRs, the kit takes a maximum two and a half hours to give the results. Moreover, there are plans to export the kit as globally it has an advantage of being able to screen S-gene dropout as well as specific detection," Ravi explained.

Ravi, who is also the nodal officer and chairman of the Covid-19 whole genome sequencing committee in Karnataka, said Omicron has swept Mumbai and Delhi and has more or less replaced the [Delta variant](#). "It will happen across the country," he stated.

"I have learnt one thing from the pandemic about this virus that is not to give assurances. Yes, most of the people seem to be getting mild infections but that does not mean we should brush it aside saying it is not going to cause any problem because most people getting infected are already vaccinated with either one dose or two doses. We still do not have data on people who have not been vaccinated whether the infection is mild, moderate or severe. I would tread with caution and would advise people to wear masks and avoid crowds so that they do not get infected. Nobody wants to get infected. Our target should be no infection," he said.

ANNOUNCEMENT

We have received feedback that certain immunization centers are recommending taking 3 paracetamol 500 mg tablets along with **COVAXIN** for Children. No paracetamol or pain killers are recommended after being vaccinated with **COVAXIN**.

Through our clinical trials spanning 30,000 individuals, approximately 10-20% of individuals report side effects. Most of these are mild, resolve within 1-2 days, and do not require medication. Medication is only recommended after you consult a physician.

Paracetamol was recommended along with certain other COVID-19 vaccines and is not recommended for **COVAXIN**.

 **BHARAT**
BIOTECH

Lead Innovation

"Paracetamol was recommended along with certain other [Covid-19](#) vaccines, but is not recommended for Covaxin," it added.

As per Government of India Ministry of Home and Family Welfare (MoHFW)'s revised [vaccination](#) guidelines, beneficiaries in the 15-18 years of age would only be administered [Covaxin](#).

As per the manufacturer, in its clinical trials spanning 30,000 individuals, approximately 10-20 per cent of individuals reported side-effects. "Most of these are mild, resolve within 1-2 days, and do not require medication. Medication is only recommended after you consult a physician," it said.

Vaccination drive underway at Mumbai's BKC Jumbo Centre (Express Photo by Amit Chakravarty)

Experts maintain that experiencing mild fever, chills, headache, or fatigue after the dose of Covid-19 vaccine means that the immune system is beginning to kick in effectively. Therefore, painkillers must be avoided to ensure the "strongest possible immune response".



Dr Col Vijay Dutta, senior consultant, Internal Medicine, Indian Spinal Injuries Centre told [indianexpress.com](#) that any medication, post vaccination, is not recommended as it has the "potential to cause hepatotoxicity". "Giving Paracetamol to children (15-18 years old) who are receiving Covid vaccines is not recommended. It is because it has the potential to cause hepatotoxicity (liver damage caused by drug exposure). If children develop a fever after receiving the Covid vaccine, they should be given Mefenamic acid or Meftal syrup. Adults over the age of 18 years who have a fever after receiving the [Covid vaccine](#) are safe to take paracetamol," Dr Dutta said.

Dr Sonam Solanki, consultant pulmonologist and bronchoscopist, Masina Hospital, Byculla, Mumbai said that "taking paracetamol just because you have been vaccinated is not recommended". "Also, not everyone will develop a headache, fever or body ache. Only 10-20 per cent of children developed side effects during trials. Don't prescribe it as a blanket measure. Only if you develop a side-effect or a documented fever then you can consult the physician and decide whether you need the paracetamol or not," Dr Solanki highlighted.

As per World Health Organization (WHO), taking painkillers before receiving the Covid-19 vaccine to prevent side-effects is also not recommended. "This is because it is not known how painkillers may affect how well the vaccine works," it read on its website.

Earlier, a February 8, 2021 article in *Elemental journal* noted how it's not yet known if [painkillers](#) can interfere with the effectiveness of Covid-19 vaccines. "So, it's best to skip painkillers if you can," it read.

As per WHO, even after you're vaccinated, keep taking precautions

"While a Covid-19 vaccine will prevent serious illness and death, we still don't know the extent to which it keeps you from being [infected](#) and passing the virus on to others. The more we allow the virus to spread, the more opportunity the virus has to change," it reads.

Continue to take actions to slow, and eventually stop, the spread of the virus.

- *Keep at least 1 metre distance from others
- *Wear a mask, especially in crowded, closed and poorly ventilated settings.
- *Clean your hands frequently.
- *Cover any cough, or sneeze in your bent elbow.
- *When indoors with others, ensure good ventilation, such as by opening a window.



US CDC advisory panel in favour of Pfizer vaccine booster for ages 12 to 15

The CDC said in a statement it now recommended that adolescents age 12 to 17 years old should receive a booster shot 5 months after their initial Pfizer/BioNTech vaccination series.

By: [Reuters](#) |
January 6, 2022 1:48:26 pm



A medical staff prepares a booster dose of Pfizer's coronavirus disease (COVID-19) vaccine. (File Photo/Reuters)

The US Centers for Disease Control and Prevention (CDC) said on Wednesday it expanded the eligibility of Pfizer Inc and BioNTech SE's booster doses to those 12 to 15 years old.

The move came after a panel of outside experts advising the CDC voted earlier to recommend booster shots of the [Covid-19](#) vaccine be [made available for ages 12 to 15](#).

The CDC's Advisory Committee on Immunization Practices (ACIP) voted 13 to 1 to recommend that the US health agency support booster shots for those aged 12 to 15 at least five months after their second dose.

The panel also said the CDC should strengthen its recommendation for boosters for ages 16 and 17. The agency had previously made the shots available to those teenagers, but had stopped short of suggesting that all of them should receive the additional jab.

The CDC said in a statement it now recommended that adolescents age 12 to 17 years old should receive a booster shot 5 months after their initial Pfizer/BioNTech vaccination series.

Covid-19 cases in the United States have [hit record levels in recent days](#) due to the fast spreading [Omicron](#) variant of the virus. Infection rates are surging as many workers and school

children return from holiday vacations, raising the prospect of overwhelmed health systems as well as closed businesses and schools.

“Covid is overwhelming our hospitals and our children's hospitals,” said panel member Dr. Katherine Poehling, a professor at Wake Forest School of Medicine. “This is a tool we need to use, and help our children through this pandemic.”

Data from Israel's Health Ministry presented at the meeting suggested that vaccinated children aged 12 to 15 who were five to six months past their second dose were being infected at the same rate as unvaccinated kids by the Omicron variant of the virus. After receiving a booster shot, the infection rate dropped sharply, according to the data.

Dr. Peter Marks, a top regulator at the US Food and Drug Administration, said that it is reasonable to extend the boosters down to 12- to 15-year-olds given the current surge in cases.

The FDA had authorized the additional doses for the age group on Monday, but the CDC sign-off was needed before the shots can be administered.

“This booster dose will provide optimized protection against Covid-19 and the Omicron variant,” CDC Director Rochelle Walensky said in the statement.

Some scientists have expressed concerns about the booster shots due to rare cases of heart inflammation called myocarditis that have been linked to both the Pfizer/BioNTech and Moderna vaccines, particularly in young men.

While there is limited data on myocarditis after booster doses for ages 12 to 15, the FDA has said evidence from both the United States and Israel indicates that the risk of myocarditis in men aged 18-40 is significantly lower after booster shots than after the second vaccine dose.

Only two cases of myocarditis were reported in Israel among 44,000 adolescents aged 12 to 15 who received a third dose of the Pfizer/BioNTech vaccine, the Israeli Health Ministry said on Wednesday.



How to survive the Omicron variant

Lancelot Pinto, Madhukar Pai write: New therapies can help handle the third wave better. But they must be used smartly.

Written by [Lancelot Pinto](#), [Madhukar Pai](#) | Updated: January 7, 2022 11:56:55 pm



With Omicron, most individuals who are doubly vaccinated will need no more than symptom-based treatment at home. (Express Illustration: C R Sasikumar)

As we battle the third wave of the pandemic in India, it is important to acknowledge that we have learned a lot during the past two years. We now have better tools. If we can avoid the past errors, and use the newer tools smartly, we should handle this crisis better.

Since the [Omicron](#) variant is exceptionally transmissible and can cause infections among vaccinated people and people who have had [Covid-19](#) previously, we can anticipate a big spike in cases during the first few weeks of the new year. Whether this surge overwhelms our

healthcare system will depend largely on how well we control the spread, and how stringent we are with selecting individuals for hospitalisation.

The principles for limiting spread remain the same as the last wave: Masking (surgical masks are better than cloth masks, but the ideal masks would be KN95 or N95), ventilation, double vaccination (with boosters for approved groups), sanitising and avoiding the 3 Cs — closed spaces, crowded spaces and close contact with others.

Those who are completely unvaccinated should be strongly nudged to get themselves vaccinated. That is the most important action at the individual level. Many people have taken their first dose but failed to take the second. It's critical to complete the vaccination schedule, especially with Omicron becoming the dominant variant of the virus. For the detection of Covid-19, including its Omicron variant, a rapid antigen test, and RT-PCR are both useful. Blood tests and CT scans of the chest have no role for either the routine diagnosis or treatment of Covid.

With Omicron, most individuals who are doubly vaccinated will need no more than symptom-based treatment at home, such as paracetamol for fever, along with the monitoring of oxygen levels with a pulse oximeter. There is no need to rush to hospitals or go seeking oxygen. We cannot afford to have hospital beds occupied for social reasons (lack of isolation facilities at home), fear (what if I don't get a bed when I need one?), isolation of mildly symptomatic or asymptomatic travellers or people with clout. Covid patients should only be hospitalised if they have low oxygen levels (less than 94 per cent oxygen saturation on pulse oximetry) or have comorbidities that are serious enough to warrant hospitalisation.

During the second wave, there was a lot of confusion among doctors, which resulted in over

investigation, over medication and irrational treatments. For this wave, we must avoid useless and dangerous therapies. The following drugs should be avoided: Favipiravir, Ivermectin, Azithromycin, Doxycycline, [Hydroxychloroquine](#), convalescent plasma, Vitamin C and D, Zinc, Colchicine, Itolizumab, Bevacizumab, Lopinavir-ritonavir, Interferon alpha-2b, Coronil and other herbal medications.

Corticosteroids continue to be the drugs with the greatest life-saving role in Covid, but this is true only when they are used with the caveats. Corticosteroids (oral or intravenous) are useful in select patients with low oxygen levels. But if used too soon, for too long, and in high doses, they can cause a rapid deterioration in individuals and increase the risk of [mucormycosis \(black fungus\)](#) that we saw after the second wave. Corticosteroids should only be prescribed when oxygen levels fall below a threshold of 92 per cent, for a limited duration (5-10 days for most individuals) and in doses that do not exceed 6mg [Dexamethasone](#) or its equivalent (40 mg Prednisolone or 32mg Methylprednisolone) per day. Inhaled, not oral, corticosteroids (such as Budesonide) may have a role, especially in individuals with underlying diseases such as asthma and COPD who have lower respiratory symptoms such as a cough.

Since the second wave, three new treatments have emerged and are available in India: Monoclonal antibodies, Molnupiravir and Flvoxamine. Another anti-viral drug, Paxlovid, developed by Pfizer, has not been approved in India yet.

Monoclonal antibodies may have a role in high-risk individuals once they have been detected with the infection. However, the only products approved in India are cocktails of either Casirivimab and Imdevimab or Bamlanivimab and Etesevimab. This therapy is expensive and requires IV infusion in a healthcare facility. These cocktails are known to be effective against

the [Delta variant](#), but not so against the Omicron variant. So, they have been discontinued in many countries that are facing an Omicron-driven surge. If the present surge in India is largely due to Omicron, our guidelines must recommend discontinuing the use of these antibody cocktails or using them selectively in patients infected with the Delta variant.

Molnupiravir, an antiviral that was recently given an Emergency Use Authorisation for treating adult patients, has shown limited efficacy when tested in unvaccinated individuals with risk factors. Whether it will offer any benefit to vaccinated individuals is not known. The drug did not work in those with diabetes and those with high viral loads. The fact that the rampant use of antivirals can lead to resistance, especially to new mutants, should make one very cautious about the widespread use of the drug. Presently, one should limit the scope of prescribing Molnupiravir to early use (within five days of onset of the symptoms) among symptomatic, unvaccinated individuals with one or more risk factors (more than 60 years, active [cancer](#), chronic kidney disease, chronic obstructive pulmonary disease, obesity, serious heart conditions). Indiscriminate use that's quite likely in the Indian setting, given how aggressively pharmaceutical companies are advertising the drug, needs to be prevented.

Fluvoxamine, a drug already used for depression, is an inexpensive and widely available drug. One trial showed that treatment with fluvoxamine (100 mg twice daily for 10 days) among high-risk outpatients who were diagnosed early reduced the need for hospitalisation. While it may be premature to routinely use this drug, it has shown enough promise to merit more studies, especially in the Indian context.

Since most Indians have some protection, either from past infection or vaccination, the third wave should cause less severe disease and

fewer deaths. However, with Omicron, we know that such protection may not prevent infection. So, a spike in cases is expected. While we brace ourselves for a huge surge, we must not forget lessons from the last wave and smartly use the tools and knowledge we have.



Explained: Asymptomatic contacts not to be tested, isolation at home cut to 7 days

Cases now up to 50,000 a day, govt revises guidelines, in line with other countries

Written by [Harikishan Sharma](#) , Edited by Explained Desk | New Delhi | Updated: January 6, 2022 8:17:02 am



An ambulance parked outside a residential complex with Covid-19 patients in Noida. (Express Photo: Abhinav Saha, File)

As surge fuelled by the [Omicron](#) variant pushed the daily [coronavirus](#) count in the country to more than 50,000, the Centre Wednesday issued revised guidelines that no longer require asymptomatic contacts of patients to get tested. The government also laid down home isolation rules for mild and asymptomatic cases,

while cutting the quarantine period after testing positive from at least 10 days to seven.

“Patients under home isolation will stand discharged and end isolation after at least seven days have passed from them testing positive and they have had no fever for three successive days. They shall continue wearing masks,” the new guidelines by the Union Ministry of Health and Family Welfare say. There is no need for a re-test after the home isolation period is over.

The asymptomatic contacts would not be tested but would be required to monitor their health in home quarantine.

The new guidelines replace those issued on April 29, 2021, under which a patient under home isolation was supposed to be “discharged and end isolation” after “at least 10 days” have passed from the onset of symptoms (or from date of sampling for asymptomatic cases) and has had “no fever for 3 days”. Besides, all family members and close contacts were required to be “monitored and tested”.

Earlier, South Africa, which was among the first countries to report Omicron cases, did away the requirement of quarantine for contacts of people confirmed with the infection, and said contacts would be tested only if they showed symptoms.

The Centers for Disease Control and Prevention in the US has also specified now that testing is not required for a Covid patient to emerge from five days of isolation, while halving the isolation time for cases without symptoms or with mild symptoms, and shortening the quarantine period of their close contacts from 10 days to five.

Issuing the revised guidelines Wednesday, the Health Ministry said: “Over the past two years, it has been seen globally as well as in India that a majority of the cases of [Covid-19](#) are either asymptomatic or have very mild symptoms. Such cases usually recover with minimal intervention

and accordingly may be managed at home under proper medical guidance and monitoring.”

The revised guidelines identify asymptomatic cases as “laboratory-confirmed cases who are not experiencing any symptoms and have oxygen saturation at room air of more than 93%”. “Clinically assigned mild cases” are defined as “patients with upper respiratory tract symptoms with or without fever, without shortness of breath and with oxygen saturation at room air of more than 93%”.

In the earlier guidelines, the oxygen saturation threshold for both category of cases was above 94%.

On clinical management of “mild/asymptomatic cases”, the guidelines say: “The patient should be clinically assigned as mild/asymptomatic case by the treating Medical Officer. Further a designated control room contact number at the district /sub district level shall be provided to the family to get suitable guidance for undertaking testing, clinical management related guidance, assignment of a hospital bed, if warranted.”

Patients have to maintain a self-health monitoring chart, with details like date and time, temperature, heart rate (from pulse oximeter), SpO2 (from pulse oximeter); and whether their breathing or condition is “better/ same/ worse”.

The district administration is required to monitor the cases under home isolation on a daily basis. The patients must have a “caregiver”, ideally someone who has completed his Covid vaccination.

The guidelines ask people not to rush in for “self-medication, blood investigation or radiological imaging like chest X ray or chest CT scan” without consulting their Medical Officer. They also warn against “overuse” or “inappropriate” use of steroids, saying these were not needed in

mild cases and could lead to additional complications.

The guidelines say "immediate medical attention" must be provided in case of symptoms such as unresolved high-grade fever (more than 100° F for more than three days); difficulty in breathing; dip in oxygen saturation below 93% in room air in at least three readings within an hour or a respiratory rate of above 24/min; persistent pain/pressure in the chest; mental confusion or inability to respond; and severe fatigue and myalgia (muscle pain).

As per Health Ministry data, India reported 58,097 new cases of Covid-19 in the past 24 hours, taking the active caseload to 2,14,004.

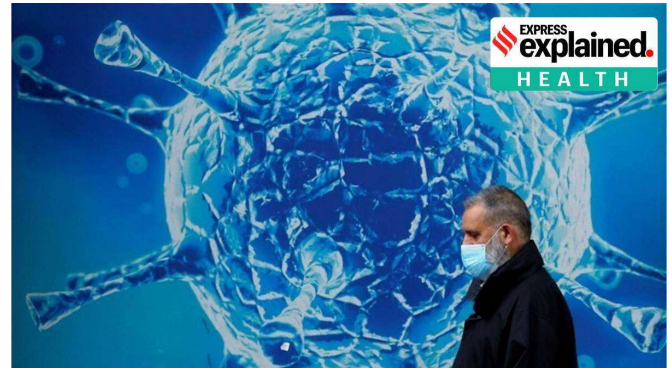
The Indian EXPRESS

‘IHU’ variant of Covid-19 explained: Few cases, limited spread

IHU variant of Covid-19: This variant, B.1.640, has been found mostly in France so far, although it has also been detected in several other countries. The variant was reported to have 46 mutations, including some in the spike protein.

Written by [Amitabh Sinha](#) | Pune |
Updated: January 7, 2022 9:17:32 am

Even as the [Omicron](#) variant of the [coronavirus](#) continues to infect people in large numbers across the world, news about the [emergence of another highly-mutated variant](#) spread rapidly on Tuesday, raising fears of yet another wave of infections. This variant, B.1.640, has been found mostly in France so far, although it has also been detected in several other countries. The variant was reported to have 46 mutations, including some in the spike protein.



A man walks past an illustration of the novel coronavirus. (File)

Not a new variant

The B.1.640 variant is not new. It has been around for at least three months. The sudden discussion around it was triggered by the circulation of a week-old study by researchers from Méditerranée Infection in Marseille, part of France's Instituts hospitalo-universitaires (IHU, or University Hospital Institutes).

The study reports the detection of a new variant in November last year among 12 people living in the same geographical area of southeastern France, the first of which had returned from a trip to Cameroon. The researchers said the variant found in these people was very similar to the one they had found earlier and named IHU.

The IHU variant that the researchers mention is B.1.640 which, according to global databases, was first discovered way back in January last year. The one that the French researchers found among people in November has now been classified as a sub-lineage B.1.640.2.

Not spreading rapidly

According to outbreak.info, a website that tracks the prevalence of different variants in genome sequencing databases, at least 400 infections with the B.1.640 variant have so far been identified. It has been detected in at least 19 countries. Interestingly, one of these sequences happens to be from India as well, the

only one out of the roughly 90,000 sequences from India deposited in the global databases.

The highest number of sequences of this variant has come from France, where 287 cases have been confirmed until now. There are 17 cases from Germany and 16 from the United Kingdom. But the country where this variant appears to be the most prevalent is Congo, where 39 of the 454 genome sequences done so far belong to the B.1.640 lineage.

Way back in November, the World Health Organization (WHO) had classified B.1.640 as a variant under monitoring, or VUM, the entry-level categorisation of a variant that is considered worth keeping an eye out for.

Not a concern

While the large number of significant mutations in this variant has attracted the interest of researchers, and raised concerns among the public, the B.1.640 is not spreading at a rate that is unnerving. It is certainly not as alarming as the spread of Omicron. According to the website outbreak.info, this variant was last detected on December 25. After that, no new case has been detected in the global databases.

“Nothing to panic or worry too much (about) at the moment, given the evidence. But clearly something that needs to be watched closely for the coming weeks,” said Vinod Scaria, a scientist at Delhi-based Institute of Genomic and Integrative Biology, in a tweet on Tuesday.



Molnupiravir, antiviral drug to treat Covid-19, rolled out at affordable cost

Dr. Reddy's Molflu will be priced at Rs. 35 per capsule with 10 capsules contained per strip, and the total course of 40 capsules over 5 days costing Rs 1,400 making it an affordable treatment option available to patients.

Written by [Anuradha Mascarenhas](#) | Pune |
Updated: January 4, 2022 5:35:54 pm



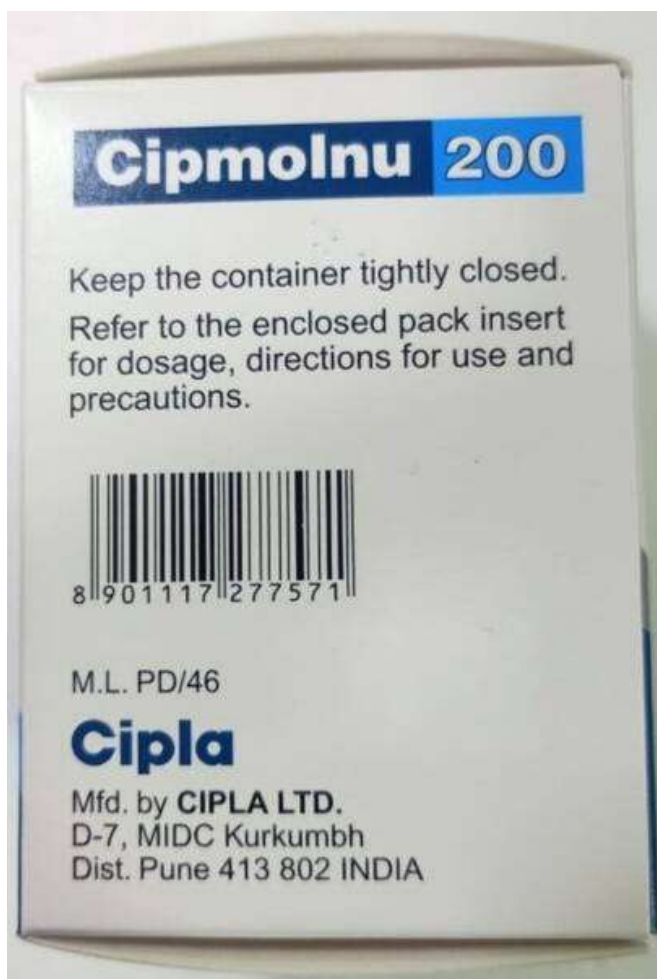
Molnupiravir, developed by US-based biotechnology company Ridgeback Biotherapeutics in collaboration with US Pharma giant Merck, is now being made by 13 Indian drug manufacturers.

[Molnupiravir, the antiviral drug that got emergency use approval](#) for treating mild to moderate [Covid-19](#) in the country has been rolled out by some pharmaceutical firms at a cost ranging between Rs 1500-1600 for a five-day course. The stiff competition among the firms has ensured that the costs are affordable for patients.

Dr. Reddy's Laboratories will launch [molnupiravir capsules](#) 200mg under its brand name Molflu across India. Dr. Reddy's Molflu will be priced at Rs. 35 per capsule with 10 capsules contained per strip, and the total course of 40 capsules over 5 days costing Rs 1,400 making it an affordable treatment option available to patients, a company spokesperson said.

Molflu is expected to be available from early next week in pharmacies throughout the country with particular focus on states with high caseload of Covid-19. Earlier this year, Dr. Reddy's entered into a non-exclusive voluntary licensing agreement with Merck Sharpe Dohme

(MSD) to manufacture and supply Molnupiravir to India and over 100 low and middle-income countries (LMICs).



Cipla Ltd's product under the brand name 'Cipmolnu 200' is now in the market in a bottle pack of 40 capsules of 200 mg each.

In a first-of-its-kind collaboration in the Indian pharmaceutical industry, a Dr. Reddy's-led consortium of pharma companies collaborated to jointly sponsor, supervise and monitor the Phase III clinical trial in India, and presented its findings to the Subject Expert Committee (SEC). Last week, Dr. Reddy's received emergency-use authorisation from the Drugs Controller General of India (DCGI) to manufacture and market the oral antiviral drug Molnupiravir capsules 200mg for the treatment of adult patients with Covid-19, with SpO₂ >93% and who have high risk of

progression of the disease including hospitalisation or death.

Molflu will be manufactured at a USFDA-approved facility, and Dr. Reddy's has made adequate capacity preparations to ensure that it is able to help patients in need. Meanwhile products of some companies like Hetero, Cipla and others are currently available and other firms are set to roll out within a week, Debmalya Mitra, Partner, Milton Healthcare LLP- authorised distributors for a set of companies that are marketing molnupiravir.

There are 13 Indian pharmaceutical companies, including Torrent, Cipla, Sun Pharma, Dr Reddy's, Natco, Mylan, and Hetero, that will manufacture the oral pill. The drug is approved for limited use in an emergency situation for the treatment of adult patients with a high risk of Covid-19 progression. Cipla Ltd's product under the brand name 'Cipmolnu 200' is now in the market in a bottle pack of 40 capsules of 200 mg each. The MRP is Rs 2000 while MRP of Hetero is Rs 2450. Molnupiravir, developed by MSD and Ridgeback Biotherapeutics, has been approved by the UK Medicines and Healthcare products Regulatory Agency (MHRA) and the US Food and Drug Administration (FDA) for the treatment of mild-to-moderate Covid-19 patients who are at high risk of developing severe disease.

"The drug has been launched in the market and is being prescribed by physicians to patients who are in need of the treatment. We have adequate manufacturing capacities and a solid distribution mechanism in place to ensure speedy access to this effective treatment pan India," said a Cipla spokesperson.

According to Dr Parikshit Prayag, an infectious diseases specialist with Deenanath Mangeshkar hospital, trials in unvaccinated patients have shown a reduction in hospitalisation with this antiviral pill. "However we will need more data to study how it works in vaccinated patients," Dr

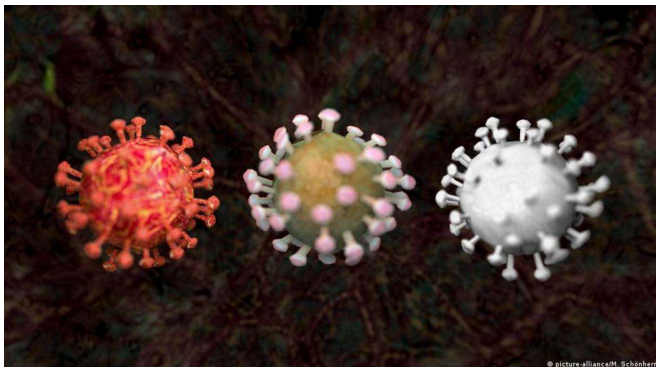
Prayag said. Among the Omicron patients treated here, the specialist said that presently symptomatic treatment was being given for runny nose, headache and body ache.

The Indian EXPRESS

Endemic, epidemic, pandemic: What's the difference?

A lot of people hope that the coronavirus will disappear as quickly as it came. But many virologists assume the virus will become endemic, especially with omicron

By: [Deutsche Welle](#) | New York |
January 4, 2022 5:00:38 pmron. This means we'll have to live with it.



If SARS-CoV-2 becomes endemic, it may not necessarily become less dangerous. (picture-alliance/M. Schönherr)

Endemic: A constant threat

A disease that occurs regularly in certain regions is called endemic. When a disease becomes endemic, [the number of people falling ill](#) remains relatively constant over time.

The number of cases is higher than in other areas but does not increase over time. Over a certain period of time, approximately the same number of people repeatedly contract the disease.

A typical example is malaria, which annually affects 300 million people worldwide, with most cases in the tropics.

As early as May 2020, the World Health Organization (WHO) predicted that the [coronavirus](#) could become an endemic virus. The delta and [omicron](#) variants have since shown how adaptable the virus is, much like the flu. Endemic means the virus is out there in the world, and [that we will have to learn to live with it](#) in certain regions. It will not disappear.

Epidemic: Only in one region

The spread of a disease is termed an epidemic when it occurs with unusual frequency in a certain region and for a limited period of time.

When the number of cases of a disease in that particular region rises above the expected (endemic) level, it is called an epidemic. When the disease incidence is localized, it's often referred to as an outbreak.

An epidemic occurs, for example, when the virulence of a particular pathogen changes: a virus mutates [and becomes more contagious](#).

Epidemics can also occur when diseases are newly introduced into a certain area. The prerequisite is that a disease can be passed from person to person.

An early example of this is smallpox, which was introduced to the Americas via the arrival of Europeans from the beginning of the 16th century. Because the Indigenous population had never before been in contact with the pathogens, [their immune systems could not fend off the virus](#).

Individual projections suggest that up to 90% of the Indigenous population of the Americas fell victim to smallpox.

Pandemic: Worldwide spread

If a disease spreads across countries and continents, experts refer to it as a pandemic.

This means, above all, that successful control of the disease depends on cooperation among the health systems of different countries. It does not mean that a [disease is particularly dangerous or deadly](#).

According to the WHO and the US Centers for Disease Control and Prevention (CDC), pandemics are usually caused by newly emerging pathogens or virus types. For example, these can be zoonoses — diseases that are transmitted from animals to humans.

If a disease is new to humans, very few people will be immune to the virus. Vaccinations are also not available in this case. This can lead to vast numbers of people becoming infected.

How dangerous or fatal the disease is depends on the specific virus and the [health of the individual](#).

Even if, in percentage terms, a disease is harmless in most cases, the absolute number of serious illnesses during a pandemic can be very high. This is simply because a very large number of people are infected with the pathogens overall.

A typical disease that repeatedly assumes pandemic proportions is influenza. The 1918 influenza pandemic, also known as the Spanish flu, killed 25 million to 50 million people — that's more people than the victims of World War I. Swine flu, the H1N1 virus, also triggered a pandemic in 2009.

However, even during a pandemic, individual isolated areas [can be spared from the disease](#), for example island or mountain areas. Air travel, however, favors the spread of pandemics.

'Epidemics' that are not the real thing

The terms epidemic and pandemic normally refer to infectious diseases. However, because it [conveys a need for urgent action, noncommunicable diseases](#) or unhealthy habits are sometimes referred to as epidemics as well.

Strictly speaking, those formulations are essentially metaphoric: "Diabetes epidemic" or "opioid epidemic," for example.

The term has even been used to describe the increase of criminal behavior in society, with media referring to an "epidemic of rape." However, some note that this misuse of the word distracts from the responsibility of the perpetrators.



Common cold can provide protection against Covid-19, says a study

High levels of T-cells from common cold coronaviruses can provide protection against COVID-19, according to a study.

Updated on Jan 10, 2022 06:40 PM IST

High levels of T-cells from [common cold](#) coronaviruses can provide protection against COVID-19, an Imperial College London study published on Monday has found, which could inform approaches for second-generation vaccines.



The study did not say how long protection from the T-cells would last. (Shutterstock)

Immunity against [COVID-19](#) is a complex picture, and while there is evidence of waning antibody levels six months after vaccination, T-cells are also believed to play a vital role in providing protection.

The study, which began in September 2020, looked at levels of cross-reactive T-cells generated by previous common colds in 52 household contacts of positive COVID-19 cases shortly after exposure, to see if they went on to develop infection.

It found that the 26 who did not develop infection had significantly higher levels of those T-cells than people who did get infected. Imperial did not say how long protection from the T-cells would last.

"We found that high levels of pre-existing T cells, created by the body when infected with other human coronaviruses like the common cold, can protect against COVID-19 infection," study author Dr Rhia Kundu said.

The authors of the study, published in Nature Communications, said that the internal proteins of the SARS-CoV-2 virus which are targeted by the T-cells could offer an alternative target for vaccine makers.

Current COVID-19 vaccines target the spike protein, which mutates regularly, creating variants such as Omicron which lessen the

efficacy of vaccines against symptomatic infection.

"In contrast, the internal proteins targeted by the protective T-cells we identified mutate much less," Professor Ajit Lalvani, co-author of the study, said.

"Consequently, they are highly conserved between the various SARS-CoV-2 variants, including Omicron. New vaccines that include these conserved, internal proteins would therefore induce broadly protective T cell responses that should protect against current and future SARS-CoV-2 variants."

(Reporting by Alistair Smout; editing by Philippa Fletcher)



5-10% Covid cases need hospitalisation at present, may change rapidly: Health secy to states

Updated on Jan 10, 2022 07:37 PM IST



With Covid-19 cases seeing a rapid spike over the past few days, the Union health secretary urged states and UTs to keep a watch on the active caseload, besides hospitalisations and home isolations.

Union health secretary Rajesh Bhushan on Monday wrote to his counterparts in states and Union territories regarding the latest resurgence in coronavirus cases that he said appeared to be driven by the 'variant of concern' (VoC) Omicron and the continued presence of the other strain Delta.

Bhushan said in the present surge, five to 10 per cent of active cases have required hospitalisation so far. He, however, warned that the situation is dynamic and evolving, and the need for hospitalisation may change rapidly.

He said during the second surge of Covid infections in the country, the percentage of active cases that needed hospital care were in the range of 20-23 per cent

The senior officer urged authorities in all states and UTs to keep a watch on the situation of the total number of active cases, those under home isolation, and patients requiring oxygen beds, ICU beds and ventilation support.

The ministry said that based on this monitoring, the requirement of healthcare workers and their availability should be reviewed on a daily basis.

It also asked the state and UT authorities to conserve healthcare workers by working out at staggered mode of work as both infrastructure and human resources have their limitations.

It is also important to strictly follow the January 9 advisory, issued by the health ministry, for managing healthcare workers in Covid and non-Covid areas of healthcare facilities, Bhushan said.

He further said states and Union Territories should earmark different categories of beds in private clinical establishments for Covid care.

He also suggested engaging retired medical professionals or MBBS students for teleconsultation services and providing skill

training of community volunteers in basic care and management at Covid Care Centres.

The [country recorded 1,79,723 cases](#) of the coronavirus disease (Covid-19) in the last 24 hours as the Omicron variant continued to spread rapidly in the country. According to the data published by the Union ministry of health and family welfare, the number of active cases breached the 700,000-mark.

This is the fourth day when India's daily tally has remained above the 1-lakh mark.



Covid-19: Chinese city tests 14 million people

With less than a month left for the Winter Olympics, the discovery of a potential Omicron cluster near Beijing would have sent alarm bells ringing in the capital, some 130km away from Tianjin.



Residents queue to get a swab sample for Covid-19 coronavirus in Tianjin, in northern China on January 9, 2022. (Photo by STRINGER / AFP)(AFP)

Published on Jan 10, 2022 07:52 AM IST

Tianjin, a port city of 14 million near China's capital Beijing, began mass testing on Sunday

after a cluster of 20 adults and children tested positive for Covid-19 including at least two with the highly transmissible Omicron variant.

Epidemiologists told state media that containing the Omicron variant in Tianjin, considered a "gateway" to Beijing will be the "first real" battle against the variant on the mainland.

With less than a month left for the Winter Olympics, the discovery of a potential Omicron cluster near Beijing would have sent alarm bells ringing in the capital, some 130km away from Tianjin.

The source of the cluster outbreak remains unknown and there's a possibility of a spillover, they said.

The Tianjin municipal government said the two cases were not linked with the imported Omicron case detected last December in the city. "Among the 20 infected people, 15 are children aged between 8 and 13. The cases are concentrated in Tianjin's Jinnan and Nankai districts," the tabloid, Global Times reported.

The other infections are mainly students and their family members related to a daycare centre and a primary school. "The Tianjin outbreak poses risks to Beijing and the upcoming Winter Olympics, because of the large number of commuters working and living in the two cities," the report said, citing an unnamed immunologist.

Tianjin residents have been advised to remain home to be available for the mandatory nucleic acid testing.

100k march in France against vaccine rules

A mandatory order would not be the most efficient way to encourage those not vaccinated against Covid-19 to get the shot and that plans to toughen health pass conditions were already yielding results, French

government spokesman Gabriel Attal said on Sunday.

People in France already have to show either proof of vaccination or a negative test to enter restaurants and bars and use inter-regional trains. But with Omicron infections surging, parliament is debating legislation that will drop the test option.

More than 100,000 people across France protested on Saturday over what they say are government plans to further restrict the rights of the unvaccinated, days after French President Emmanuel Macron vowed to "piss off" those refusing the jab. Meanwhile, several thousand protesters marched in Brussels in Belgium on Sunday to oppose anti-coronavirus regulations, as European governments mull tighter rules in the face of the Omicron wave.

Sigrid Kaag, who is set to become the first female finance minister of the Netherlands, said she has tested positive for the coronavirus, a day before the official swearing in ceremony on Monday.

A Cypriot scientist defended his assertion that a new strain of Covid-19 exists that combines characteristics of the Delta and Omicron variants. Other scientists have speculated that Leonidos Kostrikis' findings are a result of laboratory contamination. But he told Bloomberg in an emailed statement that the cases he has identified "indicate an evolutionary pressure to an ancestral strain to acquire these mutations and not a result of a single recombination event".



R-value 2.69, higher than peak of 2nd wave: What Centre said on 3rd wave in India | 7 points

The acceleration of Covid-19 cases in India is steeper than ever now, Dr VK Paul said on Wednesday.

Published on Jan 05, 2022 05:54 PM IST

India is seeing an exponential rise in Covid-19 cases, which is believed to be driven by Omicron, the Centre said on Wednesday as the country recorded 58,097 fresh Covid cases. Experts of the health ministry, however, stayed away from officially referring to the third wave.

Here are 10 things that the health ministry said on Wednesday regarding Omicron and the rise of cases in India

1. It is the reality that the Covid is increasing exponentially. On December 30, the test positivity rate was 1.1%. On January 5, the rate is 5%.
2. This is an expanding pandemic, Niti Aayog member (health) Dr VK Paul said.
3. Citing data available in the public domain, Dr Paul said India's Covid R-naught value has risen to 2.69, which is higher than the peak of the second wave, 1.69. R-naught value holds the key to understanding the spread of the infection at a given point. R-Value of 2.69 means every 100 infected person can spread the infection to 269 people.
4. The acceleration of cases is steeper than ever, Dr Paul said. Severity, hospitalisation situation is being watched closely, Dr Paul added. "In Delhi, the hospitalisation rate is 4%. In Mumbai, we heard it's 5%. Compared to this, the typical hospitalisation last year was 20%," Dr Paul said.
5. The upsurge of infection is happening in cities where Omicron is the prevalent strain, director-general of the Indian Council of Medical Research Dr Balram Bhargava said.

6. The steeper the rise is, the shorter the wave is, as seen in other countries, Dr Paul said. "Like in the UK, Denmark, it is receding now. In South Africa too, it stayed for a month. But we can't say anything clearly as it depends on our population density, vaccination coverage. So we can't extrapolate that this wave will come down soon, but we can say what we are seeing," he said.

7. Different parts of the country will face the rise differently as it has happened in the last two waves too, Dr Paul said



‘Major safety concerns’: ICMR chief’s advice for using antiviral drug Molnupiravir

Published on Jan 05, 2022 06:16 PM IST

The Drug Controller General of India (DCGI) last week gave emergency approval to Molnupiravir as the country witnessed a spike in Covid-19 cases following the emergence of the highly contagious Omicron variant.

The head of the Indian Council of Medical Research (ICMR) on Wednesday said that the antiviral drug Molnupiravir has major safety concerns including mutagenicity, muscle and bone damage. Dr Balram Bhargava, director-general of ICMR, told a media briefing that the antiviral Covid-19 pill is not included in the treatment guidelines of the Covid-19 national task force. Bhargava said that contraceptive methods should be used for three months if the drug is administered to women since the child may have problems.

“Molnupiravir has major safety concerns including mutagenicity, muscle & bone

damage. If this drug is given contraception has to be done for three months as child may have problems," he said.

The Drug Controller General of India (DCGI) last week gave emergency approval to Molnupiravir as the country witnessed a spike in Covid-19 cases following the emergence of the highly contagious Omicron variant. Union health minister Mansukh Mandaviya said that 13 companies will make the antiviral drug in India.

[Same vaccine to be administered as 'precaution' 3rd dose: Centre](#)

Merck has entered into licensing agreements with eight domestic drugmakers, including Dr Reddy's, to manufacture and supply the generic version of Molnupiravir to over 100 low- and middle-income countries. A spokesperson of Dr Reddy's Laboratories Ltd said that the drugmaker will launch the Molnupiravir at ₹35.

"Molflu is expected to be available from early next week in pharmacies throughout (India) with particular focus on states with high caseload of Covid-19," the company spokesperson said.

India reported 58,097 new cases in the last 24 hours, taking the active caseload to over 2,14,000, the health ministry said on Wednesday morning. Maharashtra has reported the highest number of confirmed Omicron cases, followed by Delhi, Kerala, Rajasthan, and Gujarat. India also reported its first death due to the Omicron variant.



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Covid-19 can cause serious kidney damage, warns expert

Published on Jan 05, 2022 06:19 PM IST

Covid-19 has caused serious long-term kidney damage in people to the extent that they needed dialysis, said a nephrologist.



The expert says Covid can either cause direct damage to the cells of the kidney, or increase blood clotting that reduces blood flow to kidneys.

[Covid-19](#) can badly affect kidneys of even those people who did not have any history of kidney diseases earlier. The deadly virus has caused serious long-term kidney damage in people to

the extent that they needed dialysis, said a nephrologist.

While [coronavirus](#) is known to affect lungs, its damage to other organs like brain, heart and kidney is now being studied.

"Covid has been causing a lot of serious kidney issues even in people who were not affected by any kind of kidney ailment earlier. Many people affected by Covid have been showing signs of kidney damage, some so severe to the extent that they have required dialysis. Almost 30% of all people who have suffered from Covid infection have had kidney problems. People who had underlying kidney disease if they had Covid infection, they had very severe illnesses sometimes resulting in death," said Dr Samir Tawakley, Sr Consultant- Nephrology at Apollo Hospitals in a FB live session.

Elderly who are over 60 years of age, people with diabetes, with hypertension, those who have heart problems and obese are at a high risk of developing kidney related complications.

The expert says Covid can either cause direct damage to the cells of the kidney, or increase blood clotting that reduces blood flow to kidneys. He adds that reduced oxygen level in blood also has a damaging effect on kidney structure.

Opening up on the symptoms of a person who has kidney disease due to Covid, Dr Tawakley said the person will have reduced urine output, swelling all over the body, shortness of breath, nausea, vomiting, lethargy, restlessness, weakness and in severe cases confusion, coma and seizures.

The expert however says that the Covid infection does not only necessarily cause chronic problems, and can also cause acute kidney injury which in most circumstances is reversible.

"Almost 35% more chances of developing a chronic kidney problem are there if you have had a covid infection as compared to the person who did not have a covid infection," says Dr Tawakley.

The doctor advises to follow all prevention measures like sanitisation, mask and social distancing to ward off risk of getting Covid. He also says that patients who require dialysis should not miss it at any cost.

He also advises kidney patients to get fully vaccinated as that could protect them from serious illness in case of infection.



Where does India stand on the world Omicron graph? 10 points

(ANI)Published on Jan 05, 2022 10:03 PM IST

Mumbai, Kolkata, Thane, Mumbai Suburban, Bengaluru Urban, Punem Chennai, 24 Parganas (West Bengal) are the emerging districts of concern.



People flout Covid-appropriate behaviour as they throng Sadar Bazar in New Delhi on Tuesday.

India on Wednesday confirmed the first Omicron-related death that took place on

December 31, 2021. The health ministry said though the 73-year-old man who was hospitalised since December 15 last year had comorbidities, his genome sequencing report said he was infected by the Omicron variant. He was found negative on December 21 and his reports came on December 26, six days before he passed away. "Our guidelines state that if a coronavirus positive patient dies, it is considered as COVID-19 fatality. Similarly, if a person is found to be Omicron positive, even if it is detected late, we will consider that as Omicron positive case only," Lav Agarwal, joint secretary of the health ministry said.

As on January 5 morning, India reported 2,135 cases of Omicron in 24 states and UTs, including 828 recovered and 1,306 active cases. The Centre termed the rise in the overall Covid cases in the country as exponential.

On January 4, around 25.2 lakh cases of the infection were recorded all over the world which is "the highest ever since the onset of the pandemic".

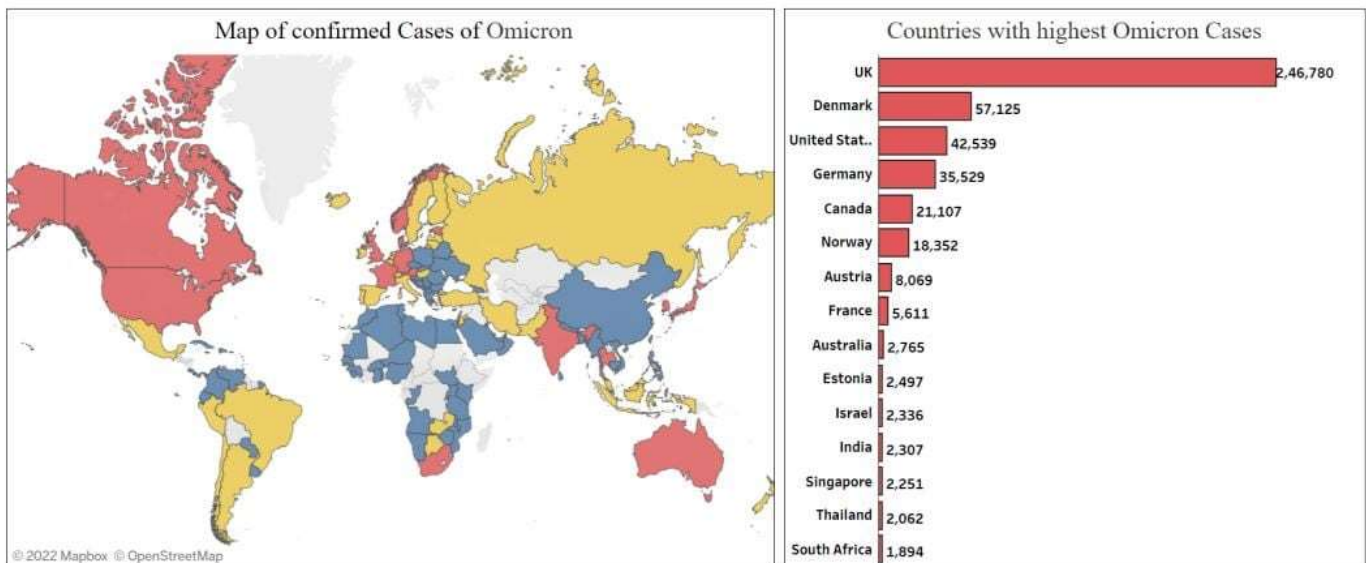
Here are 10 points about India's present Covid-19 situation and Omicron

1. India stands 12th as far as the number of Omicron cases are concerned following the United Kingdom, Denmark, the US, Germany, Canada, Norway, Austria, France, Estonia and Israel, according to the Centre.

Countries with highest Omicron cases. (Courtesy: Health ministry)

2. Mumbai, Kolkata, Thane, Mumbai Suburban, Bengaluru Urban, Punem Chennai, 24 Parganas (West Bengal) are the emerging districts of concern.

3. India has reported an increase of more than 6.3 times in the number of cases in the last eight days and a sharp increase in the case positivity rate from 0.79 per cent on December 29 to 5.03 per cent on January 5



4. Omicron is becoming the dominant variant in cities, the health ministry said.

5. Delhi health minister Satyendar Jain said the third wave of the pandemic has already hit the Capital. 65% of Covid samples in Delhi, whose genome sequencing reports came out between January 1 and 3, were found to have the Omicron variant as against 28 per cent from December 1 to 31, official data showed.

6. The R-value of Covid in India is 2.69, higher than 1.69 which was recorded at the peak of the second wave of the pandemic in India. The acceleration of cases is steeper than ever, the health ministry said.

7. 28 districts in India are reporting more than 10% weekly positivity while 43 districts are reporting a weekly positivity rate between 5% and 10%.

8. The worsening situation has impacted political campaigns as the Congress on Wednesday cancelled four rallies scheduled in poll-bound Uttar Pradesh.

9. States continued extending restrictions to contain the spread of the infection by imposing night curfews, weekend curfews and by suspending physical classes in schools and colleges. The Gautam Buddha Nagar district

administration on Wednesday ordered that the schools for classes 6 to 10 will remain closed till January 14. Tamil Nadu announced a night curfew starting from January 6. The Maharashtra government decided to discontinue physical classes in colleges and universities till February 15.

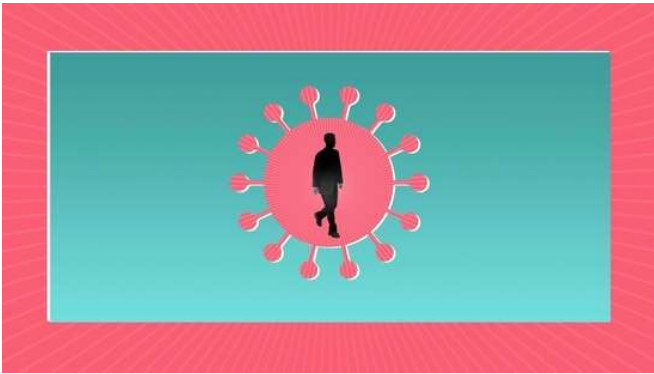
10. According to experts, coming four to six weeks are crucial for India as global instances show the surge driven by Omicron is not prolonged.



Why are so many vaccinated people getting Covid-19 lately?

Published on Jan 06, 2022 07:33 AM IST

Omicron appears to replicate much more efficiently than previous variants. And if infected people have high virus loads, there's a greater likelihood they'll pass it on to others, especially the unvaccinated.



AP Illustration/Peter Hamlin) (AP)

A couple of factors are at play, starting with the emergence of the [highly contagious Omicron variant](#). Omicron is more likely to infect people, even if it doesn't make them very sick, and its surge coincided with the holiday travel season in many places.

People might mistakenly think [the Covid-19 vaccines](#) will completely block infection, but the shots are mainly designed to prevent severe illness, says Louis Mansky, a virus researcher at the University of Minnesota.

And the vaccines are still doing their job on that front, particularly for people who've gotten boosters.

Two doses of the Pfizer-BioNTech or Moderna vaccines or one dose of the Johnson & Johnson vaccine still [offer strong protection against serious illness from Omicron](#). While those initial doses aren't very good at blocking Omicron infection, boosters — particularly with the Pfizer and Moderna vaccines — rev up levels of the antibodies to help fend off infection.

Omicron appears to replicate much more efficiently than previous variants. And if infected people have high virus loads, there's a greater likelihood they'll pass it on to others, especially the unvaccinated. Vaccinated people who get the virus are more likely to have mild symptoms, if any, since the shots trigger multiple defences in your immune system, making it much more difficult for Omicron to slip past them all.

Advice for staying safe hasn't changed. Doctors say to wear masks indoors, avoid crowds and get vaccinated and boosted. Even though the shots won't always keep you from catching the virus, they'll make it much more likely you stay alive and out of the hospital.



How China is keeping to its strict 'zero Covid' strategy

Published on Jan 07, 2022 11:17 AM IST

China has a formula it calls "dynamic zero" for curbing outbreaks: strict lockdowns and immediate mass testing.



Health workers wear protective suits outside a building placed under lockdown at the City Garden housing estate in the North Point district in Hong Kong, China.(Bloomberg)

The distressing case of a pregnant Chinese woman miscarrying after a strict lockdown delayed her access to medical treatment has reignited debate over the limits of China's zero-tolerance approach to Covid-19.

The country where the coronavirus was first detected in 2019 is now among the last places still hewing to "zero Covid", placing millions under

quarantine even as Beijing prepares to host next month's Winter Olympics.

- How is China maintaining 'zero Covid'? -

China has a formula it calls "dynamic zero" for curbing outbreaks: strict lockdowns and immediate mass testing.

Unlike softer lockdowns elsewhere, people in China can be banned from leaving their buildings or forced to remain inside hotel rooms if they are considered high-risk contacts.

The historic city of Xi'an, home to the famed Terracotta Warriors, was locked down in December, forcing its 13 million residents indoors after around 150 cases were detected.

The similarly sized city of Zhengzhou tested every resident after just 11 cases.

International flights are a fraction of pre-pandemic levels with arrivals undergoing strict weeks-long quarantine.

Mandatory track-and-trace apps mean close contacts are usually detected and quarantined quickly.

- Does it work? -

China's official tally since the start of the pandemic -- just over 100,000 -- is a fraction of the record one million cases logged by the US in a single day earlier this month.

The official death toll has stayed under 5,000.

Although cases from the chaotic initial outbreak in Wuhan in early 2020 are widely believed to have been under-reported, life since then has largely returned to normal.

"There is still no ability to stop single local cases from appearing, but we have the ability and confidence to quickly extinguish the outbreak when a local case is found," National Health

Commission official Liang Wannian told reporters last month.

- Who pays the price? -

"Zero Covid" comes at a cost.

Border areas, especially near Myanmar, have endured almost constant lockdowns and seen an exodus of businesses.

Locked-down communities have complained of poor access to food, supplies and medical treatment.

Meanwhile, migrant workers have been left stranded from families for months due to onerous travel rules and restrictions.

Heavy-handed enforcement has sometimes sparked outrage, such as when health workers beat a corgi to death after the owners were sent to quarantine.

Analysts say repeated shutdowns of factories and businesses have contributed to the country's slowdown, despite China being the only major economy to expand in 2020.

- Will China ever reopen? -

"China certainly has shown it is feasible to continue the zero Covid strategy almost indefinitely," Ben Cowling, an epidemiologist at Hong Kong University, told AFP.

The country effectively cut itself off from the world in March 2020 and virtually banned foreigners from entering.

Since then, travel restrictions have eased slightly.

But international tourism is non-existent and the government has said it will not renew expiring Chinese passports unless the holder has a good reason for travel.

The country will not reopen until at least after the upcoming Winter Olympics and Paralympics in Beijing, with the government anxiously guarding the capital and tightening restrictions ahead of the Games.

Those who question "zero Covid" have faced a nationalistic backlash.

Prominent Chinese medical expert Zhang Wenhong wrote in July that countries must eventually "learn to coexist with the virus" -- prompting attacks from online trolls.

- What will happen if China opens up? -

Peking University researchers have warned China could suffer a "colossal outbreak" that would overwhelm its medical system if it relaxed restrictions to a similar level as Europe and the US.

But Ivan Hung, an infectious diseases expert at Hong Kong University, said second-generation vaccines targeting the Delta and Omicron variants -- as well as close to 100 per cent vaccination rates -- could ward off a disaster.

In this scenario, "it's likely that Covid will turn out to be similar to influenza," Hung said.

But letting the virus in could be risky for President Xi Jinping as he seeks a third term in October after billing himself as a leader that will always keep China safe.

"When it does come, the transition may not be easy because Chinese society has gotten quite used to a low level of transmission," University of Oxford's Thomas Hale told AFP.



Omicron spread due to mix of factors: WHO

Published on Jan 08, 2022 07:50 AM IST

Maria Van Kerkhove, the WHO's Covid-19 technical lead, said people therefore needed to think about reducing their exposure to the virus and take control over its transmission, following



a week of record numbers of new cases

Omicron spread due to mix of factors: WHO

The World Health Organization said Friday that the [spread](#) of Omicron was down to a combination of factors including the make-up of the Covid-19 variant and increased social mixing.

Maria Van Kerkhove, the WHO's Covid-19 technical lead, said people therefore needed to think about reducing their exposure to the virus and take control over its transmission, following a week of record numbers of new cases.

Van Kerkhove said Omicron transmitted very efficiently between people due to a number of reasons.

Firstly, its mutations allow the [virus](#) to adhere to human cells more easily.

"Second, is that we have what is called immune escape. And this means that people can be reinfected either... if they had a previous infection or if they've been vaccinated," she said, in comments circulated by the WHO.

"The other reason is that we are seeing replication of Omicron in the upper respiratory tract -- and that's different from Delta and other

variants, including the ancestral strain which replicated in the lower respiratory tract, in the lungs."

But in addition to these factors, the spread of the virus was also being driven by the context of people mixing more, spending more time indoors in the northern hemisphere winter, and not adhering to measures such as physical distancing.

Just under 9.5 million new Covid-19 cases were reported to the WHO last week -- a record, up 71 percent on the week before.

"The general public out there, what you need to worry about is just reducing your exposure to the virus," said Van Kerkhove.

"We want people to understand and feel empowered that they have some control over infection."

She also added that avoiding developing ongoing Long Covid symptoms was "reason enough" to try to prevent getting infected with the disease in the first place.



Can booster shots beat the coronavirus? Read what experts have to say

Published on Jan 08, 2022 08:07 AM IST

The rapid spread of coronavirus disease (Covid-19) due to emergence of the Omicron variant has renewed calls for getting people vaccinated at a faster pace. Many healthcare experts have said that vaccination remains the only proven way to beat the infection.



A man receives his Covid-19 vaccine at Union Station in Los Angeles, on January 7. (AFP Photo)

The Omicron variant of coronavirus has created an unprecedented situation, leading to surge in Covid-19 infection and increasing the vaccination doses. Many countries across the world are asking people to take a third – or the booster shot – to tackle the heavily mutated Omicron.

Israel has gone a step further and is giving a fourth dose of Covid-19 vaccine to its population. India has also launched a programme to inoculate an eligible group of people with the precautionary dose.

But is this the way forward? And do we have to take a booster shot every few months? The healthcare experts and researchers have been baffled by the constantly mutating coronavirus and have been advocating increasing the vaccine coverage. But in many interviews, these experts have said that trying to boost the entire population every few months is not realistic.

Akiko Iwasaki, professor of immunobiology at Yale University and one of the most authoritative voices on Covid-19, told New York Times that "there are better ways than doing boosters every six months".

"This doesn't seem to be a sustainable long-term strategy, for sure," said another immunologist Deepta Bhattacharya, from the University of Arizona.

Booster shots were advocated to increase the immunity against the coronavirus, looking at the frequent mutations it is coming up with. But there is no data to support the effectiveness of this dose.

The boost to the immunity has been temporary, with some studies in the United States pointing to a drop in antibody levels just weeks after a third dose.

“Even with that amount of antibody, it's very hard to stop the virus for very long. It's a much higher bar now than before, and maybe an Omicron-specific vaccine would do a better job,” Shane Crotty, a virologist based in California told the New York Times.

Late last year, Pfizer CEO Albert Bourla said that people might need a fourth Covid-19 shot sooner than expected due to the Omicron variant. The statement came days after Pfizer and BioNTech released results of a study which showed that a third shot of the vaccine is effective against Omicron, but a two-dose regime saw its ability to protect dropping significantly against the heavily-mutated virus.

But in the United States, the worst affected country, Dr Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases, said that it's too early to discuss a potential fourth dose of Covid-19 vaccine.

Singapore's Health Minister Ong Ye Kung reiterated the same thought in a Facebook post on Friday. "If you have recovered well from an infection, without complications, your immune system would have gone through a strong stimulus. Think of it as a fairly powerful vaccination shot," he said.

Ong said there is no rush to get boosted for those who have been infected and then vaccinated, or those who have been infected in between vaccine doses.

Can recovered Covid-19 patients be reinfected with Omicron? Here's what WHO says

Published on Jan 08, 2022 08:24 AM IST

The Omicron variant has put additional strain on the healthcare infrastructure of various countries, which are battling a renewed surge in Covid-19 cases. There are also concerns around people getting reinfected by the coronavirus.



A healthcare worker delivers Covid-19 test results in Mexico City, Mexico, on January 6. (Bloomberg Photo)

The Omicron variant has been causing a surge in the coronavirus disease (Covid-19) infection across the world. The number of hospitalisations is less, but the spread of infection is faster, owing to a high number of mutations the Omicron possesses.

This begs a question: Can the Omicron variant reinfect a person? Health experts and the World Health Organization (WHO), which keeps an eye on the new and emerging variants of the constantly mutating coronavirus, have said that the possibility of reinfection is high.

[In a note](#) published on the Omicron variant, the WHO said that the variant can evade previous immunity in people and can still infect those who

have had Covid-19 in the past. It sounded an alarm for people who are unvaccinated, and those who were vaccinated many months ago.

“Individuals who have recovered from Covid-19 are 3 to 5 times more likely to be reinfected with Omicron compared to Delta,” the WHO said in the note released on its website last month.

It, however, added that there is still no proof that Omicron causes more severe disease than the Delta variant, which led to a devastating second wave of infection last year.

The WHO said that the virus has been transmitted mostly among adults in their 20s and 30s, spreading initially in large cities and in clusters associated with social and workplace gatherings.

However, some studies have confirmed the silver lining of the Omicron variant. News agency Bloomberg reported earlier this week that a combination of widespread immunity and numerous mutations have resulted in a virus that causes far less severe disease than previous iterations.

The Bloomberg report was based on the ongoing studies being conducted on Omicron, including in South Africa where the variant first emerged.

One of the crucial factors which makes Omicron less virulent is that it does not infect the lungs as easily as the previous variants. One such study was published by a consortium of Japanese and American scientists, who experimented on mice and hamsters. Another study in Belgium reported similar outcomes in hamsters, which experienced severe illness with previous mutations of the virus.

Cold, flu or Covid-19: How do I know what I have?

Published on Jan 09, 2022 08:41 AM IST

Experts say testing is the best way to determine what you have since symptoms of the illnesses can overlap. The viruses that cause colds, the flu and Covid-19 are spread the same way — through droplets from the nose and mouth of infected people.



How do I know if I have a cold, the flu or COVID-19? (AP Illustration/Peter Hamlin)(AP)

Experts say testing is the best way to determine what you have since symptoms of the illnesses can overlap.

The viruses that cause colds, the flu and Covid-19 are spread the same way — through droplets from the nose and mouth of infected people. And they can all be spread before a person realizes they're infected.

The time varies for when someone with any of the illnesses will start feeling sick. Some people infected with the coronavirus don't experience any symptoms, but it's still possible for them to spread it.

Cough, fever, tiredness and muscle aches are common to both the flu and Covid-19, says

Kristen Coleman, as assistant research professor at the University of Maryland School of Public Health. Symptoms specific to Covid-19 include the loss of taste or smell. Common colds, meanwhile, tend to be milder with symptoms including a stuffy nose and sore throat. Fevers are more common with the flu.

Despite some false portrayals online, the viruses have not merged to create a new illness. But it's possible to get the flu and Covid-19 at the same time, which some are calling "flurona."

"A co-infection of any kind can be severe or worsen your symptoms altogether," says Coleman. "If influenza cases continue to rise, we can expect to see more of these types of viral co-infections in the coming weeks or months."

With many similar symptoms caused by the three virus types, testing remains the best option to determine which one you may have. At-home tests for flu aren't as widely available as those for Covid-19, but some pharmacies offer testing for both viruses at the same time, Coleman notes. This can help doctors prescribe the right treatment.

Laboratories might also be able to screen samples for various respiratory viruses, including common cold viruses. But most do not have the capacity to routinely do this, especially during a Covid-19 surge, Coleman says.

Getting vaccinated helps reduce the spread of the viruses. The US Centres for Disease Control and Prevention says it is safe to get a flu and Covid-19 shot or booster at the same time.



India witnesses 6-fold rise in weekly Covid-19 cases, shows data

Published on Jan 10, 2022 07:14 AM IST

The rapid increase in the number of Covid-19 cases in India has been fuelled by the Omicron variant, which is highly transmissible and believed to be more resistant to vaccines. The deaths due to Covid-19 too have gone by in the country.



Passengers waiting during a weekend curfew imposed by Delhi government following a surge in Covid-19 cases, at New Delhi Railway Station on Sunday.(ANI Photo)

India has seen a rapid rise in its coronavirus disease (Covid-19) caseload in the past week, as established by the data released by the Union health ministry. The surge in cases is ben attributed to the Omicron variant, which has nearly three dozen mutations and spreads faster than the Delta variant. In the week ending January 9, India recorded 6,38,872 cases of Covid-19. This is a sharp increase – of more than six times - from 1,02,330 cases recorded between December 27 and January 2.

According to the numbers released by the Union health ministry and [listed on the dashboard](#) of World Health Organization (WHO), India saw its daily tally of Covid-19 rise from 6,531 on December 27 to 27,553 on January 2.

The first day of the week that began after that (January 3), the cases went up to 33,750 and on January 9, the number had crossed 1.50 lakh-mark (1,59,632 to be exact). This was the second

day in a row that India recorded more than one lakh cases of Covid-19.

The related fatalities have also gone up, though at a much slower pace, indicating that Omicron infection is spreading fast but is not as dangerous as the second wave. In the week ending January 2, India recorded 495 fresh deaths due to Covid-19, which went up to 761 in January 3-9 period.

The total fatalities in these two weeks were 2,020 (December 27-January 2) and 1,868 (from January 3-9). This is the sum total of all the adjustments done by various state governments.

India is at number 2 after the United States on WHO's dashboard of countries affected the most by Covid-19. However, in terms of the number of new cases reported in the last week, India is at number 4.

The US reported the highest number of cases in the past week (4,027,033), followed by France (1,419,654) and the UK (1,267,948).



Yoga tips: How to boost immunity amid Omicron spread

Updated on Jan 10, 2022 10:21 AM IS

Focussing on our holistic health is the way forward and yoga can be the answer to all our health woes in pandemic times be it physical or mental health concerns.

[Covid-19](#) is here to stay and the rapid evolution of variants with latest being [Omicron](#) will continue to pose a grave threat to our health. Amid the ongoing [third wave of Covid-19](#), it is imperative to not just keep our [immunity](#) high

and stress levels checked but also manage our chronic diseases well.



Various yogic practices such as asanas, pranayama, meditation, cleansing and relaxation practices are known to help modulate the physiological response to stressors (Pixabay)

Focussing on our [holistic health](#) is the way forward and yoga can be the answer to all our health woes in pandemic times be it physical or mental health concerns. Yoga practices brings harmony between mind and body and helps to build up psycho-physiological health, emotional harmony and manage daily stress.

Various yogic practices such as asanas, [pranayama](#), meditation, cleansing and relaxation practices are known to help modulate the physiological response to stressors, as per Ayush guidelines. Yoga practices can also help in management of chronic diseases like [diabetes](#), hypertension, chronic obstructive pulmonary disease (COPD, bronchial asthma, sleep disorders, depression and obesity among others that can be comorbid conditions in patients with Covid-19.

"[Yoga](#) is a natural solution to holistic health and comprises of various techniques including physical postures, breathing techniques, and meditation among many more. Yoga is very effective in boosting your immunity; and also helps with smooth functioning of your organs while adding strength, flexibility, and mental well-being," says Grand Master Akshar, renowned Yoga expert told HT Digital.

He also gives yoga tips to boost overall health and immunity amid surge in Omicron cases

Make yoga part of your regular routine

Yoga is popular all across the globe and is practiced by millions of people for its innumerable health benefits. Yoga brings the body into specific alignments and with the help of breath channelling through the body can result in holistic well-being for both the mind and the body. While practicing yoga postures it is especially important to follow the correct breathing technique as this will only enhance the practice and give you all the advantages.



Intense meditation may boost immunity: Study

Published on Jan 07, 2022 02:45 PM IST

According to a study conducted by the University of Florida, eight days of intense meditation causes robust activation of the immune system.



People turned to meditation to reduce their stress levels. (Pixabay)

According to a study conducted by the University of Florida, eight days of

intense [meditation](#) causes robust activation of the [immune system](#).

The study has been published in the 'Proceedings of the National Academy of Sciences Journal'.

The findings are believed to be the first comprehensive genomic study of how meditation affects the biological processes directly involved in disease development. At the heart of the research is Inner Engineering practices, which are meditation and yoga programs that emphasize inner well-being.

While the positive effects of meditation are well documented, far less is known about its molecular and genetic effects, said Vijayendran Chandran, PhD, an assistant professor of paediatrics and neuroscience in the UF College of Medicine.

Chandran's interest in the molecular roots of Inner Engineering actually started with some prodding by his wife -- and a dose of healthy scepticism. Just try it for 48 days, she said. He did so for about 21 minutes a day.

"I tried it and it worked really well. I just felt great," Chandran said.

That also awoke his scientific curiosity: How exactly did Inner Engineering practices benefit the body? To establish their findings, Chandran and his collaborators studied the genetic profiles of 388 samples obtained from 106 people before and after an April 2018 advanced Inner Engineering retreat at the Isha Institute of Inner-Sciences in McMinnville, Tennessee. The retreat was tightly controlled: Participants remained silent for eight days, meditated for more than 10 hours a day, ate vegan meals, and followed a regular sleep schedule.

Blood samples from retreat participants were collected five to eight weeks in advance, then just before and after the retreat as well as three months later. The genomic analysis ultimately

found several immune-related and other cellular pathways were altered after the meditation retreat.

Strikingly, they found increased post-retreat activity in 220 genes directly related to the immune response. That included heightened activity in 68 genes associated with interferon signalling, a key part of the body's anti-virus and anti-cancer responses. They also established that the enhanced immune system after the retreat is primarily due to meditation and not diet, sleep patterns, or gender differences.

Chandran, whose research specialties include bioinformatics and "big data" analysis, had more than 70 million data points from the blood samples. Like a police detective following a trail of evidence, Chandran let the data be his guide.

"What we found was that multiple genes related to the immune system were activated -- dramatically -- when you do Inner Engineering practices," Chandran said.

The increased gene activity among interferon-signalling genes is particularly significant, according to Chandran. Interferon proteins rally other parts of the immune system to defend against viruses and several recent studies have shown that interferon signalling is imbalanced in patients with severe COVID-19. Essentially, meditation used a coordinated network of core genes and regulators to unleash a positive effect on the immune system, the researchers found.

"This is the first time anyone has shown that meditation can boost your interferon signalling. It demonstrates a way to voluntarily influence the immune system without pharmaceuticals," he said.

The researchers reported that the findings also have potential implications for many immune-related conditions such as COVID-19 and multiple sclerosis. While meditation boosted activity in the 68 interferon-related genes,

patients with severe COVID-19 have the opposite problem: a dearth of interferon activity that inhibits virus-fighting.

When researchers compared interferon gene activity in the retreat participants and severely ill COVID-19 patients, the differences were stark. Meditation activated 97 per cent of interferon-response genes, compared with 76 per cent gene activation in mild COVID-19 patients and 31 per cent in severe COVID-19 cases.

They also observed the opposite trend for inflammation-signalling genes, where they saw significantly high levels of inflammatory genes in severe COVID-19 patients, compared with mildly ill patients, and no change in inflammatory genes after meditation. Likewise, meditation produced beneficial gene activity comparable to conventional interferon treatments given to multiple sclerosis patients. Taken together, the findings supported the idea that meditation contributed to potentially improving multiple health conditions, the researchers concluded.

While the findings are intriguing, Chandran also said that the beneficial gene-activity effects need further study, including replication in a randomized clinical trial. It could also be helpful to determine if a less intense meditation regimen in the long term might produce similar beneficial immune-system effects, he said.

Research funding was provided by the UF Department of Pediatrics. Collaborators from the Indiana University School of Medicine, the University of Louisville, and the Beth Israel Deaconess Medical Center contributed to the research.



Beat Omicron with these immunity-boosting drinks

Updated on Jan 10, 2022 05:07 PM IST

You need more than your daily cup of tea or coffee in these difficult times when Omicron cases are surging like never before. Here are immunity-boosting drinks you must have every morning.



Turmeric latte is winning over the West, one cup of goodness at a time. (Shutterstock)

Your diet and fitness routine play an important role in your overall health. Amid the third wave of pandemic triggered by Omicron variant, the need to strengthen your [natural defence mechanism](#) is even more. Adding the [right ingredients to your diet](#) apart from eating timely meals, physical exercise, proper sleep, hydration and [holistic practices like yoga](#) and meditation can give a huge boost to your [immune system](#). Spices like cinnamon, turmeric, cloves, pepper, mustard, coriander, cardamom, cumin and black pepper are recommended by Ayurveda experts for boosting immunity. While eating them daily can be highly beneficial to prevent Covid and while recovering from the infection, sometimes we don't know how to add them to our diet.

There are various ways to have them. You can flavour your curries with them or add them to your milk and coffee. Spices are not boring anymore when you rustle up interesting beverages like cinnamon flavoured chocolate milk, turmeric latte, Tulsi tea, Masala chai and other herbal teas out of them.

Here are recipes of some drinks that you can enjoy to boost your immunity, suggested by Kanika Malhotra, celebrity nutritionist, weight loss expert and Founder of Health Astronomy.

1. Turmeric latte

[Turmeric](#) has an active compound called curcumin which has an anti-inflammatory effect on the body and provides a good defence system against diseases. Having turmeric latte is one option to give your immunity a super-boost.



How to make it

Boil two tbsp of water, two leaves of tulsi and once it reaches half the quantity, add 200 ml milk to it.

Add 1 small piece cinnamon and fresh cut turmeric (don't powder), 1 elaichi, 1 clove, 2 strands of kesar saffron and 1 black pepper corn. Boil for 7-8 mins on low flame.

Spices are not boring anymore when you add them in beverages like turmeric latte and cinnamon flavoured hot chocolate

2. Halim or aliv seeds drink

The long-lost immunity booster, it is also known as Garden Cress, aliv seeds or halim seeds. This superfood can promote overall health and well-being by providing loads of nutrition. These tiny seeds are packed with iron, protein, fibre, vitamin A, vitamin C, calcium and folate.

How to make it

You can soak 5-6 seeds overnight in 1 cup of water and drink empty it on stomach. You can also mix them with yogurt or buttermilk.



Foods to boost your child's mental health amid pandemic

Published on Jan 10, 2022 06:28 PM IST

A diet that lacks nutrient-dense foods may lead to micronutrients deficiency which can affect mental health of a child.



Children are often picky eaters and may not always consume the diet that is right for them. (Pixabay)

[Gut health](#) has a direct impact on [mental health](#). [Pandemic times](#) are particularly stressful for children, who are not able to meet their friends and teachers on a regular basis and play freely outdoors.

Eating foods that have a positive impact on their mental health is thus important. A healthy diet rich in nutrients and vegetables can help promote overall sense of well-being in them.

Children are often picky eaters and may not always consume the diet that is right for them.

"A diet that lacks nutrient-dense foods may lead to nutrient deficiencies, especially of

micronutrients like zinc and folic acid that have been associated with mental health issues," says Zamurrud M Patel, Chief Dietician, Global Hospitals, Parel, Mumbai.

A child's balanced diet requirement starts as early as he/she turns 1. In childhood, diet plays an important role in physical, social and developmental growth. In the early phases of childhood, a child needs food that not only aids physical growth but also in better brain development.

Here are foods that must be included in a child's diet for better mental health as per Patel.

1. Red and yellow coloured fruits and vegetables like carrots, bell peppers, papaya etc are rich sources of Vitamin A, which is a potent antioxidant.
2. Banana is a good source of Vitamin B6 and phytonutrients. It's also a good source of fibre and keeps the bowel clean.
3. Garlic and onions have good anti-bacterial and anti-fungal properties which keep the inflammation under check and promote good cellular health.
4. Green leafy vegetables contain substantial amounts of vitamins such as A, C, K, and many of the B's including folate (B9); it is also a source of minerals such as calcium, iron, magnesium, manganese, and potassium along with lots of fiber.

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