Novel vaccine candidate shows promise against COVID-19, study finds (The Tribune: 2020904)


An experimental vaccine that boosts the production of specific proteins could be effective against the novel coronavirus that causes COVID-19, according to a study conducted in mice.

Scientists at The Ohio State University in the US manipulated a natural cellular process to ramp up levels of two proteins used by the virus to infect other cells, packaged the protein-boosting instructions in nanoparticles and injected them into mice.

Within a month, the mice had developed antibodies against the SARS-CoV-2 virus, according to the study published on Wednesday in the journal Advanced Materials.

The technique involves altering specific sequences of messenger RNA, molecules that translate genetic information into functional proteins, the researchers said.

While these sequences are not translated to proteins, the researchers changed their structures to promote higher-than-usual levels of proteins.

The sequences are known as untranslated regions, or UTRs.

Though Phase 3 clinical trials of fast-tracked COVID-19 vaccine candidates are in progress, Yizhou Dong, an associate professor at the Ohio State University, said his lab’s platform offers a potential alternative.

“If the current vaccines work well, that’s wonderful. In case the field needs this, then it’s an option. It worked as a vaccine is expected to, and we can scale this up very fast,” Dong said.
“For now, it’s a proof of concept—we’ve demonstrated we can optimise a sequence of messenger RNA to improve protein production, produce antigens and induce antibodies against those specific antigens,” he said.

The crux of the method is typical to vaccine development: using snippets of a pathogen’s structure to produce an antigen—the foreign substance that triggers an appropriate immune response—and finding a safe way to introduce it to the body.

However, the technique takes antigen design to a new level by making use of messenger RNA UTRs, Dong said. His lab worked with the two UTRs that bookend the start and finish of protein assembly, functioning as regulators of that process and influencing how the resulting protein interacts with others.

UTRs themselves are strings of nucleotides, the molecules that compose RNA and DNA, the researchers said.

“For our application we tried to optimise the UTRs to improve the protein production process. We wanted as much protein produced as possible—so we can give a small dose of messenger RNA that produces enough antigen to induce antibodies against the virus,” Dong said.

The team experimented with two potential antigens that the novel coronavirus is known to use to cause infection: a spike protein on its surface and a receptor binding domain.

The domain is a component of the spike protein that the virus uses to make its way into host cells—a necessary step to make copies of itself.

Both are used in other SARS-CoV-2 vaccine candidates, the researchers said.

After manipulating the messenger RNA for these two proteins, the team encased them in lipid nanoparticles developed previously in Dong’s lab.

They injected mice with the experimental vaccine and gave them a booster two weeks later.

A month after the first injection, immune cells in the mice had taken up the antigens of the two proteins and developed antibodies against them.

“It takes some time for the immune system to process the antigens and have cells produce antibodies. In this study, we detected antibodies after 30 days,” Dong added. PTI
UK working on 20-minute coronavirus test

Government expanding trials of two new tests — a no-swab saliva test and another that gives results in minutes (The Tribune: 2020904)


The British government says it is investing in a coronavirus test that gives results in as little as 20 minutes, as critics say tests for the virus are being rationed because the system can’t cope with demand.

Health Secretary Matt Hancock says the government is expanding trials of two new tests — a no-swab saliva test and another that gives results in minutes. It’s also running a trial on the benefits of repeat testing of people without symptoms.

Britain has hugely expanded its testing capacity since the start of the pandemic, but critics say it is still not doing enough to find and isolate people with the coronavirus.

Anyone with symptoms is eligible for a test, but the BBC reported Thursday that people who enter their postcode into the government’s website are sometimes being directed to drive-through centres hundreds of miles away.

Hancock insisted the system was working well despite some “operational challenges.” The government says it has the capacity to perform almost 350,000 tests a day, though only about 180,000 are actually being processed daily. — AP

Depression rates tripled during Covid-19 pandemic

Depression rates tripled during Covid-19 pandemic, finds study (The Tribune: 2020904)


Income and savings are most dramatic predictors of depression symptoms, reveal the findings.

New research adds to the growing body of evidence that Covid-19 pandemic has likely tripled depression symptoms among adults.

The study, published in the journal JAMA Network Open, found that 27.8 per cent of US adults had depression symptoms as of mid-April, compared to 8.5 per cent before the pandemic.
The findings also revealed that income and savings are the most dramatic predictors of depression symptoms in the time of Covid-19.

"We were surprised to see these results at first, but other studies since conducted suggest similar-scale mental health consequences," said study senior author Sandro Galea from the Boston University in the US.

For the results, the research team used data from 5,065 respondents to the 2017-2018 US National Health and Nutrition Examination Survey (NHANES), and 1,441 respondents from the Covid-19 Life Stressors Impact on Mental Health and Well-Being (CLIMB) study.

The researchers found an increase in depression symptoms among all demographic groups. Not surprisingly, experiencing more Covid-related stressors was a major predictor of depression symptoms.

However, the biggest demographic difference came down to money.

After adjusting for all other demographics, the study found that, during Covid, someone with less than $5,000 in savings was 50 per cent more likely to have depression symptoms than someone with more than $5,000.

"Persons who were already at risk before Covid-19, with fewer social and economic resources, were more likely to report probable depression, suggesting that inequity may increase during this time and that health gaps may widen," said study lead author Catherine Ettman.

"There may be steps that policymakers can take now to help reduce the impact of Covid-19 stressors on depression, such as eviction moratoria, providing universal health insurance that is not tied to employment, and helping people return to work safely for those able to do so," the team noted.


Earlier, research published in the journal Sustainability found that Covid-19 has severely affected people's daily lives and mental health, increasing their stress, fear of getting sick and financial strain.

**Permanent hair dye may up cancer risk in women**

Permanent hair dye may up cancer risk in women (The Tribune: 2020904)

Women who use permanent hair dye products, kindly take note. Researchers have found that permanent hair dye can slightly increase the risk of some types of breast, skin and ovarian cancer.

The study from Harvard University in the US, published in the journal The BMJ on Thursday, also revealed that natural hair colour was also found to impact on the likelihood of some cancers.

Use of hair dye is very popular, particularly among older age groups keen to cover up signs of grey. For example, it is estimated that it is used by 50-80 per cent of women and 10 per cent of men aged 40 and older in the US and Europe.

While the World Health Organisation’s International Agency for Research on Cancer has classified occupational exposure to hair dyes as a probable carcinogen, there is no warning about personal use because existing evidence is inconclusive.

To gain a better understanding of the risk of cancer from use of personal hair dye, researchers analysed data on 117,200 women from the Nurses’ Health Study, which includes assessments of hair dye exposure.

The women did not have cancer at the start of the study and were followed for 36 years.

Ever use of permanent dyes was associated with a slightly increased risk of the basal cell carcinoma of the skin, and this risk was higher in women with naturally light hair.

The results showed an increased risk of three types of breast cancer—estrogen receptor-negative, progesterone receptor-negative, and hormone receptor-negative—and ovarian cancer was also linked to use of permanent dyes, with risk rising according to the cumulative amount of dye women were exposed to.

An increased risk of Hodgkin lymphoma was also seen with the use of permanent hair dye but only for women with naturally dark hair.

“Possible explanations could be that shades of permanent hair dyes are associated with the concentration of ingredients, with darker colours having higher concentrations,” the study authors said.

However, the results showed no increased risk of most cancers or of cancer death in women who reported having ever used permanent hair dyes compared with those who had never used such dyes.

The authors also pointed to some limitations, including the lack of racial diversity of study participants and the possibility that other unmeasured factors, such as use of other products, may have affected the results.

Nevertheless, the authors said their findings “offer some reassurance against concerns that personal use of permanent hair dyes might be associated with increased cancer risk or mortality.”
COVID-19 antibodies

Children can have both COVID-19 antibodies, virus in their system simultaneously: Study (The Tribune: 2020904)


Neutralising antibodies are important in potentially protecting a person from re-infection of the same virus.

Children can have both COVID-19 antibodies, virus in their system simultaneously: Study Neutralising antibodies are important in potentially protecting a person from re-infection of the same virus.

Children may still have the potential to transmit the novel coronavirus even if they have a measurable immune response, according to a new study which says the virus and antibodies can coexist in young patients.

The study, published in the Journal of Pediatrics, used a retrospective analysis of 6,369 children tested for the novel coronavirus SARS-CoV-2, and 215 patients who underwent antibody testing at the Children's National Hospital in the US between March 13 and June 21.

According to the scientists, including those from the hospital, 33 of the 215 patients had co-testing for both the virus and antibodies during their COVID-19 disease course, with nine of the 33 showing presence in their blood while also later testing positive for the virus.

"With most viruses, when you start to detect antibodies, you won't detect the virus anymore. But with COVID-19, we're seeing both," said Burak Bahar, lead author of the study from the Children's National Hospital.

According to Bahar, the next phase of research will be to test if the virus that is present alongside the antibodies can be transmitted to other people.

She added that it also remains unknown if the antibodies detected in the children correlate with immunity, and how long antibodies and potential protection from reinfection last.

When the scientists assessed the timing of viral clearance and immunologic response, they found the average time from viral positivity to negativity, when the virus can no longer be detected, was 25 days.

The median time to seropositivity, or the presence of antibodies in the blood, was 18 days, while the median time to reach adequate levels of neutralising antibodies was 36 days.

Neutralising antibodies are important in potentially protecting a person from re-infection of the same virus.
The scientists also found that patients six through 15 years old took a longer time to clear the virus compared to patients 16 through 22 years old.

Females in the 6-15 age group also took longer to clear the virus than males, they added.

While there is emerging data regarding this timing in adults with COVID-19, the researchers said there is far less data when it comes to the pediatric population.

"The takeaway here is that we can't let our guard down just because a child has antibodies or is no longer showing symptoms," Bahar said, adding that the continued role of good hygiene and social distancing "remains critical." --PTI

High diabetes risk

Handgrip can detect people at high diabetes risk (The Tribune: 2020904)


A study that measured the muscular handgrip strength of 776 men and women without a history of diabetes over a 20-year period has found that a simple test such as the strength of handgrip could be used as a quick, low-cost screening tool to help identify patients at risk of developing type 2 diabetes.

In the 779 study subjects, the risk of type 2 diabetes was reduced by around 50 per cent for every unit increase in handgrip strength value, said scientists at the universities of Bristol and Eastern Finland in a paper published in the journal Annals of Medicine.

Reduced muscular strength, which can be measured by handgrip strength, has consistently been linked to early death, cardiovascular disease and disability.

Until recently, there was inconsistent evidence on the relationship between handgrip strength and type 2 diabetes.

In a recent literature review of 10 published studies on the topic, the same researchers demonstrated that people with higher values of handgrip strength had a 27 per cent reduced risk of developing diabetes.

However, while findings from this review suggested handgrip strength could potentially be used to predict type 2 diabetes, researchers needed to test this formally using individual patient data.

In the latest study, the researchers from Bristol Medical School and Eastern Finland’s Institute of Public Health and Clinical Nutrition followed 776 men and women aged 60-72 years without a history of diabetes over a 20-year period and measured the power of their hand grip strength using a handgrip dynamometer.
Patients were asked to squeeze the handles of the dynamometer with their dominant hand with maximum isometric effort and maintain this for five seconds.

The results demonstrated that the risk of type 2 diabetes was reduced by about 50 per cent for every unit increase in handgrip strength value.

This association persisted even after taking into account several established factors that can affect type 2 diabetes, such as age, family history of diabetes, physical activity, smoking, hypertension, waist circumference and fasting plasma glucose.

When information on handgrip strength was added to these established factors which are already known to predict type 2 diabetes, the prediction of type 2 diabetes improved further, the researchers noted.

“Assessment of handgrip is simple, inexpensive and does not require very skilled expertise and resources and could potentially be used in the early identification of individuals at high risk of future type 2 diabetes,” said lead study author Setor Kunutsor from Bristol’s Musculoskeletal Research Unit.

Importantly, the findings suggested women are more likely to benefit from the use of this potential screening tool.

“We propose larger studies to replicate these findings in other populations and specifically in men and women,” said Professor Jari Laukkanen from the University of Eastern Finland.

In April this year, a study in the American Journal of Preventive Medicine said that hand grip can help doctors perform time-efficient screening tools for diabetes. The study identified the levels of handgrip strength/weakness that correlate with type 2 diabetes in otherwise healthy men and women, according to their body weights and ages. — IANS

**Covid-19: What you need to know today (Hindustan Times: 2020904)**

[https://epaper.hindustantimes.com/Home/ArticleView](https://epaper.hindustantimes.com/Home/ArticleView)

One of the most frightening things I have read in recent times is a study titled Community Outbreak Investigation of Sars-CoV-2 Transmission Among Bus Riders in Eastern China published in JAMA (Journal of American Medical Association) Internal Medicine. According to this study, by researchers from the US and China, 23 of 67 passengers who took a round trip lasting 100 minutes by bus (in January, in Zhejiang in Eastern China) to attend a 150-minute event were infected by the 68th passenger on the bus (who was unaware about being infected). A few of those who attended the event (and weren’t on the bus) were also infected — and all of them said they had come in close contact with the so-called index patient. The researchers found that those who were on the bus were around 40 times more likely to have been infected than 60 others (none infected) on another bus attending the same event (lending an entirely different perspective to the great Ken Kesey’s quote — “you are either on the bus or off the bus”).
The bus was air conditioned and in indoor-circulation mode. And while there were high-risk and low-risk zones, there wasn’t an appreciable difference in the chances of infection of those seated in these — a clear indication of airborne transmission of the Sars-CoV2 virus, especially in a closed area where the air is recirculating. The attack rate of the virus on the bus was around 34%, the researchers found, although people seated near the door and the one window that could be opened, did not get infected.

The study was published on Tuesday, a day before India’s housing and urban affairs ministry put out guidelines for the resumption of 15 Metro services around the country (13 of these will begin services; two, one in Mumbai and the other in Nagpur, both in the state of Maharashtra which continues to be ravaged by the virus, will not). It isn’t just the Metro; many offices have opened; as have several malls; and some restaurants and gymnasiums. The challenge before all of them is along two dimensions — all arising from the fact that when the facilities (including Metro coaches and stations) were being designed, the emphasis was on optimising space to accommodate the most number of people. In addition, modern malls and offices worked hard on creating social spaces where people could mingle.

The first challenge is social distancing. It is not very difficult to ensure the coaches don’t get crowded, but the stations are another matter altogether. HT reported last week that while Delhi’s buses are sticking to the 20-per-bus limit (by and large) necessitated by Covid-19-related social distancing norms, the stops are crowded, with people waiting for a long time, and then jostling to get into the bus before it reaches its capacity. According to another report in HT, Metro officials will monitor stations through CCTV and order trains to skip crowded stations — an exceptionally well-thought-out solution that assumes the waiting crowd will disperse quietly and in a socially distanced and disciplined manner, instead of continuing to wait for the next train.

The second challenge is the one presented by air-conditioning. Most modern offices have no openable windows and depend on air-conditioning for both maintaining the temperature and air circulation. That is true of malls as well, and Metro stations. The coaches themselves are air-conditioned, simply because many Metros run underground. Experts say that with the right kind of filtration and circulation systems and settings, airborne transmission of the virus can be controlled.

Finally, it all comes down to risk, return, and the absence of options (many people taking buses and the Metro during the pandemic aren’t doing so out of choice).

PS: In a move with significant political undertones, the US Centers for Disease Control and Prevention on Wednesday communicated to all states that they should be ready to store, distribute and administer a vaccine to those at the front lines of the fight against Covid-19, and other vulnerable groups. The communication mentioned two vaccine candidates without naming them, although the New York Times said the specifications match those being tested by Pfizer and Moderna. Three vaccines are in Phase 3 (or combined Phase2/3) trials in the US: Moderna’s, Pfizer/BioNTech SE’s, and Oxford-AstraZeneca’s.

RESEARCH

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THE CHALLENGES

The first challenge for Metros and modern offices is social distancing. It is not very difficult to ensure the coaches don’t get crowded, but the stations are another matter altogether. The second challenge is the one presented by air-conditioning. Most modern offices have no openable windows and depend on air-conditioning for both maintaining the temperature and air circulation.

Covid New Cases (The Asian Age: 2020904)

84K Covid cases in 24 hrs as govt claims higher tests

VINEETA PANDEY
NEW DELHI, SEPT. 3

Close to 84,000 fresh cases of novel coronavirus were detected in India on Thursday, the highest so far in a single day as overall cases of Covid-19, as per the Union health ministry, went past 38.55 lakh. In the last 24 hours 1,043 deaths were recorded, taking overall fatalities to 67,376.

Union health secretary Rajesh Bhushan said India has one of the lowest cases per million when compared to other countries in the world. “Despite high infection rates in India, the cases per million (population) in Brazil and the US are seven times higher than their corresponding figures in India. India’s case-load per million is 2.792, while that of the world is 33.59. The US has 18,986 cases per million while Brazil has 16,692. Similarly, deaths per million (population) in Brazil and the UK are 12 and 13 times higher, respectively, as compared to India,” he said.

The United States has the highest number of total cases — 62.94 lakh as per worldometers.info and 61.15 lakh according to Johns Hopkins, followed...
Covid-19 vaccine shows promise

UK working on a test that gives results in 20 minutes

London, Sept 3: The British government says it is investing in a coronavirus test that gives results in as little as 20 minutes, as critics say tests for the virus are being rationed because the system can’t cope with demand. Health Secretary Matt Hancock says the government is expanding trials of a new test—a no-swab saliva test—and another that gives results in minutes.

It’s also running a trial on the benefits of repeat testing of people without symptoms. Britain has hugely expanded its testing capacity since the start of the pandemic. Anyone with symptoms is eligible for a test, but the BBC reported that people who enter their postcode into the government’s website are sometimes being directed to drive-through centres hundreds of miles away. — AP

Female Poverty Rate: (The Asian Age: 2020904)

Covid mortality rate

Covid mortality rate is falling. But long-term morbidity needs to be monitored (The Indian Express: 2020904)


It is quite possible that in the next four to six months, mortality due to COVID-19 will decline further. This will reduce the fear of the disease, which will facilitate opening up of the economy further.

Written by Dileep Mavalankar, Deepak Saxena | Updated: September 4, 2020 8:56:55 am

The month-by-month mortality figures show a sharp decline, especially after May. (Express Photo/File)

Even as the COVID-infection graph is rising in the country, mortality due to the disease seems to be on the decline. Is the SARS-COV-2 virus losing its sting?

The month-by-month mortality figures show a sharp decline in the mortality rate, especially after May. In Gujarat, the mortality rate touched a high of nearly 7 per cent in April; it has come down to 2-3 per cent in August. A decline has also been observed in Maharashtra, the state most affected by the pandemic: It has fallen from 4 per cent to less than 3 per cent in this period. In Karnataka, another badly-affected state, it has gone down from 4 per cent to 1.6 per cent. Doctors treating COVID-19 patients have observed that the cases being admitted to hospitals in July and August are clinically much milder compared to those admitted in April or May.

There could be many possible explanations. First, there is a strong possibility that the virus is losing its virulence and that is why we are witnessing clinically milder cases. This has been noticed during past epidemics as well. For example, during the initial phase of the swine flu epidemic, the cases were very severe and health conditions of patients deteriorated rapidly leading to very high mortality. However, in about a year, cases became much milder and now swine flu cases do occur but with very low mortality numbers. Similar observations were documented during the chikungunya virus epidemic in 2006. The disease caused high mortality in the initial phase, which declined after some months. Today, chikungunya is a relatively milder disease, and mortality is very rare.

The second explanation is that in the case of relatively new infectious diseases, doctors and hospitals are not prepared to treat/manage the affliction as the epidemiology and clinical profile of such diseases are not known completely. For COVID-19, there was initially no known antidote, but later, various modalities of treatment were developed — use of high-flow nasal oxygen instead of the early use of ventilators, making patients admitted to ICU lie in the prone
position instead of the supine position, and the use of corticosteroids, anticoagulants, Remdesivir and other antiviral drugs. Clinicians are now better equipped in terms of skills while treating COVID-19 patients and managing those with severe symptoms.

India’s health system has also come up with evidence-based guidelines that assisted in bringing in a semblance of uniformity in patient care across the country. Engagement with private providers and enhancement of testing modalities and guidance on isolation and quarantine, further assisted in early detection and breaking the chain of transmission.

Opinion | Covid-19 economic pain will pass but we need to create enduring change for firms, citizens with reforms

Third, and very importantly, patients and communities have been motivated by disseminating appropriate information about reaching doctors and hospitals early. Efforts have been enhanced to generate awareness about the new norms pertaining to the use of masks, hand washing and social distancing. Testing has become more widespread and accessible. All this has meant that diagnosis happens early, helping to control complications.

Fourth, in the first phase of the epidemic, the disease spread to the most congested part of the cities. Given the very dense population, infective doses could have been high. Serological surveys show a high percentage of people in slums in parts of Maharashtra have antibodies. In contrast, in June, July and August, the epidemic spread to the less dense population of several cities, which have a better socio-economic profile. The comparatively less proximity between the carriers of the virus and their contacts could have reduced the pathogen’s infective dose. The nutritional and immunological status of the better-off populations infected in June, July and August could also have contributed to relatively milder infection in the later part of the pandemic.

The decline in mortality rates is not specific to India. This was seen in China as well. Mortality in Wuhan was much higher than the rest of China, where mortality is less than 1 per cent. The new wave of infections in Europe also shows a much-reduced mortality rate compared to that in March, April and May. It is quite possible that in the next four to six months, mortality due to COVID-19 will decline further. This will reduce the fear of the disease, which will facilitate opening up of the economy further. Reduced mortality may mean that total deaths will also not be as high as feared at the beginning of the outbreak.

Opinion | Fighting Covid-19 and food insecurity requires new ideas, robust political will

At the same time, the infection could spread rapidly, leading to many more asymptomatic cases. As we wait for the vaccine, there is a good chance of herd immunity building up in several communities. This means that once we have a vaccine against COVID-19, strategies could be developed to prioritise its administration to people who are at high risk of mortality — especially, older people or those with comorbidities. All this will require monitoring mortality assiduously, week by week, and ensuring that no death is missed: This will give a correct idea about the death impact of the pandemic.

Unfortunately, in many developing countries, including India, death recording, as well as analysis of the cause of deaths, is poor. That comes in the way of ascertaining accurately the mortality impact of the disease. The critical difference between COVID-19 and the common seasonal flu is its high mortality. If COVID-19 mortality goes down substantially, then this
difference could reduce. Then this viral disease could become a malady akin to the seasonal flu. Countries must monitor long-term serious morbidity due to COVID-19 — this, in fact, has begun to surface. Long-term cohort studies are also required to measure the overall impact of COVID-19 in the future.

Editorial | Mass trials will show if Oxford vaccine for COVID-19 works among diverse groups of people. More vaccines will be needed

This article appeared in the print edition on September 4, 2020 under the title ‘Virus alert’. The writers are professors at the Indian Institute of Public Health, Gandhinagar, affiliated to PHFI. Views are personal.

Aggressive testing

AIIMS director advises hefty fines for no masks, aggressive testing (The Indian Express: 2020904)


Delhi, which saw the maximum number of cases in June, is now witnessing an uptick in the daily number of Covid-19 cases again.

delhi coronavirus update, delhi covid 19 cases, randeep guleria, delhi metro resumes, delhi metro services, fines for not wearing masks delhi, delhi aiims, delhi city news

X

We will have to develop strategies to live with Covid: Dr Guleria (File Photo)

As Delhi gears up to restart Metro services in the capital, AIIMS director Dr Randeep Guleria, who has been part of the government’s core committee in formulating policies for management of Covid-19, has advised hefty fines for not wearing masks and continuing to focus on aggressive testing.

“We have to develop strategies, both in terms of increasing awareness in public and seeing how we can take measures so that even if people behave a certain way, what can we do to prevent crowding and the spread of infection. It becomes more important with the lockdown coming down and opening of Metro. The virus is looking to survive and infect more and more people,” he told The Indian Express.

“The issue here is looking at the balancing of two things. One is trying to bring down the number of cases and at the same time looking at the effect on the economy and how things can move forward. As I have said in the past, Covid might stay for a longer period of time. It will probably be there till early next year. We will have to develop strategies to live with Covid,, We can have hefty fines for people who don’t follow; it has worked when it comes to wearing seatbelts,” he said.
Delhi, which saw the maximum number of cases in June, is now witnessing an uptick in the daily number of Covid-19 cases again. For over a week now, the city has been reporting more than 1,500 cases in a day.

“After a time of flattening the curve and cases coming down, it has again started rising. We are seeing another surge in the number of cases. We need to become more vigilant and aggressive so that it doesn’t go on to what we had in June. Ultimately, that will get reflected in more admissions and strain on the healthcare system. There are multiple factors we need to consider — one is that there is a little bit of Covid fatigue and frustration among the general public. There was a lot of enthusiasm in maintaining the lockdown and being careful in the early months. Now people have gotten fed up with all that, and therefore we need to re-emphasise that we are still in the heart of the pandemic,” he said.

**Coronavirus latching on to food packaging**

**WHO downplays danger of coronavirus latching on to food packaging? (The Indian Express: 2020904)**


Two cities in China said they had found traces of the coronavirus in imported frozen food and on food packaging, raising fears that contaminated food shipments might cause new outbreaks.

Coronavirus in chicken wings, Brazilian chicken wings covid-19, WHO, China news, world news, Chicken coronavirus, indian express
A woman works at a poultry stall at a wet market following an outbreak of the coronavirus disease (COVID-19) in Beijing, China. (Reuters)
The World Health Organization on Thursday downplayed the danger of the coronavirus latching on to food packaging and urged people not to be afraid of the virus entering the food chain.

Two cities in China said they had found traces of the coronavirus in imported frozen food and on food packaging, raising fears that contaminated food shipments might cause new outbreaks.

“People should not fear food, or food packaging or processing or delivery of food,” WHO head of emergencies programme Mike Ryan told a briefing in Geneva. “There is no evidence that food or the food chain is participating in transmission of this virus. And people should feel comfortable and safe.

“WHO epidemiologist Maria Van Kerkhove said China had tested hundreds of thousands of packages and “found very, very few, less than 10” proving positive for the virus.

More than 20.69 million people have been reported to be infected by the novel coronavirus globally and almost 750,000 have died, according to a Reuters tally.

Read | ‘We will persevere’: A newspaper faces the weight of Hong Kong’s crackdown
The WHO urged countries now that are striking bilateral deals for vaccines not to abandon multilateral efforts, since vaccinating pockets will still leave the world vulnerable.

Russian President Vladimir Putin said on Tuesday that Russia had become the first country to grant regulatory approval to a COVID-19 vaccine after less than two months of human testing, a move Moscow likened to its success in the Cold War-era space race. Moscow’s decision to grant approval before then has raised concerns among some experts.

READ | Two Chinese patients test positive months after virus recovery

Only about 10% of clinical trials are successful and some scientists fear Moscow may be putting national prestige before safety.

The WHO does not have enough information to make a judgment on the expanded use of the Russian vaccine, Bruce Aylward, WHO senior adviser, said at the briefing.

Viral infections'

Coronavirus | ‘RT-PCR will remain the gold standard for all viral infections'(The Hindu: 2020904)


A negative test on an antigen based assay is not reliable. Even if there is infection, there is a 50% chance that the antigen test will be negative, says Dr. P. Srinivasan, technical director at Neuberg Diagnostics.

Dr. P. Srinivasan, technical director at Neuberg Diagnostics and Chairman & Co-Founder of Be The Cure Registry and Jeenomics (Next Generation Sequencing HLA Laboratory) of Jeevan Stem Cell Foundation, Chennai, spoke to G. Ananthakrishnan on current testing options for the novel coronavirus SARS-CoV-2, when to think of taking the test, state of antibody testing.
Covid-19 vaccine

Sanofi, GSK start human trial of their Covid-19 vaccine (New Kerala: 2020904)


Pharmaceutical giants Sanofi and Glaxo Smith Kline (GSK) on Thursday started a clinical trial for their jointly developed Covid-19 vaccine candidate.

A total of 440 healthy adults are being enrolled in the trial across 11 investigational sites in the US, the two drugmakers said. The vaccine candidate uses the same recombinant protein-based technology as one of Sanofi's seasonal influenza vaccines with GSK's pandemic adjuvant technology. The Phase 1/2 clinical trial is a randomised, double blind and placebo-controlled trial designed to evaluate the safety, tolerability and immune response of the Covid-19 vaccine candidate. The companies anticipate first results early December which will support the initiation of a Phase 3 trial in the same month.

If data are sufficient for licensure application, the plan is to request regulatory approval in the first half of 2021, French pharma company Sanofi and its British peer GSK said, adding that the two companies are scaling up manufacturing of the antigen and adjuvant with the target of producing up to one billion doses in 2021.

"Sanofi and GSK bring proven science and technology to the fight against the global Covid-19 pandemic, with the shared objective of delivering a safe and effective vaccine," Thomas Triomphe, Executive Vice President and Global Head of Sanofi Pasteur, said in a statement.

"The initiation of our clinical study is an important step and brings us closer to a potential vaccine which could help defeat Covid-19."

Preclinical data showed an acceptable tolerability profile and data based on two injections of the adjuvanted recombinant vaccine showed high levels of neutralising antibodies that are comparable to levels in humans who recovered from the Covid-19 infection, the drugmakers said, adding that pre-clinical results will be published later this year.

"Moving this vaccine candidate into clinical development is an important moment in the progress towards addressing the global pandemic we are all facing," said Roger Connor, President of GSK Vaccines.

Sanofi and GSK said they are committed to making the vaccine available globally.
Mental health

Smartphone game may improve mental health: Study (New Kerala: 2020904)


Researchers have found that turning mobile mental health intervention into a smartphone game can potentially improve mental well-being.

Published in the journal PLOS ONE, the study conducted shows that gamifying the content of mobile interventions improved resilience, a key character trait that reduces the susceptibility to depression, stress and anxiety.

"eQuoo (the gamified intervention app) was able to show that it not only had a significant and beneficial impact on the participant’s mental wellbeing," said study authors from the Ludwig Maximilian University of Munich in Germany.

"But that gamifying therapies counterbalances sky-high attrition rates most mental health apps struggle with, especially in the demographic of 18-35-year-olds," they added. Mobile mental health apps have the potential to act as interventions for depression and anxiety, but their effectiveness appears limited with studies showing that individuals do not stick with the routine for long periods of time.

To improve their effectiveness, the authors proposed turning intervention content into a game that includes levels that need passing, feedback, points, and other gaming elements. A five-week randomised control trial was completed by 358 participants who were assigned to one of three groups gamified intervention app, normal intervention app, and waitlisted with no app.

Resilience and anxiety were measured by self-report surveys at three-time points. The authors found that after five weeks, both measures were significantly better in the game group than in either of the other groups.

Additionally, the game group retained 21 per cent more participants than the other groups. The promotion of mental health is known to be an effective way to prevent the development of depression and anxiety disorders. However, interventions are rare for a variety of reasons, even for those who need them the most.

A gamified mental health intervention app that retains user interest and improves resilience could maximise the benefits of mobile intervention by helping to prevent depression and anxiety.

"While at the same time being convenient, inexpensive, and a way to avoid getting professional help and experiencing the associated stigma and negative feelings," the researchers said. "Since five weeks of study is relatively brief, especially for mental health interventions, future studies should examine the effectiveness of the gamified app over the long-term," they noted.
Respiratory infections

BCG vax protects old people from respiratory infections: Study (New Kerala: 2020904)


The Bacille Calmette-Guerin or BCG vaccine, originally made against tuberculosis, gives an effective preventive action against various infections -- possibly also against Covid-19, say researchers, adding that it also protects elderly people from respiratory infections.

BCG is frequently given to children, but a double-blind randomised clinical study, published in the journal Cell, shows that elderly people also benefit from it.

"Two years ago we started the ACTIVATE study, with the aim of showing whether BCG vaccination could protect against infections in vulnerable elderly people," said study researcher Mihai Netea from Radboud University in the Netherlands.

According to the researchers, patients over 65 years of age who were admitted to hospital were randomised to receive BCG or placebo vaccination at their discharge.

"We followed them for a year to see if BCG could protect them against a broad range of infections," Netea said.

The team revealed that the ACTIVATE study had already started before the corona pandemic. A total of 198 elderly people were given either a placebo or a BCG vaccine upon discharge from the hospital.

During the research, there was a noticeable difference in the placebo group, 42.3 per cent of the elderly developed an infection, while this was the case in only 25 per cent of the BCG group.

Also, the BCG-vaccinated participants had their first infection on average 16 weeks after vaccination, compared to 11 weeks for the placebo group. There was no difference in side effects.

"The most important observation was that BCG could mainly protect against respiratory infections BCG-vaccinated elderly people had 75 per cent fewer respiratory infections than the elderly who received placebo," said study co-coordinator J. Giamarellos-Bourboulis.

Although most protection seems to have been against respiratory infections of (probably) viral origin, whether or not BCG also works against Covid-19 has not yet been demonstrated, due to the low prevalence of Covid-19 in this study, the team said.
However, the study does show that it is safe to give the BCG vaccination to the elderly and that it can protect them against various infections.

Several studies are underway that look specifically at the effects of BCG on Covid-19.

Last month, a study published in the journal 'Cell Reports Medicine', revealed that the BCG vaccine has a general stimulating effect on the immune system and is, therefore, effective against Covid-19.

**Healthy diet**

**Easy, affordable, healthy diet can protect from Covid-19** *(New Kerala: 2020904)*


, affordable and healthy eating can help people from falling prey to Covid-19, say nutritionists.

The food consumed impacts the human body's ability to fight diseases and recover from infections and eating a healthy, nutritious, and balanced diet is important amid global pandemic, they said on the occasion of national nutrition week, being celebrated from September 1 to September 7.

Though no food will cure Covid-19 infections, a healthy diet along with good physical activity will help build a stronger immune system to tackle the adverse impact of the deadly coronavirus, they said.

As the nutrition week is being celebrated amidst the pandemic, doctors say it is important to know that good nutrition helps reduce the risks of ailments like diabetes, hypertension, obesity, heart diseases, which are common reasons for falling prey to coronavirus. Many types of cancers too can be prevented by consuming healthy and nutritious food.

According to common understanding, a healthy diet for a newborn baby means exclusive breastfeeding in the first six months, with the introduction of nutritious and safe foods to complement breast milk from 6 months to 2 years and beyond. For young children, a healthy and balanced diet is essential for growth and development while for aged, it can help to ensure healthier and more active life.

"Food makes a world of difference to our system which is linked to the solar clock. Eating at regular hours means the energy levels remain steady and do not sway from highs to lows. This will help body rhythm settle down and it will balance out the hormones to keep the body energized. Any food that is closest to its natural form, least processed and seasonal is the best for health," said Srilatha, Chief Clinical Nutritionist, Medicover Hospitals.
"Nutrient-rich food adds health while processed and refined foods add empty calories leaving you without energy and feeling low and can lead to many diseases. Fermented foods add good bacteria that keep the gut healthy and the absorption of nutrients efficient," she said.

One must include adequate amounts of whole grains, pulses, seasonal vegetables, green leafy vegetables, whole fruits, milk and milk products, and to add moderate amounts of non-veg foods focusing on fish and skinless chicken. Whole grains and pulses provide macro nutrients like carbohydrate and proteins. Fruits and vegetables are excellent sources of vitamins, minerals, fibre and antioxidants.

Adding nuts to daily food is a great habit, and it helps strengthen immunity. Nuts and oil seeds add healthy fats, dietary fibre, protein and most importantly, antioxidants, which are known to clean up the free radicals from the system. It is most important to take adequate fluids like water, lemon water, coconut water, buttermilk, homemade soups, pudina pani, zeera pani, and any other non-sugary liquids to stay hydrated. Even a mild dehydration leaves the human body exhausted.

"Like any army fighting an enemy, the immune system needs good, regular nourishment. It is observed that people who do not eat healthy and do not care for immunity are more vulnerable to infectious diseases like Covid-19. Eat right to stay tight, must be the philosophy when it comes to consuming sufficient vitamins, minerals, and other nutrients," said Zeenat Fatima, Nutritionist, Continental Hospitals.

Good nutrition and exercise is crucial for health, particularly in times when the immune system might need to fight back. Limited access to fresh foods may compromise opportunities to continue eating a healthy and varied diet. It can also potentially lead to an increased consumption of highly processed foods, which tend to be high in unhealthy trans fats, cholesterol, sugars, and salt. Nonetheless, even with few and limited ingredients, one can continue eating a diet that supports good health.
सतर्कता : दिल्ली में बढ़ते मामलों से चिंतित सरकार का फैसला
अस्पताल जाने पर कोरोना जांच जरूरी

कोरोना के मामले बढ़ते हैं देख दिल्ली सरकार ने सतर्कता बढ़ाई है। अब राजधानी के नान-कोरोना अस्पतालों की ओपीडी में अनेक बाल लक्षण वाले मरीजों की कोरोना जांच अनिवार्य होगी। समानांतर ओपीडी में पहुंचे मरीजों की कोई रैपिड एंटीजेन जांच करानी होगी।

दिल्ली के प्रमुख बड़े नान-कोरोना अस्पतालों में दीन दयाल उपाध्याय अस्पताल में जांच अव्वल है। वहीं, हांगकांग जांच सभी अन्य अस्पतालों में भी जांच शुरू होगी।

लक्षण संक्रमण सबसे पहले: ओपीडी में अनेक बाल लक्षण वाले मरीजों से एक फांसी का बचाव जारी है। फांसी में अनेक लक्षण संक्रमण सबसे पहले होता है।

हालांकि, जांच ओपीडी में अनेक बाल लक्षण वाले मरीजों की होगी। दिल्ली अस्पताल में बाल लक्षण वाले मरीजों को जांच होगी।

अस्पताल पहुंचने पर एक बार कोरोना जांच के बाद 48 घंटे तक दोबारा जांच के लिए दूसरे दिन जाना जाएगा।

टेलिग्राफ मामले और जांच

देश में 24 घंटों में स्वास्थ्य बीमारी की जांच कर रहे हैं। दिल्ली में कोरोना की संख्या 38 लाख के पार गई है। दिल्ली में 45 मामले और अन्य जांचों में 40 मामले बढ़ गए हैं। दिल्ली में कोरोना की संख्या 38 लाख के पार गई है। दिल्ली में 45 मामले और अन्य जांचों में 40 मामले बढ़ गए हैं।

50 दिन बाद 2737 केस

dिल्ली में कोरोना के मामले 2700 के आंकदेखी जाना गया।

दिल्ली में कोरोना के मामले 2700 के आंकदेखी जाना गया।

योगा पेज 03
Coronavirus (Hindustan: 2020904)

https://epaper.livehindustan.com/imageview_292166_85160502_4_1_04-09-2020_3_i_1_sf.html
दिल्ली में कोरोना की दूसरी लहर नहीं: जैन

अस्पतालों में 48 फीसदी मरीज बढ़े

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पीड़ितों में 48 फीसदी की वृद्धि हुई है।

राजधानी में कोरोना की दूसरी लहर पर
जैन ने कहा कि कोरोना की जांच बढ़ते दिख रहे हैं। देश में तो लगातार केस बढ़ रहे हैं।

जैन ने कहा कि इस बात पर हमें ज्यादा नहीं सोचना कि एक दिन में एक हज़ार केस आए थे या 1500 केस आए थे। अभी हम नहीं कह सकते कि कोरोना दिल्ली में हाल हुआ है।

झूठे मंत्री ने कहा कि दूसरी लहर तब कह सकते हैं, जब एक बार पूरी तारीख से कोरोना खत्म हो जाए और फिर दो महीने या 6 महीने के बाद नए के से केस आने लगे।

एम्स निदेशक डॉ. रणजीत गुप्ता ने बुधवार को दिल्ली में कोरोना के नए मामले बढ़ने पर कोरोना की दूसरी लहर का बात कही थी। जैन ने कहा कि हम ज्यादा से ज्यादा टेस्ट कर रहे हैं।

बुधवार को करीब 28 हज़ार टेस्ट हुए थे। गुरुवार को करीब 35 हज़ार टेस्ट हुए। जैन ने कहा कि दिल्ली में 14 दिनों में कोरोना बढ़ा है। इनमें से 70 प्रतिशत से ज्यादा बढ़ा है। जिन 5-6 अस्पतालों में ऐसी शिकायतें आ रही हैं। वहां हमने पता किया। वहां 70-80 प्रतिशत मरीज बढ़ा है। इस वजह से कुछ चुनिंदा अस्पतालों में ऐसे हालात हैं। कुल मिलाकर जगह की कमी नहीं है।