



DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY
Friday 20210115

Smoking

Smoking linked to higher risk of subarachnoid haemorrhage (Theb Tribune: 20210115)

<https://www.tribuneindia.com/news/health/smoking-linked-to-higher-risk-of-subarachnoid-hemorrhage-198444>

SAH is a type of stroke that occurs when a blood vessel on the surface of the brain ruptures and bleeds into the space between the brain and the skull

Smoking linked to higher risk of subarachnoid hemorrhage

Adults who smoke or who are genetically predisposed to smoking behaviours are more likely to experience a serious type of stroke called subarachnoid hemorrhage (SAH), researchers say.

The study, published in the journal 'Stroke', indicates that those who smoked half a pack to 20 packs of cigarettes a year have a 27 per cent increased risk of SAH.

SAH is a type of stroke that occurs when a blood vessel on the surface of the brain ruptures and bleeds into the space between the brain and the skull. It mainly affects middle-aged adults and has high rates of complications and death.

“Previous studies have shown that smoking is associated with higher risks of SAH, yet it has been unclear if smoking or another confounding condition such as high blood pressure is a cause for stroke,” said researcher Guido Falcone, assistant professor of neurology at Yale University in the US.

To determine whether there is a causal effect of smoking on SAH, researchers analysed the genetic data of 408,609 people aged between 40 and 69 years at the time of recruitment (2006-2010).

Incidence of SAH was collected throughout the study, with a total of 904 SAHs occurring by the end of the study.

Researchers developed a genetic risk scoring system that included genetic markers associated with the risk of smoking and tracked smoking behaviour data, which was collected when each participant was recruited.

Heavier smokers, those who smoked more than 40 packs of cigarettes a year, were nearly three times more at risk for SAH compared to those who did not smoke. IANS

Depression, stress

Depression, stress may reduce efficacy of COVID-19 vaccines, scientists say (The Tribune: 20210115)

<https://www.tribuneindia.com/news/health/depression-stress-may-reduce-efficacy-of-covid-19-vaccines-scientists-say-198395>

According to the researchers, most COVID-19 vaccines already in circulation are approximately 95 per cent effective

Depression, stress and loneliness can weaken the body's immune system, and lower the effectiveness of certain vaccines, including the new COVID-19 preventives that are in development and the early stages of global distribution, scientists say.

According to a report accepted for publication in the journal Perspectives on Psychological Science, simple interventions, including exercise and getting a good night's sleep in the 24 hours before vaccination, may maximise the vaccine's initial effectiveness.

The researchers noted that even though rigorous testing has shown that the COVID-19 vaccines approved for distribution in the US are highly effective at producing a robust immune response, not everyone will immediately gain their full benefit.

Environmental factors, as well as an individual's genetics and physical and mental health, can weaken the body's immune system, slowing the response to a vaccine, they said.

"In addition to the physical toll of COVID-19, the pandemic has an equally troubling mental health component, causing anxiety and depression, among many other related problems," said Annelise Madison, a researcher at The Ohio State University in the US.

"Emotional stressors like these can affect a person's immune system, impairing their ability to ward off infections," said Madison, lead author on the paper.

The report sheds light on vaccine efficacy and how health behaviours and emotional stressors can alter the body's ability to develop an immune response.

Vaccines work by challenging the immune system. Within hours of a vaccination, there is an innate, general immune response on the cellular level as the body begins to recognise a potential biological threat.

This frontline response by the immune system is eventually aided by the production of antibodies, which target specific pathogens.

Past COVID-19 infection

Past COVID-19 infection gives 5-month immunity, but risk exists: UK study (The Tribune: 20210115)

<https://www.tribuneindia.com/news/health/past-covid-19-infection-gives-5-month-immunity-but-risk-exists-uk-study-198392>

The Public Health England analysis found that naturally acquired immunity as a result of past infections provide 83 pc protection against reinfection, compared to people who have not had the disease before

An official UK study released on Thursday concludes that a past COVID-19 infection provides some immunity for at least five months, but people may still carry and transmit coronavirus.

The Public Health England (PHE) analysis found that naturally acquired immunity as a result of past infections provide 83 per cent protection against reinfection, compared to people who have not had the disease before.

This appears to last at least for five months from first becoming sick. However, experts cautioned those with immunity may still be able carry the virus in their nose and throat and, therefore, have a risk of transmitting to others.

“This study has given us the clearest picture to date of the nature of antibody protection against COVID-19 but it is critical people do not misunderstand these early findings,” said Professor Susan Hopkins, Senior Medical Advisor at Public Health England who led PHE’s SIREN study.

“We now know that most of those who have had the virus, and developed antibodies, are protected from reinfection but this is not total and we do not yet know how long protection lasts. Crucially, we believe people may still be able to pass the virus on,” she said.

She has stressed that the findings mean even if you believe you already had the disease and are protected, you can be reassured it is highly unlikely you will develop severe infections but there is still a risk that you could acquire an infection and transmit to others.

“Now more than ever, it is vital we all stay at home to protect our health service and save lives,” she added.

The PHE says it has been regularly testing tens of thousands of healthcare workers across the UK since June for new COVID-19 infections as well as the presence of antibodies, which suggest people have been infected before.

While the SARS-CoV-2 Immunity and Reinfection Evaluation (SIREN) study will continue to assess whether protection may last for longer, its results warn that people who contracted the disease in the first wave may now be vulnerable to catching it again.

Covid-19 infection

Covid-19 infection gives some immunity for at least 5 months: UK study (The Tribune: 20210115)

<https://www.tribuneindia.com/news/health/covid-19-infection-gives-some-immunity-for-at-least-5-months-uk-study-198362>

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The research, known as the SIREN study, involves tens of thousands of healthcare workers in Britain

Covid-19 infection gives some immunity for at least 5 months: UK study

People who have had COVID-19 are highly likely to have immunity to it for at least five months but there is evidence that those with antibodies may still be able to carry and spread the virus, a UK study of healthcare workers has found.

Preliminary findings by scientists at Public Health England (PHE) showed that reinfections in people who have COVID-19 antibodies from a past infection are rare -- with only 44 cases found among 6,614 previously infected people in the study.

But experts cautioned that the findings mean people who contracted the disease in the first wave of the pandemic in the early months of 2020 may now be vulnerable to catching it again.

They also warned that people with so-called "natural immunity" -- acquired through having had the infection -- may still be able carry the SARS-CoV-2 coronavirus in their nose and throat, and could unwittingly pass it on.

“We now know that most of those who have had the virus, and developed antibodies, are protected from reinfection, but this is not total and we do not yet know how long protection

lasts," said Susan Hopkins, senior medical adviser at PHE and co-leader of the study, whose findings were published on Thursday.

"This means even if you believe you already had the disease and are protected, you can be reassured it is highly unlikely you will develop severe infections. But there is still a risk you could acquire an infection and transmit (it) to others." A statement on the study said its findings did not address antibody or other immune responses to vaccines now being rolled out against COVID-19, or on how effective vaccines would be.

Vaccine responses will be considered later this year, it said.

The research, known as the SIREN study, involves tens of thousands of healthcare workers in Britain who have been tested regularly since June for new COVID-19 infections as well as for the presence of antibodies.

Between June 18 and Nov. 24 scientists detected 44 potential reinfections - two "probable" and 42 "possible" - out of 6,614 participants who had tested positive for antibodies. This represents an 83% rate of protection from reinfection, they said.

The researchers plan to continue following and assessing the participants to see if this natural immunity might last longer than five months in some. But they warned that early evidence from the next stage of the study already suggests some people with immunity can still carry high levels of virus and could transmit it to others.

"It is therefore crucial that everyone continues to follow the rules and stays at home, even if they have previously had COVID-19," they said in the statement about their results. Reuters

Depression, anxiety

Being workaholic may increase depression, anxiety risk (The Tribune: 20210115)

Women had almost twice the work addiction risk than men

<https://www.tribuneindia.com/news/health/being-workaholic-may-increase-depression-anxiety-risk-198340>

If you are a workaholic, then there are chances you may suffer negative mental and physical health outcomes such as depression, anxiety or sleep disorder, a new study suggests.

The study, published in the International Journal of Environmental Research and Public Health, indicates that people with higher work addiction risk compared to people with low work addiction risk have twice the risk of developing depression.

Sleep quality was lower to workers with a high risk of work addiction compared to workers with low risk of work addiction. Also, women had almost twice the work addiction risk than men, the researchers said.

"We found that job demands could be the most important factor that can develop work addiction risk. So this factor should be controlled or should be investigated by the organization's manager, for example, HR staff, psychologists," said researcher Morteza Charkhabi from Higher School of Economics in Russia.

Workaholics are people who usually work seven and more hours more than others per week.

For the study, the team aimed to demonstrate the extent to which the work addiction risk is associated with the perception of work (job demands and job control) and mental health in four job categories suggested by Karasek's model or Job Demand-Control-Support model (JDCS).

The JDCS model assumes four various work environments (four quadrants) in which workers may experience a different level of job demands and job control: passive, low-strain, active, and tense/job-strain. Job control is the extent to which an employee feels control over doing work.

The researchers collected data from 187 out of 1,580 (11.8 per cent) French workers who agreed to participate in a cross-sectional study.

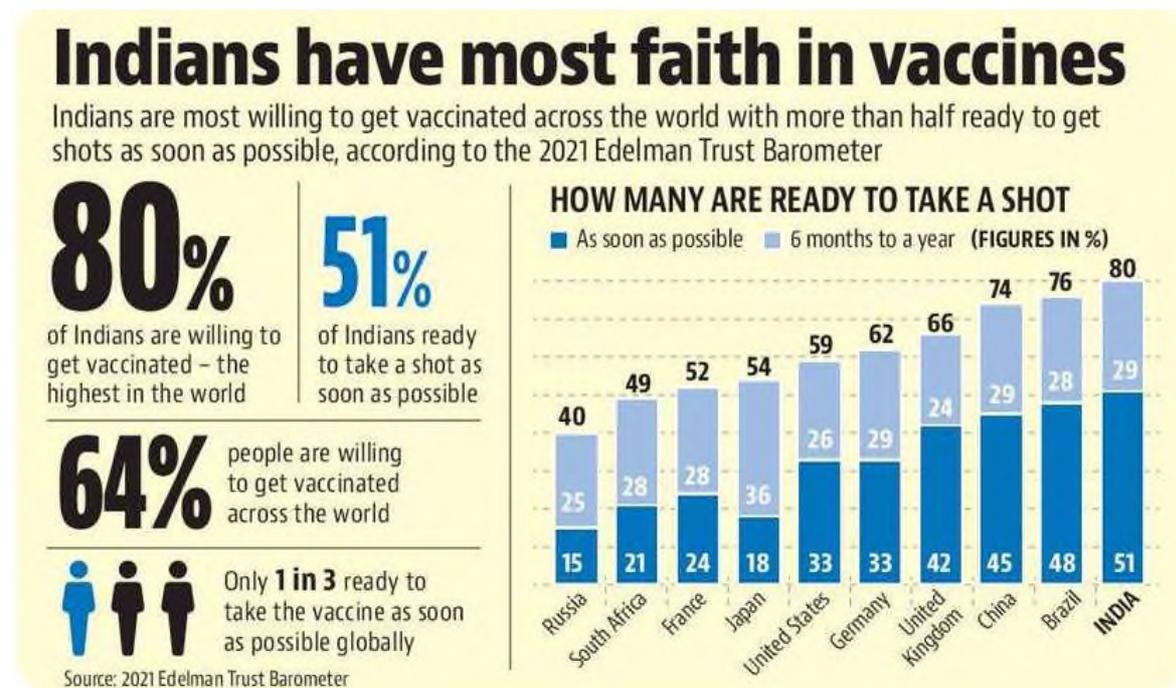
The team divided all the participants based on their occupational groups and investigated the link between work addiction risk and mental and physical health outcomes.

The results show that high job demands at work are strongly associated with work addiction risk but the job control level does not play the same role.

The prevalence of work addiction risk is higher for active and high-strain workers than for passive and low-strain workers.—IANS

V-Day

Capital's 8,100 warriors will take jabs on V-Day (Hindustan Times: 20210115)



: Delhi will kick off its Covid-19 vaccination drive with roughly 8,100 of its frontline medical warriors receiving doses, chief minister Arvind Kejriwal said on Thursday, unveiling details of massive preparations that, along with similar arrangements around the country, will become the world's largest coronavirus immunisation drive when it is launched by Prime Minister Narendra Modi on Saturday morning.

In all, 300,000 health care workers across India are set to be vaccinated for Covid-19 the first day, which will be a global record due to India's unique position as having access to one the largest stockpile of doses in the world and having put in place massive grassroots preparations in recent weeks.

"This morning, I held a meeting with all concerned departments and officials to review the arrangements. The Delhi government is fully prepared to roll out the Covid-19 vaccination drive from January 16," he said, while adding that vaccinations will be done four days a week between 9am and 5pm.

Kejriwal, who will be present at Lok Nayak Hospital on Saturday to oversee the inoculation drive, said the number of vaccination centres will gradually be increased to 175, and then 1,000 after a few weeks.

"Every day, 100 people will be vaccinated. So, nearly 8,100 people will be vaccinated every day from day one. As of now, the central government has given us a total of 274,500 vaccines which will be sufficient to vaccinate over 120,000 health care workers. A total of 240,000 health care workers have registered with us as of now," he said.

Union health ministry officials said on Thursday that 3,006 vaccination sites have been readied and supplied with doses in preparation for the January 16 launch, which will be marked by an address to the nation by the Prime Minister in the morning. In all, 16.5 million doses have already been distributed to these centres that dot the length and breadth of the country.

If all goes as planned, India will become only the third country to be able to vaccinate more than 300,000 people a day after United States and China, a comparison of global immunisation statistics suggest. According to Oxford University-based Our World In Data's vaccination tracker, it took the US 18 days to carry out more than this number of daily vaccinations (on an average): its first vaccinations were done on December 15 and its seven-day rolling average of new doses crossed 302,000 on Jan 1.

According to government data, Delhi has received 274,500 doses of Covishield (Serum Institute of India) vaccine and 20,000 doses of Covaxin (Bharat Biotech). Kejriwal explained that of the 274,500 vaccines, each health care worker will get two shots. Also, 10% of the 274,500 vaccines are to be kept for exigencies such as breakage.

“By the time the first round is over, those who got vaccinated in the first week will be eligible for their second dose. We are certain that the next batch of vaccines will be sent to Delhi in the next 2-3 weeks, so more centres can be opened and the vaccination of the next and final batch of health care workers can be initiated simultaneously,” said the official, asking not to be named.

Data seen by HT showed that of the 81 session sites (vaccination centres), 75 will be for the Covishield vaccine, while six will be for Covaxin. As on Thursday, the vaccines had arrived at the district storage units from the Rajiv Gandhi Superspeciality Hospital in Tahirpur. All vaccines will be transported to designated cold chain points on Friday from the district storage units.

Of the 81 centres, north-west Delhi and west Delhi will have 11 session centres – the highest of all the districts in the city. Central, south-west and south Delhi districts will have nine centres each. South-east Delhi will have eight centres, New Delhi seven, Shahdara six, east Delhi five, north Delhi four, and north-east Delhi two centres.. A revenue official in the south-east district said the district has received 28,700 doses of which over 14,300 will be used from Saturday. An official in north-west Delhi said all the sites have also been instructed to arrange the beneficiary list in such a manner that wastage of vaccines is minimum.

“The Covishield vaccine comes in a vial of 10 doses and Covaxin in a vial of 20 doses. We have been asked to list in around 100 people so all the doses in an opened vial get utilised,” said the district official.

At the All India Institute of Medical Sciences (AIIMS), doctors said a three-room site has been created in the outpatient block of the hospital as per government guidelines. At Ram Manohar Lohia Hospital, a vaccination site has been set up on the ground floor of the post-graduation institute building. The hospital will start off with one site and will later set up two more.

“So far, we do not know which vaccines we will get or who will receive it first. A day ahead of the vaccination drive, the beneficiaries will receive a message with the allotted site and time and we will also receive a message with the details of the beneficiaries,” said Dr AK Singh Rana, medical superintendent of RML Hospital.

The hospital has set up a resuscitation centre right next to the vaccination area for managing adverse event following immunisation (AEFI).

Dr T Jacob John, former head of the department of virology at Christian Medical College-Vellore, said, “The decision on whether all the available doses are used to give the first shot to as many people and then wait for the supply of the next batch depends on the current availability of the vaccine and the number of doses likely to become available in the future. In this case, there will be stock to at least give the second shot to all those who have already received one even if there is a delay in getting the next batch. Also, there is no hurry to vaccinate people anymore now that the infection has started declining on its own.”

Officials said the average number of inoculations for each site across India will be capped at 100 for the first day. “We don’t want to overburden the system on day one, and plan to scale it up gradually. We will start with about 3,000 sites on day one, and will ramp it up to about 5,000 sites in about a fortnight,” said VK Paul, member (health), Niti Aayog.

But experts warned that the task for India to sustain the speed and scale of its programme will not be easy.

“Being able to vaccinate about 300,000 health professionals in a day is a huge number considering the arrangements that need to be made to execute the programme of such scale. It’s not just about procuring vaccines but transporting it till the last mile, and also convincing people to take it can be a task,” said K Sujatha Rao, former Union secretary of health.

“The government obviously has the experience of universal immunisation programme to guide them... and dry runs have happened but real-time execution is always different. Something this new had to be attempted in a calibrated manner; you gradually build up the momentum. If they manage to pull it off, then it will be a great achievement indeed,” Rao added.

Officials reiterated on Thursday that after the initial 16.5 million doses already shipped, routine and equitable supplies to states and Union territories will be carried out.

Polio National Immunisation Day

Health Ministry reschedules Polio National Immunisation Day to 31 (The Hindu: 20210115)

<https://www.thehindu.com/news/national/health-ministry-reschedules-polio-national-immunisation-day-to-jan-31/article33574351.ece>

‘The decision is in keeping with the stated policy of the Health Ministry to ensure that COVID-19 health services and non-COVID-19 essential health services proceed in tandem without adversely impacting each other,’ says a release

‘COVID-19 herd immunity

‘COVID-19 herd immunity unlikely in 2021 despite vaccines’(The Hindu: 20210115)

<https://www.thehindu.com/sci-tech/science/covid-19-herd-immunity-unlikely-in-2021-despite-vaccines/article33554838.ece>

World Health Organization (WHO) Chief Scientist Soumya Swaminathan | File | Photo Credit: REUTERS

The World Health Organization’s (WHO’s) chief scientist warned that even as numerous countries start rolling out vaccination programmes to stop COVID-19, herd immunity is highly unlikely this year.

At a media briefing on January 11, Dr. Soumya Swaminathan said it was critical countries and their populations maintain strict social distancing and other outbreak control measures for the foreseeable future.

In recent weeks, Britain, the U.S., France, Canada, Germany, Israel, the Netherlands and others have begun vaccinating millions of their citizens against the coronavirus.

“Even as vaccines start protecting the most vulnerable, we’re not going to achieve any levels of population immunity or herd immunity in 2021,” Dr. Swaminathan said. “Even if it happens in a couple of pockets, in a few countries, it’s not going to protect people across the world.” Scientists typically estimate that a vaccination rate of about 70% is needed for herd immunity, where entire populations are protected against a disease. But some fear that the extremely infectious nature of COVID-19 could require a significantly higher threshold.

Dr. Bruce Aylward, an adviser to WHO’s director-general, said the U.N. health agency was hoping coronavirus vaccinations might begin later this month or in February in some of the world’s poorer countries, calling on the global community to do more to ensure all countries have access to vaccines.

“We cannot do that on our own,” Dr. Aylward said, saying WHO needed the cooperation of vaccine manufacturers in particular to start immunising vulnerable populations.

Dr. Aylward said WHO was aiming to have “a rollout plan” detailing which developing countries might start receiving vaccines next month.

Still, the majority of the world’s COVID-19 vaccine supply has already been bought by rich countries.

The U.N.-backed initiative known as COVAX, which is aiming to deliver shots to developing countries is short of vaccines, money and logistical help as donor countries scramble to protect

their own citizens, particularly in the wake of newly detected COVID-19 variants in Britain and South Africa, which many officials are blaming for increased spread.

WHO, however, said that most of the recent spikes in transmission were due to “the increased mixing of people” rather than the new variants.

WHO’s technical lead on COVID-19, Maria Van Kerkhove, said that the spike in cases in numerous countries was detected before the new variants were identified. Ms. Van Kerkhove noted that during the summer, COVID-19 cases were down to single digits in most countries across Europe.

“We lost the battle because we changed our mixing patterns over the summer, into the fall and especially around Christmas and the new year,” she said, explaining that many people had multiple contacts with family and friends over the holidays.

“That has had a direct impact on the exponential growth that you have seen in many countries,” she said, describing the case count increase in some places as “vertical”.

Dr. Michael Ryan, WHO’s emergencies chief, said while there is some evidence variants may be speeding the spread of COVID-19, “there is no evidence that variants are driving any element of severity”.

He said the variants shouldn’t alter countries strategies for controlling outbreaks.

“It doesn’t change what you do, but it gives the virus some new energy,” Dr. Ryan said.

Bird Flu (The Asian Age: 20210115)

<http://onlinepaper.asianage.com/articledetailpage.aspx?id=15346212>

■ Eateries can't serve egg-based dishes or poultry meat

Bird flu: Chicken, poultry meat sale banned in Delhi

New Delhi, Jan. 12: All the three Municipal Corporation of Delhi — North, South and East — on Wednesday imposed a ban on sale and storage of poultry or processed chicken meat by shops and restaurants with immediate effect in view of the bird flu situation in the national capital.

Earlier in the day, the veterinary services department of the North Delhi Municipal Corporation (NDMC) had issued the order which said that owners of restaurants and hotels will face action if egg-based dishes or poultry meat and other products are served to customers.

The order has been issued in public interest and should be diligently complied with, it said.

A South Delhi Municipal Corporation official said the SDMC has also taken a decision to ban sale and storage of poultry or processed chicken meat by shops and restaurants with immediate effect, in view of the bird flu in the city.

East Delhi Mayor Nirmal Jain said, EDMC authorities too have decided to take the deci-



A worker cleans a poultry farm amid the bird flu alert in Surat. — PTI

sion in view of the situation here.

"Selling and storage of poultry or processed chicken meat by shops and restaurants has been banned in east Delhi area with immediate effect. Restaurants and hotels too are prohibited from serving such products," he said. Testing of samples of crows and ducks had confirmed bird flu cases in the national capital on Monday, prompting the city government to impose a ban on sale of processed and packaged chicken brought from outside the city. The Ghazipur poultry market has also been closed.

"All meat and poultry shops and meat processing units in areas under the NDMC, are prohibited to sell, store poultry

▶ SEVERAL DUCKS at Sanjay Lake and a large number of crows across various city parks have been found dead in the last 1 week

▶ REPORTS OF over 50 bird deaths were received on a helpline of the Delhi gov't's animal husbandry unit

or processed or packaged chicken meat with immediate effect, till further orders," the North Corporation order said.

Several ducks at Sanjay Lake and a large number of crows across various city parks have been found dead in the last one week.

Reports of over 50 bird deaths were received on a helpline of the Delhi government's animal husbandry unit, and 18 samples from different parts of the city were sent for avian flu testing on Tuesday, officials had said.

Bird flu outbreak has been confirmed only in Delhi, Uttarakhand, UP, Kerala, Rajasthan, MP, Himachal, Haryana, Maharashtra and Gujarat till now, according to the ministry. — PTI

Covid Vaccine Free for all (The Asian Age:20210115)

<http://onlinepaper.asianage.com/articledetailpage.aspx?id=15345724>

Covid vaccine free for all in Delhi: CM

If the Centre does not provide vaccine free of cost, AAP govt will arrange for it, says Kejri

New Delhi, Jan. 13: The AAP government will provide coronavirus vaccine free to the people of Delhi if the Centre fails to do so, chief minister Arvind Kejriwal said on Wednesday.

He said he has already appealed to the Centre for ensuring free vaccination in the country since there are many people who may not afford the life-saving shot. "We will see what the Centre does. If need be and the Centre does not provide the vaccine free of cost, we will make it available free of cost for the people of Delhi," he told reporters here.

The chief minister also appealed for not spreading rumours about the vaccine. "I understand that the Centre and our scientists have brought the vaccine following all the protocols and safeguards. So, there should not be any doubt and people should come forward for vaccination," he said.

The chief minister said the coronavirus vaccine will be given first to healthcare and frontline workers, and he expressed hope it will provide relief to the people from the virus and the pain they suffered over the last one year. The vaccination drive will begin in Delhi from Saturday at 89 centres.

— PTI



Delhi CM Arvind Kejriwal visits a family member of late Dr Hitesh Gupta, who died of coronavirus while working at a dispensary, in New Delhi on Wednesday. — PTI

₹1 cr for family of doctor who died due to Covid

New Delhi, Jan. 13: Delhi chief minister Arvind Kejriwal on Wednesday met the family of doctor Hitesh Gupta who died due to Covid-19, and provided a financial assistance of ₹1 crore.

Kejriwal visited Gupta's residence in IP Extension and expressed gratitude for his sacrifice and service to the people of Delhi. The chief minister said Gupta's wife will be provided a government job. "We will try to help them in every possible way," he said.

Gupta succumbed to the coronavirus in November 2020. He was working in a Delhi government dispensary at Karkardooma. "Gupta...Got infected while serving corona patients and unfortunately lost his life after being hospitalised," Kejriwal said.

The Delhi government had announced a scheme to support the families of coronavirus warriors who lose their lives in the line of duty by providing them a financial assistance of ₹1 crore. — PTI

Chloroquine, corticosteroids

Chloroquine, corticosteroids use may impair antibody response in Covaxin (New Kerala: 20210115)

<https://www.newkerala.com/news/2021/8651.htm>

: Mild adverse event following immunisation (AEFI) like headache, fatigue, myalgia (pain in muscle), injection site tenderness, malaise (weakness), pyrexia, chills, arthralgia, and nausea are among the symptoms that may occur following Covishield vaccination.

As per a Health Ministry communication, paracetamol maybe given in these adverse reactions. Very rare cases of demyelinating have been reported following this vaccination.

For Covaxin, use of chloroquine and corticosteroids may impair antibody response. In addition, some mild AEFIs like injection site pain, headache, fatigue, fever, body ache, abdominal pain, nausea and vomiting, giddiness-dizziness, tremor, sweating, cold, cough and injection site sweating may occur.

Both the vaccines are not recommended for those younger than 18 years, lactating mothers women and during pregnancy.

Covid-19 vaccine and other vaccines may be separated by 14 days. Interchangeability of vaccine is not permitted and the same vaccine has to be taken twice.

The temporary contraindications are active Covid infection, infected persons who have been given plasma and those acutely unwell and hospitalised due to any illness.

Those with chronic diseases are not contraindicated including renal, metabolic, cardiac, malignancies, pulmonary and neurological.

The Health Ministry has issued this advisory to the states as the vaccination starts from January 16 and states have received the vaccine doses.

Study identifies promising model for human aging

According to the findings of the new study researchers have identified a promising new model in order to study the human aging process.

As per the findings published in the journal, *Frontiers in Physiology*, there are many components to aging, both mental and physical. When it comes to the infrastructure of the human body, the musculoskeletal system that includes muscles, bones, tendons and cartilage - age-associated decline is inevitable, and the rate of that decline increases the older we get. The loss of muscle function and often muscle mass is scientifically known as sarcopenia or dynapenia.

For adults in their 40s, sarcopenia is hardly noticeable -- about 3% muscle mass is lost each decade. For those aged 65 years and older, however, muscle decline can become much more rapid, with an average loss of 1% muscle mass each year. More importantly, sarcopenia is also marked by a decrease in strength, impaired gait, reduced physical activity, or difficulty completing everyday tasks.

The proportion of older adults aged 65+ is projected to more than double by the year 2060, driving research into the process of musculoskeletal decline. Researchers at Colorado State University's Columbine Health Systems Center for Healthy Aging believe they have found an animal model that will help them better understand it and find ways to curtail the symptoms.

The study, published in *Frontiers in Physiology Striated Muscle* in October, is an example of using comparative medicine to understand human diseases and conditions.

Scientists often rely on animal models to mimic disease progression and study the prevention, diagnosis and treatment of conditions. However, until now, no animal model has been able to fully capture all aspects of human musculoskeletal aging.

"Existing preclinical models either rely on unloading the muscle, meaning mimicking bedrest in an animal, or they must wait until the animals get really, really old, and even then they don't really get the same muscle aging phenotype as people do," said Karyn Hamilton, a professor in the CSU Department of Health and Exercise Science, an associate director at the Center for Healthy Aging, and a researcher on the study.

In their work, Hamilton's team found that the Dunkin Hartley guinea pig was a good candidate for a muscle aging model due to the animal's tendency to develop osteoarthritis (OA) at a young age.

The two conditions -- OA and sarcopenia -- seem to be linked in humans. With advancing age, skeletal muscle dysfunction increases the risk for OA, and OA increases the risk for further muscle decline.

Hamilton teamed up with Dr. Kelly Santangelo -- an associate professor in the Department of Microbiology, Immunology, and Pathology at CSU, who has been studying primary OA in Hartley guinea pigs for many years -- and Associate Professor Raoul Reiser, also in Department of Health and Exercise Science, to understand how skeletal muscle changes as OA progresses in guinea pigs.

The team hypothesized that those muscle changes might mimic human musculoskeletal aging.

Classic signs

Muscle composition also changes with age: fast-twitch fibers, which are larger and capable of exerting stronger forces, decrease in number, and slow-twitch fibers, which are smaller and less metabolically efficient, tend to increase. Generally when people "lose muscle mass," it's the large, fast-twitch fibers that are affected. With decreasing muscle mass also tends to come an increase in fat mass, or adipose tissue, in the body.

As humans age, it may be that maintaining muscle function is more important than preventing loss of mass.

"What we've learned over the decades is that age-related loss of muscle mass and age-related loss of muscle function don't always go hand in hand," Hamilton said. "You can do things to improve muscle mass, and you might not get an improvement in muscle function; you can do things to improve muscle function and may not get an increase in muscle mass."

The researchers compared muscle changes observed in Hartley guinea pigs with those in Strain 13 guinea pigs, which tend to develop OA later in their lifespan and, therefore, might not exhibit the same classic signs of muscle aging.

They found some striking similarities to human muscle aging, such as a decrease in muscle density, likely due to an increase in fat mass. While a decrease in muscle mass was not noted, researchers did find a shift toward smaller, slow-twitch muscle fibers, as is expected in human muscle with advancing age.

"If you look at the overall picture, we think that some of the key things that always happen with human muscle aging -- that shift toward a less powerful, slower-twitch muscle phenotype -- are quite clearly modeled in the Hartley guinea pigs," Hamilton said. "And we believe that if we started looking at even older guinea pigs, we might see more of the things that people think of as classic sarcopenia."

Future directions

This study provides a baseline that allows the team to take multiple directions in future research. One direction will be to employ functional tests to study how muscle strength and

gait or mobility change with age in the Hartley guinea pigs, and how these changes mimic the deterioration of muscle function in aging humans.

A priority will be to identify if Hartley guinea pigs can be a valuable translational model for identifying interventions that show promise for preventing or slowing the decline in overall musculoskeletal function with aging in humans.

In fact, Hamilton and Santangelo have already begun treating the guinea pigs with plant-based phytochemicals that target a protective suite of genes. The treatment seems to reverse some signs of musculoskeletal aging at the molecular level by improving mitochondrial function as well as preventing joint deterioration and preserving aspects of gait that normally deteriorate with advancing age.

Overall, Hamilton says she hopes this work can provide researchers with another animal model for studying human aging, one that can "successfully translate preclinical findings and basic science discoveries to encouraging interventions to increase human healthspan or improve healthy aging."

Chemotherapy

Scientists discover new way to treat chemotherapy with light (New Kerala::20210115)

<https://www.newkerala.com/news/2021/8598.htm>

Scientists from South Korea have made it possible to treat chemotherapy with only one injection through repeated phototherapy, and no side effects by developing a technology that can significantly increase efficiency while reducing the pain of chemotherapy and minimizing the side effects after treatment.

The President of Korea Institute of Science and Technology (KIST), Seok-Jin Yoon announced that a research team led by Dr Se-hoon Kim at the Theragnosis Research Center (KU-KIST Graduate School of Converging Science and Technology) has developed a cancer-targeted phototherapeutic agent that promises complete elimination of cancer cells without side effects. It involves only one injection and repeated phototherapy. This development was made through joint research with Professor Dong-June Ahn of Korea University and Professor Yoon-Sik Lee of Seoul National University.

Phototherapy technology, a cancer treatment modality that uses light, injects a photosensitizer that destroys cancer cells in response to a laser, which accumulates in only cancerous tissues. Further, it shoots light to selectively destroy the cancer cells. It has far fewer side effects than radiation therapy or general chemotherapy (that inevitably damage the tissues surrounding the cancer cells), allowing repeated treatment.

Whereas the effect of the conventional photosensitizers only lasted for one session, and the photosensitizer had to be administered each time the treatment procedure was repeated. Moreover, the residual photosensitizer after treatment accumulated in the skin or eyes causing side effects due to light; thus, it was recommended to isolate the patient from sunlight and indoor lighting for some time after treatment.

Overall, the patients receiving treatment have had to suffer from the pain of the injection and the inconvenience of living in isolation each time. Recently, photosensitizers with phototherapeutic effects that get activated only in cancer tissues have been developed; however, they are still toxic and have to be injected for every repeat treatment.

Dr Se-hoon Kim and his team at KIST used peptides that selectively target cancer tissues and assemble themselves in a specific order to resolve the problems associated with the phototherapy technology.

The research team developed a peptide-based photosensitizer that activates phototherapeutic effects only in cancer tissues by using the internalizing RGD peptide (iRGD) that can selectively penetrate and target cancer tissues as the skeleton, and by properly designing a matting agent for the modulation of its reaction to light.

When this newly developed photosensitizer is injected into a living body, it is activated by the body temperature and aggregates into a supramolecular array designed by the research team, to be stored around cancer cells. The subsequent phototherapy can destroy only cancer cells without affecting normal cells.

The phototherapeutic agent developed by the researchers was injected into a mouse model implanted with a tumour, and the photosensitizer was stored around the tumour and was continuously released for a long time (2 to 4 weeks), demonstrating the ability of selectively targeting the tumour with just one injection around the cancerous tissues. Moreover, no toxicity was found to destroy the tissues and major organs around cancer, even with repeated exposure to light. The cancerous tissues were completely removed through repeated procedures.

"We developed a cancer-targeting peptide phototherapeutic agent that forms a reservoir through supramolecular self-assembly without additional adjuvants when injected in vivo," said KIST Center Director Se-hoon Kim.

"The developed phototherapeutic agent is expected to be useful in future phototherapy as it allows long-term repeated phototherapy without toxicity after only one injection around cancer until the complete removal of cancer, and has a simple formulation with a single component," he added.

Pregnancy

Researchers pinpoint three days when pregnancy is most likely to start (New Kerala: 20210115)

<https://www.newkerala.com/news/2021/8458.htm>

A team of researchers from the University of Warwick has pinpointed the three days when pregnancy sickness, characterised by nausea and vomiting, is most likely to start.

The novel study opens up the possibility for scientists to identify a biological cause for the condition.

By measuring the onset of symptoms from a woman's date of ovulation for the first time, rather than last menstrual period, they have demonstrated that symptoms start earlier in pregnancy than previously thought, and within a smaller time frame.

Nausea and vomiting in pregnancy, often referred to as pregnancy sickness, which usually ends by 12 -14 weeks of pregnancy is experienced by most women during pregnancy although some will experience it more severely, as in the case of hyperemesis gravidarum when the symptoms can continue throughout the pregnancy.

The cause has historically often been seen as psychological but this latest study reinforces the view that the cause is biological and is linked to a specific developmental stage of pregnancy.

Researchers from Warwick Medical School and the Department of Statistics at the University of Warwick have drawn their conclusions from a unique dataset collected at the Clearblue Innovation Centre, by SPD Development Company Ltd.

Their results, published in the journal BMC Pregnancy and Childbirth, identify a specific time period during pregnancy that could point scientists to an anatomical or biochemical cause for the condition.

The date of a woman's last menstrual period is commonly used to measure the start of pregnancy, but their date of ovulation is thought to be a more accurate starting point as menstrual cycles can vary greatly between individuals, and even between cycles for the same individual.

The researchers used data from daily symptom diaries kept by 256 pregnant women to compare the start of their nausea and vomiting symptoms to the date of their last menstrual period and date of ovulation, as determined by a urine test.

Using their date of ovulation as the start of pregnancy most women experienced the first symptoms of pregnancy sickness after 8 to 10 days, compared to 20 to 30 days if measured from their last menstrual period.

This not only demonstrated that pregnancy sickness starts earlier than previous research has shown, but has also shown that using date of ovulation narrows the time frame that symptoms start to 3 days, compared to 11 days if last menstrual period is used.

Lead author Professor Roger Gadsby of Warwick Medical School said "The precise course of pregnancy sickness is unknown, but this research shows that it occurs at a specific developmental stage, in a specific timeslot.

"For researchers, it narrows our focus in terms of where we look for the cause. If we know that symptoms occur in a very narrow window 8-10 days after ovulation, researchers can concentrate their efforts on that particular stage of development to find the cause of the condition, both anatomically and biochemically.

"In the past, women suffering from nausea and vomiting in pregnancy have had their symptoms trivialised and overlooked because it was thought there was a psychological basis for the symptoms. This research further reinforces that nothing could be further from the truth, that this is a biological problem related to the development of the early foetus."

The research also found that 94% of women experienced symptoms of pregnancy sickness, a higher proportion than previous research that generally calculates the proportion as closer to 80%. This is likely to be because data was regularly collected from participants before they became pregnant up to 60 days after last menstrual period, while most other studies ask women to recall their symptoms after they have become pregnant.

Professor Roger Gadsby adds "What we've shown is that more people get symptoms of pregnancy sickness than has ever been shown before, and one of the reasons for that is that this research has picked up mild early symptoms that tend to fade by 7-8 weeks. In other studies, those symptoms would have faded by the time the research started."

Previous research by the same team has demonstrated that the term 'morning sickness' is misleading as nausea and vomiting can occur at any time of day, and argues that 'nausea and sickness in pregnancy' or 'pregnancy sickness' is more appropriate and avoids trivialising the condition.

Type-2 diabetes'

Short term low-carb diet linked to Type-2 diabetes' remission (New Kerala: 20210115)

<https://www.newkerala.com/news/2021/8451.htm>

Patients with Type-2 diabetes who follow a strict low carbohydrate diet for six months may experience greater rates of remission compared with other recommended diets without adverse effects, a new study suggests.

Most benefits diminished at 12 months, but say doctors might consider short-term strict low carbohydrate diets for managing Type-2 diabetes, while actively monitoring and adjusting diabetes medication as needed, the researchers, including Joshua Z. Goldenberg from Texas A&M University, said.

"Future long term, well designed, calorie controlled randomised trials are needed to determine the effects of LCD on sustained weight loss and remission of diabetes, as well as cardiovascular mortality and major morbidity," the researchers said.

A low-carb diet is a diet that restricts carbohydrates, such as those found in sugary foods, pasta and bread. It is high in protein, fat and healthy vegetables.

Type-2 diabetes is the most common form of diabetes worldwide and diet is recognised as an essential part of treatment. But uncertainty remains about which diet to choose and previous studies have reported mixed results.

For the study, published in The BMJ journal, the team assessed the effectiveness and safety of low carbohydrate diets (LCDs) and very low carbohydrate diets (VLCDs) for people with Type-2 diabetes, compared with (mostly low fat) control diets based on analysis from 23 randomised trials involving 1,357 participants.

LCDs were defined as less than 26 per cent daily calories from carbohydrates and VLCDs were defined as less than 10 per cent daily calories from carbohydrates for at least 12 weeks in adults (average age 47 to 67 years) with Type-2 diabetes.

Based on low to moderate certainty evidence, the researchers found that patients on LCDs achieved higher diabetes remission rates at six months compared with patients on control diets, without adverse events.

LCDs also increased weight loss, reduced medication use, and improved body fat (triglyceride) concentrations at six months.

However, most of these benefits diminished at 12 months, a finding consistent with previous reviews, and some evidence showed worsening of quality of life and cholesterol levels at 12 months, the team said.

Virus (Hindustan: 20210115)

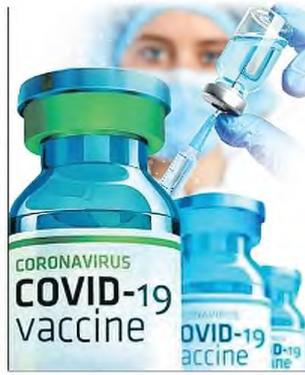
महाभियान : मोदी शनिवार सुबह 10:30 बजे शुभारंभ करेंगे, पहले दिन तीन लाख लोगों का टीकाकरण देश तैयार, कल से वायरस पर वार

नई दिल्ली | विशेष संवाददाता

कोरोना वायरस के खिलाफ दुनिया का सबसे बड़ा टीकाकरण अभियान कल यानी 16 जनवरी से शुरू होने जा रहा है। तैयारियां पूरी कर ली गई हैं। प्रधानमंत्री नरेंद्र मोदी शनिवार सुबह 10:30 बजे इस महाभियान का शुभारंभ करेंगे। पहले दिन देशभर में बने 3006 केंद्रों पर तीन लाख छह सौ लोगों को कोरोना वायरस का टीका लगाया जाएगा।

स्वास्थ्यकर्मियों को पहले लगेगा : प्रधानमंत्री कार्यालय के मुताबिक, पहले चरण में स्वास्थ्यकर्मियों का टीकाकरण होगा। इसमें सरकारी और निजी क्षेत्र के स्वास्थ्य कर्मचारियों के अलावा आंगनवाड़ी कार्यकर्ता भी शामिल हैं। टीकाकरण कार्यक्रम में कोविन एप का इस्तेमाल किया जा रहा है। इसमें टीके से संबंधित हर प्रकार की रिवल टाइम जानकारी रहेगी। यह टीकाकरण से जुड़े लोगों का मार्गदर्शन करेगा। इससे देशभर में दिल्ली से निगरानी रखी जाएगी।

टीका लगवाने वालों से संवाद कर सकते हैं पीएम : स्वास्थ्य मंत्रालय के सूत्रों के मुताबिक, यह कार्यक्रम वर्चुअल होगा। प्रधानमंत्री इस दौरान टीका लगवाने वाले कुछ स्वास्थ्यकर्मियों से संवाद भी



03 1.65

करोड़ से ज्यादा स्वास्थ्यकर्मियों को सबसे पहले मिलेगी खुराक

करोड़ खुराक सभी राज्यों, केंद्रशासित प्रदेशों तक पहुंचाई जा चुकी है

एनसीआर ने कमर कसी

- दिल्ली : राजधानी में हर हफ्ते चार दिन टीकाकरण होगा। पहले दिन 81 केंद्रों पर हर जगह 100 लोगों को टीका
- नोएडा : जिले में गुरुवार को 28840 टीके की पहली खेप पहुंची, इनसे छह केंद्रों पर टीका लगाया जाएगा
- गाजियाबाद : 27 हजार खुराक पहुंच चुकी है, केंद्रों पर तैयारी पूरी

कर सकते हैं। अफसरों से कहा गया है कि डिजिटल माध्यम से दोतरफा संवाद को सफल बनाने के लिए वे इंतजामात करें। दिल्ली एम्स और सफदरजंग अस्पताल ने इसकी तैयारी भी कर ली है।

भेदभाव का सवाल नहीं : सरकार द्वारा खरीदी गई 'कोविशील्ड' और 'कोवैक्सिन' टीके की 1.65 करोड़ खुराकें राज्यों और केंद्रशासित प्रदेशों तक पहुंचा दी गई हैं। वहां से छोटे शहरों

और टीकाकरण के लिए बने स्टोर तक पहुंचाई जा रही हैं। मंत्रालय ने कहा, इसलिए किसी भी राज्य से भेदभाव का कोई सवाल ही नहीं है। यह आरंभिक स्तर पर दी गई खुराक है। इसलिए कम आपूर्ति किए जाने को लेकर जताई जा रही चिंताएं निराधार और दुर्भाग्यपूर्ण हैं।
तय सीमा से ज्यादा लोगों को न बुलाए : राज्यों को सलाह दी गई है कि वे टीका केंद्र पर हड़बड़ी में तय सीमा से

ज्यादा संख्या में लोगों को न बुलाएं। इससे समस्या खड़ी हो सकती है। केंद्रों पर सिर्फ जरूरी लोग ही मौजूद रहें।
केंद्र बढ़ाने की सलाह : मंत्रालय ने राज्यों को टीकाकरण केंद्र बढ़ाने की सलाह दी है और उनके योजना संचालन की बात कही है ताकि सबको टीका लगाया जा सके।
> चार दिन टीकाकरण पेज 03
> राज्यों ने कमर कसी पेज 08

समाधान

यहां हर सवाल का जवाब पाएं हेल्पलाइन नंबर 1075 पर फोन कर आप टीकाकरण से जुड़ी जानकारी ले सकते हैं। यह सातों दिन 24 घंटे काम करेगा।

संदेश

मोबाइल पर जानकारी मिलेगी सूत्रों के मुताबिक, जिन लोगों को टीका दिया जाना है उनके मोबाइल पर संदेश भेजा जाएगा। साथ ही किस तैयारी के साथ जाना है यह जानकारी भी दी जाएगी।

सुखद

सभी राज्यों में पर्याप्त खुराक प्रधानमंत्री कार्यालय ने बताया कि सभी राज्यों में टीकों की पर्याप्त खुराक भेजी गई है। वहां से छोटे शहरों तक भी पहुंच चुकी है।

सतर्कता

10% अतिरिक्त टीका रखें सभी केंद्रों पर 10% अतिरिक्त टीके रखने होंगे ताकि टूट-फूट या खराब होने पर इसका इस्तेमाल किया जा सके। बच जाने पर इसका आगे इस्तेमाल होगा।

कीर्तिमान बनेगा अभियान

- 5.7 लाख से ज्यादा स्वास्थ्यकर्मी टीकाकरण करेंगे, दुनिया के किसी भी देश से सबसे ज्यादा
- 28 दिन के अंतर पर कोरोना टीके की दो खुराक लेनी होंगी
- दूसरी खुराक लेने के 14 दिन के बाद टीके का असर शुरू होगा
- देश के सभी राज्यों व केंद्रशासित प्रदेशों में एक ही दिन टीकाकरण की शुरुआत

Coronavaccine (Hindustan: 20210115)

टीका लगाने की शुरुआत 81 केंद्रों से होगी, बाद में संख्या बढ़ाकर 175 की जाएगी

कोरोना वैक्सीन सप्ताह में चार दिन लगाई जाएगी : केजरीवाल



नई दिल्ली | वरिष्ठ संवाददाता

मुख्यमंत्री अरविंद केजरीवाल ने गुरुवार को टीकाकरण की तैयारियों को लेकर समीक्षा बैठक की। इस दौरान मुख्यमंत्री ने कहा कि सप्ताह में चार दिन सोमवार, मंगलवार, गुरुवार और शनिवार को कोरोना वैक्सीन लगाई जाएगी। वहीं बुधवार और शुक्रवार को दूसरी बीमारियों से बचाव के लिए जो वैक्सीन लगाई जाती है, वो जारी रहेगी।

केजरीवाल के साथ समीक्षा बैठक में अधिकारियों ने टीकाकरण की तैयारियों का पूरा खाका पेश किया। बैठक के बाद मुख्यमंत्री ने मीडिया से बातचीत में कहा कि दिल्ली में 16 जनवरी से 81 केंद्रों पर टीकाकरण का काम शुरू हो जाएगा। कुछ दिनों में केंद्रों की संख्या बढ़ाकर 175 और बाद में 1000 कर दी जाएगी। इस तरह से पूरी दिल्ली में टीकाकरण के एक हजार केंद्र तैयार किए जा रहे हैं।

मुख्यमंत्री अरविंद केजरीवाल ने



एक साल से कोरोना की वजह से सब लोग परेशान हैं, बहुत दुखी और तकलीफ में हैं। इन वैक्सीन के आने के बाद मैं उम्मीद करता हूँ और भगवान से प्रार्थना करता हूँ कि अब लोगों को कोरोना से मुक्ति मिलेगी। दिल्ली सरकार और दिल्ली के लोग टीकाकरण के लिए पूरी तरह तैयार हैं।

-अरविंद केजरीवाल, मुख्यमंत्री

8100 2.40

स्वास्थ्यकर्मियों को रोजाना वैक्सीन दी जाएगी इसके लिए उनके मोबाइल पर एसएमएस जाएगा

लाख स्वास्थ्य कर्मियों ने टीकाकरण कराने के लिए अब तक अपना पंजीकरण कराया है

उम्मीद

मुख्यमंत्री अरविंद केजरीवाल ने कहा कि उम्मीद है कि आने वाले समय में केंद्र सरकार और वैक्सीन उपलब्ध कराएगी, जिससे सभी स्वास्थ्यकर्मियों को टीका लगाया जा सके। अभी तक जितनी खेप मिली है वो पंजीकरण करा चुके सभी स्वास्थ्यकर्मियों के पर्याप्त नहीं हैं।

व्यवस्था

छह जगह कोवैक्सीन लगेगी
छह केंद्रों पर भारत बायोटेक द्वारा बनाई कोवैक्सीन लगेगी और अन्य 75 स्थानों पर सीरम इंस्टीट्यूट की कोविशिल्ड लगाई जाएगी। कोवैक्सीन जिन 6 केंद्रों पर लगेगी, वो केंद्र के संस्थान हैं।

कहा कि टीकाकरण के पहले चरण में स्वास्थ्यकर्मियों को ही वैक्सीन दी जाएगी। इसके लिए अब तक 2.40 लाख स्वास्थ्यकर्मियों पंजीकरण करा चुके हैं। दिल्ली सरकार को केंद्र से अभी 2.74 लाख वैक्सीन की डोज मिली है, जो 1.20 लाख स्वास्थ्यकर्मियों के लिए पर्याप्त है। इसके अलावा केंद्र सरकार 10 प्रतिशत डोज अतिरिक्त देती है,

ताकि टूट-फूट होने पर उपयोग में लाई जा सके। उन्होंने कहा कि हम उम्मीद करते हैं कि स्वास्थ्यकर्मियों के लिए और जितनी वैक्सीन की डोज की जरूरत पड़ेगी, वो जल्द हमारे पास आ जाएगी। एक केंद्र पर एक दिन में 100 लोगों को वैक्सीन लगाई जाएगी और पूरी दिल्ली में प्रतिदिन 8100 स्वास्थ्य कर्मचारियों को वैक्सीन दी जाएगी।

टीकाकरण के लिए शिक्षकों की सूची तैयार होगी : टीकाकरण के लिए शिक्षकों की सूची तैयारी की जाएगी। शिक्षा निदेशालय ने बुधवार को इस संबंध में दिल्ली के सभी जिला, उपजिला शिक्षा निदेशकों को निर्देश जारी किया है। शिक्षा निदेशालय ने विभाग के सभी कर्मचारियों की सूची अपलोड करने को कहा है।

टीके का मामूली दुष्प्रभाव संक्रमण नहीं

सलाह

टीकाकरण अभियान से दो दिन पहले केंद्रीय स्वास्थ्य मंत्री हर्षवर्धन ने ट्विटर पर वैक्सीन को लेकर शंकाओं के निवारण की कोशिश की।

● क्या कोविड टीके से किसी तरह के साइडइफेक्ट की जानकारी है?

कोरोना से बचाव में कारगर टीका लगवाने के बाद कुछ लोगों को हल्के बुखार, टीकाकरण वाले स्थान पर

दर्द और बदन टूटने की शिकायत सता सकती है। ये सभी साइडइफेक्ट अस्थायी हैं। कुछ समय बाद इनसे खुद ब खुद निजात मिल जाती है।

● क्या टीका लगवाने से किसी को कोविड-19 संक्रमण हो सकता है?

टीकाकरण की वजह से कोविड-19 संक्रमण नहीं होता। यह संभव है कि व्यक्ति पहले से संक्रमित हो और वैक्सीन लगवाने तक उसमें लक्षण न उभरे हों। टीके से पनपे अस्थायी

साइडइफेक्ट जैसे बुखार को संक्रमण का संकेत नहीं समझना चाहिए।

● क्या वैक्सीन संतानोत्पत्ति की क्षमता पर बुरा असर डालती है?

इस बात के वैज्ञानिक प्रमाण नहीं हैं कि कोरोना वैक्सीन संतानोत्पत्ति की क्षमता प्रभावित कर सकती है। कोरोना संक्रमण की वजह से भी प्रजनन संबंधी दिक्कतें उभरने की बात सामने नहीं आई है। कृपया, अफवाहों पर ध्यान न दें।