Droplet dispersion

Scientists decode how virus-carrying droplets disperse as infected people breathe
The current study, according to the researchers, provides a general framework to understand the droplet dispersion (The Tribune: 2020806)


Scientists decode how virus-carrying droplets disperse as infected people breathe

Scientists have developed a new framework to understand the dispersion of droplets of different sizes which are ejected as people breathe, findings that shed more light on the transmission pattern of diseases such as COVID-19.

The study, published in the journal Physics of Fluids, used mathematical formulae to determine the maximum range of small-, intermediate- and large-sized droplets.

According to the researchers, including those from the University of Edinburgh in the UK, the findings have important implications for understanding the spread of airborne diseases like COVID-19 since their dispersion tests revealed the absence of intermediate-sized droplets.

"We wanted to develop a mathematical model of someone breathing that could be explored analytically to examine the dominant physics at play," said Cathal Cummins, a co-author of the study from the Heriot-Watt University in the UK.

As people breathe, they emit droplets of various sizes that don't necessarily follow the airflow faithfully, the scientists said.

The current study, according to the researchers, provides a general framework to understand the droplet dispersion.

They said the model provides formulas to predict when such droplets will have short ranges.
"Our study shows there isn't a linear relation between droplet size and displacement -- with both small and large droplets travelling further than medium-sized ones," said Felicity Mehendale, a co-author of the study from the University of Edinburgh.

"We can't afford to be complacent about small droplets," Mehendale said, adding that personal protective equipments (PPEs) used by healthcare workers and clinicians are effective barriers to large droplets, but may be less effective for small ones. The scientists noted that they are currently working on plans to manufacture an aerosol extractor device to keep clinicians safe during a wide range of aerosol-generating procedures routinely performed in medicine and dentistry.

They said one such extraction unit placed near the droplet sources can effectively trap droplets if their diameters fall below that of a human hair.

"This has important implications for the COVID-19 pandemic," Cummins said. "Larger droplets would be easily captured by PPE, such as masks and face shields. But smaller droplets may penetrate some forms of PPE, so an extractor could help reduce the weakness in our current defense against COVID-19 and future pandemics," he added.

According to Mehendale, a better understanding of the droplet behaviour will help inform the safety guidelines for aerosol-generating procedures, and is also relevant during the current and future pandemics, as well as for other infectious diseases.

"This mathematical model may also serve as the basis of modelling the impact on droplet dispersion of ventilation systems existing within a range of clinical spaces," she added. PTI

**Novel way to treat severe Covid-19**

**Indian-origin scientists find novel way to treat severe Covid-19**

The treatment was more effective when administered earlier in the disease course, reducing mortality rate and the need for intubation(The Tribune: 20200806)


Indian-origin scientists find novel way to treat severe Covid-19

New York, August 5

A team of Indian-origin researchers has found that patients experiencing severe Covid-19 symptoms had improved outcomes when administered an Interleukin-6 (IL6ri) inhibitor, sarilumab or tocilizumab—used in treating autoimmune diseases like rheumatoid arthritis (RA) and other several inflammatory conditions.

The treatment was more effective when administered earlier in the disease course, reducing mortality rate and the need for intubation.
Published in the International Journal of Infectious Diseases, the results showed that Interleukin-6 inhibitors appear to be a more effective treatment method as compared to other options, including remdesivir and dexamethasone, which are recommended and are being currently used to check the pandemic.

"At a time when treatments are being tested with urgency amid the Covid-19 pandemic, our study results offer some hope towards finding solutions to better treat patients infected by this disease," said study researcher Manish Sagar from the Boston University in the US.

According to the study, elevated IL-6 levels may mediate the severe systemic inflammatory responses that occur in patients with severe acute respiratory syndrome or Covid-19 infection.

The observational study included 255 Covid-19 patients being treated with IL6ri during stage IIB (149 patients) and stage III (106 patients) of the disease.

Once an appropriate patient was identified, he/she was given IL6ri (sarilumab or tocilizumab) based on iteratively reviewed guidelines.

The IL6ri was initially reserved for critically-ill patients, but after review, the treatment was liberalised for patients with lower oxygen requirements.

The IL6ri recipients had considerably higher supplementary oxygen requirements, indicating more advanced disease than patients in previous remdesivir and dexamethasone trials, and would have been expected to have a higher mortality rate.

The study's sampling-with-replacement analysis found that the patients who received IL6ri had a lower mortality rate than patients in the intervention and control groups of remdesivir and dexamethasone trials.

The 22.9 per cent mortality rate for the 105 Boston Medical Center patients that required ICU care (41.1 per cent) was considerably lower than previously published 45-50 per cent mortality in other ICU studies.

"The greatest benefit of IL6ri use was seen in patients who received the drug in an earlier stage, prior to critical respiratory decompensation, showing the importance of prompt testing and treatment," said study researcher Pranay Sinha.

"We hope these findings can help guide physicians as we seek solutions to reduce mortality, increase extubation, reduce the length of stay in the hospital, and have more patients discharged from the hospital alive," Sinha added. IANS
Arthritis drug

Arthritis drug can shorten hospital stay for severe COVID-19 patients: Study

Hyperinflammation triggered by the new coronavirus is central to the pathological process (The Tribune: 2020806)


The drug tocilizumab, which is used in the treatment of various forms of arthritis, can greatly shorten the time on ventilation and hospital stays for patients with severe COVID-19, according to a Swedish study.

The study, published in The Journal of Internal Medicine, included 87 patients with severe COVID-19 in intensive care at Karolinska University Hospital in Sweden.

"The report is, as far as we know, the first from Sweden to present results of a specific drug intervention for severe cases of COVID-19," said Piotr Nowak from Karolinska University Hospital.

In the study, 29 of the patients received tocilizumab, a drug approved for the treatment of rheumatoid arthritis that blocks the so-called IL-6 receptor to prevent viral hyperinflammation or cytokine storm.

Hyperinflammation triggered by the new coronavirus is central to the pathological process and causes high levels of the cytokine IL-6, which are associated with a more severe COVID-19 disease, the researchers said.

The differences between the treatment and control groups were significant, they said.

The study found that patients who received tocilizumab were hospitalised for a much shorter length of time, including time spent on a ventilator, than those who received the standard treatment.

The time spent on ventilation was reduced by ten days, the time spent in intensive care by eight days, and the total hospital stay by ten days, according to the researchers.

The treatment was not associated with serious adverse events, they said.

"So it seems we can help severely ill COVID-19 patients by affecting inflammation in the body with this treatment," said Nowak.
"The results now need to be corroborated by a larger study that randomly assigns patients to either tocilizumab or other treatment," he said.

The study is a so-called retrospective cohort study, which involves working back from particular outcomes to determine possible causal factors, the researchers said.

In this case, such a factor was who had received drug treatment and who had not, they said.

The drawback is that the results are less reliable since it is harder to control for different influencing factors, they said. PTI

Common cold infection

Common cold infection may train the body to recognise novel coronavirus: Study
The research, published in the journal Science, noted that the immune system’s memory T cells keep track of the viruses they have seen before(The Tribune: 2020806)


Common cold infection may train the body to recognise novel coronavirus: Study
Photo for representation

The immune system’s memory helper T cells, which recognise the common cold virus and help the body fight it off, also identify some parts of the novel coronavirus, according to a study whose findings may explain why some people have milder COVID-19 cases than others.

The research, published in the journal Science, noted that the immune system’s memory T cells keep track of the viruses they have seen before, giving the cells a headstart in recognising and fighting off repeat invaders.

However, the scientists, including those from La Jolla Institute (LJI) in the US, cautioned that it is too soon to say whether such pre-existing immune cell memory affects COVID-19 clinical outcomes.

“We have now proven that, in some people, pre-existing T cell memory against common cold coronaviruses can cross-recognise SARS-CoV-2, down to the exact molecular structures,” said Daniela Weiskopf, a co-author of the study from LJI.

“This could help explain why some people show milder symptoms of the disease while others get severely sick,” Weiskopf said.
Alessandro Sette, another co-author of the study from LJI, noted that the reactivity of the immune system may translate to different degrees of protection.

“Having a strong T cell response or a better T cell response may give you the opportunity to mount a much quicker and stronger response,” Sette said.

An earlier study by Sette and his team had shown that 40 to 60 per cent of people who were never exposed to the novel coronavirus SARS-CoV-2 had T cells that reacted to the virus.

According to the study, the immune systems in these individuals recognised fragments of the virus it had never seen before — a finding which was also reported among people in the Netherlands, Germany, Singapore and the UK.

In the current research, the scientists assessed samples collected from study participants who had never been exposed to SARS-CoV-2.

They defined the exact parts of the virus that are responsible for the cross-reactive T cell response.

Their analysis showed that unexposed individuals can produce a range of memory T cells that are equally reactive against SARS-CoV-2 and four types of common cold coronaviruses.

Based on the finding, the scientists said fighting off a common cold coronavirus could teach the T cell compartment to recognise some parts of SARS-CoV-2 as well.

They believe this process provides evidence for the hypothesis that common cold viruses can, in fact, induce cross-reactive T cell memory against SARS-CoV-2.

“We knew there was pre-existing reactivity and this study provides very strong direct molecular evidence that memory T cells can ‘see’ sequences that are very similar between common cold coronaviruses and SARS-CoV-2,” Sette said.

The scientists found that while some cross-reactive T cells targeted the SARS-CoV-2’s spike protein — the region of the virus that recognises and binds to human cells — pre-existing immune memory was also directed to other SARS-CoV-2 proteins.

Sette noted that the finding is relevant since most vaccine candidates target the spike protein.

The findings, according to the researchers, suggest the hypothesis that inclusion of additional SARS-CoV-2 targets might enhance the potential to take advantage of this cross reactivity, and could further enhance vaccine potency. PTI

**Mental health market**

**The online mental health market (The Hindu: 2020806)**
As social media accounts by ‘positivity coaches’, ‘wellness mentors’, and ‘motivational speakers’ mushroom, here’s why we might need better regulation
It was the week following actor Sushant Singh Rajput’s tragic death. Farheen Meraj, a Noida-based research fellow with a Government organisation, stumbled upon a post by a someone who called themselves a mental health counsellor.

Medical care

**Continuity of medical care will now be a reality (The Hindu: 2020806)**

Bengaluru startup develops platform on which complex healthcare applications can be easily built.
You go to Hospital A for treatment. You get well. But after six months, the illness recurs. You go to a different hospital, B. Even though all your personal data and treatment information were digitally entered in the first hospital, you have to start all over again in the second hospital, except that during the course of the consultation, the doctor has a look at the file from Hospital A. Nevertheless, a fresh file is opened in Hospital B.

COVID-19 vaccine

**Zydus Cadila to commence phase II clinical trials of COVID-19 vaccine from Aug 6 (The Hindu: 2020806)**

Zydus Cadila to commence phase II clinical trials of COVID-19 vaccine from Aug 6
Zydus Cadila Chairman Pankaj R. Patel said the phase I dosing to establish the safety of ZyCoV-D is an important milestone.
Drug firm Zydus Cadila on Wednesday said the phase I clinical trial of its COVID-19 vaccine candidate, ZyCoV-D, has been completed and it will

Coronavirus

Coronavirus | ICMR fast-tracks approvals for Israeli research coordinated by DRDO (The Hindu: 2020806)

[Link to article]

DRDO coordinating effort including transfer of data, saliva samples from 5000 patients
The government has pulled all stops to help Israel conduct COVID-19 research on patients admitted to four Delhi hospitals, including transfer of saliva

Alcoholism treatment

Study finds alcoholism treatment is potentially effective against COVID-19 (New Kerala: 2020806)

[Link to article]

Moscow [Russia], Aug 5: A team of chemists used molecular modelling to find out that two medications that have been known for a long time can be used to fight SARS-CoV-2. These are disulfiram, which is used to treat alcoholism, and neratinib, an experimental drug being used to treat breast cancer.

The research was led by chemists from HSE University and the Zelinsky Institute of Organic Chemistry. The paper about the discovery has been in the issue of Mendeleev Communications journal.

The structural elements of the virus that are less subject to mutation during its evolution should be chosen as a target for the potential treatment. Otherwise, a medication effective against one strain would no longer be effective against another. The best candidates for this are conservative proteins, such as the SARS-CoV-2 virus main protease M pro. In addition to being resistant to mutations, M pro plays a major role in coronavirus replication, which means that
its inhibition (blocking its function) is able to slow down or even completely stop its reproduction inside the body.

Usually, the process of docking, as with a port dock and a ship entering it, is used for molecular modelling in simple cases. Two molecules participate in docking. One is called a 'ligand' (here, it is a medicine), and the other one is 'receptor' (or active site) of the target protein, such as Mpro, which can be used to 'dock'. An effective drug docks with the active site, by covalent links, which makes the enzyme dysfunctional or destroys it. But classical docking does not work in SARS-CoV-2.

To overcome this problem, chemists from HSE University and the Zelinsky Institute decided to use 'on-top docking', which they came up with shortly before the pandemic.

'We decided not to focus on the previously described active site, but to investigate the whole surface of M proprotein with many medications, hoping that the big calculation powers would return useful "dockings",' - says Igor Svitanko, the author of the article, Professor at the HSE Joint Department of Organic Chemistry with the RAS Zelinsky Institute of Organic Chemistry.

The researchers used the spatial model of SARS-CoV-2 Mpro created in January 2020 from PDB database (ID 6LU7). The potential drugs were taken from the database of medications approved by the United States Food and Drug Administration (FDA). The research team's own algorithms were used for modelling.

The modelling data demonstrated that sulphur-containing drugs show unusually high ligand efficiency at the active centre of SARS-CoV-2 main protease Mpro, but only disulfiram 4 retains stable interactions.

Today, it is most commonly used for treating alcoholism. Disulfiram fights SARS-CoV-2 in two ways. First, as previously demonstrated in vitro with SARS and MERS coronaviruses, it is a covalent inhibitor. In addition, it fights COVID-19 symptoms such as the significant decrease in reduced glutathione, which is an important antioxidant. This deficiency may lead to severe manifestations of the disease.

In addition to disulfiram, the Russian chemists were the first to predict the potential efficiency of neratinib, an irreversible tyrosine kinase inhibitor, against SARS-CoV-2. Just recently, in 2017, FDA approved neratinib as an adjuvant treatment of breast cancer.

Modelling has shown that both potential inhibitors of the main coronavirus protease (M pro) are, presumably, covalent. For example, disulfiram can probably block the M pro enzymatic activity by thiol-disulfide exchange reaction, while neratinib binding suggests the possibility of covalent interaction similarly to covalent peptide inhibitors.

The tests that were performed on July 27, 2020, at Reaction Biology Corp., a certified laboratory in the U.S., demonstrated that disulfiram really inhibits M pro in 100 nm concentration, which confirmed the results of the modelling. Unfortunately, the second substance - neratinib - demonstrated activity on M pro, but it was insufficient for clinical use.

Meanwhile, the main achievement is the demonstration that the 'on-top docking' approach is working and returns quite realistic and controllable results. The team's plans for late 2020 and
2021 include molecular modelling of treatments for diseases that have demonstrated their harmfulness but have not yet spread over the world.

**Smoking**

**Study reveals how smokers are at hip fracture risk (New Kerala: 2020806)**


New York, Aug 5: Smoking has been linked to a higher risk of bone fracture, but researchers have now identified certain lung-related factors -- such as smoking or passive smoke -- may help to predict an individual smoker's fracture risks.

"Hip fractures are associated with significant morbidity and mortality in smokers with lung disease, but whether lungaspecific factors are associated with fracture risk is unknown," said study authors from the University of Pittsburgh in the US.

According to the researchers, the goal was to determine whether lungaspecific factors are associated with incidents of hip fracture and if they improve risk discrimination of traditional fracture risk models in smokers.

The findings were published in the Journal of Bone and Mineral Research. In the study of 9,187 adults who currently or formerly smoked, there were 361 new hip fractures reported over a median follow-up of 7.4 years.

Known risk factors associated with experiencing a hip fracture included older age, female sex, osteoporosis, previous spine and hip fracture, rheumatoid arthritis and diabetes.

The study suggested that the incorporation of lungaspecific risk factors into fracture risk assessment tools may more accurately predict fracture risk in smokers.

"We need to look beyond traditional risk factors when making osteoporosis screening and management decisions in our patients with chronic obstructive pulmonary disease (COPD)," said study lead author Jessica Bon from the University of Pittsburgh.

"A former smoker with frequent COPD exacerbations or significant emphysema on chest CT scan may be at greater risk of fracture than would be expected based on age or sex or other underlying comorbidities alone," Bon noted.
Diabetes

Rheumatoid arthritis linked to lower risk of diabetes (New Kerala: 2020806)


Rheumatoid arthritis linked to lower risk of diabetes
Researchers have found that adults with rheumatoid arthritis had a lower risk of developing type 2 diabetes than other individuals, including those with other types of arthritis.

"We have examined the risk of incident type 2 diabetes mellitus among rheumatoid arthritis patients versus four different comparison cohorts," said the study authors from Harvard University in the US. For the study, published in the journal Arthritis Care iamp; Research, the research team compared adults with rheumatoid arthritis with four other groups.

Individuals from the general population without rheumatoid arthritis, individuals with hypertension, individuals with osteoarthritis, and individuals with psoriatic arthritis. According to the researchers, a total of 449,327 people were included. During the median of 1.6 years of follow-up, the rate of type 2 diabetes development was lowest in the rheumatoid arthritis group (7.0 per 1,000 people per year) and highest (12.3 per 1,000 people per year) in the hypertension group.

After adjustments, rheumatoid arthritis was associated with a 24 per cent to 35 per cent lower risk of developing type 2 diabetes compared with the four other groups. In this large population-based cohort study, the findings showed that patients had a lower rate of incident type 2 diabetes compared to the general non-rheumatoid arthritis, hypertension, osteoarthritis, and psoriatic arthritis cohorts.

"While systemic inflammation in rheumatoid arthritis increases the risk of cardiovascular disease, our findings unexpectedly show that having rheumatoid arthritis itself does not confer an increased risk of type 2 diabetes compared with four different comparator groups," said senior author Seoyoung C. Kim.

"Since all rheumatoid arthritis patients included in our study were treated with at least one disease-modifying antirheumatic drug, our study is unable to test the association between no treatment or under-treatment for rheumatoid arthritis and risk of type 2 diabetes," Kim noted.
Here's how blueberry-enriched diet may help women's muscle growth, repair (New Kerala: 2020806)


Here's how blueberry-enriched diet may help women's muscle growth, repair

California, Aug 5: A new research study investigated how serum from subjects consuming a diet enriched with blueberries would affect the cells responsible for muscle growth and repair.

The emerging study, "Consumption of a blueberry-enriched diet by women for six weeks alters determinants of human muscle progenitor cell function," was conducted at Cornell University. The results of the study were published in the Journal of Nutrition.

The study was conducted over six weeks with 22 women, 12 aged 25-40 and 10 aged 60-75. For the blueberry-enriched diet, participants consumed the equivalent of 1.75 cups of fresh blueberries/day, given as freeze-dried blueberries (19 g in the morning and 19 g in the evening), along with their regular diet. Participants were also asked to avoid other foods rich in polyphenols and anthocyanins.

Serum was obtained from the participants 1.5 hours after consuming the morning dose of blueberries. The researchers then investigated how the serum would affect muscle progenitor cell function through proliferation or cell number, capacity to manage oxidative stress and oxygen consumption rate or metabolism.

The results showed the six-week blueberry-enriched serum obtained from the women aged 25-40 increased human muscle progenitor cell numbers in culture. There was also a trend toward a lower percentage of dead human muscle progenitor cells, suggesting resistance to oxidative stress, as well as increased oxygen consumption of the cells. There were no beneficial effects seen in the muscle progenitor cells treated with serum from participants aged 60-75 who consumed the blueberry-enriched diet.

"The consequences associated with the deterioration of skeletal muscle are a loss of mobility, decreased quality of life, and ultimately, loss of independence. Currently, research on dietary interventions to support skeletal muscle regeneration in humans is limited. This preliminary study of muscle progenitor cell function paves the way for future studies to develop clinical interventions," said Anna Thalacker-Mercer, Ph.D., the study's lead investigator. "While the results cannot be generalised to all populations, this study is an important step in translating findings from cell culture and rodent studies to a potential dietary therapy for improving muscle regeneration after injury and during the ageing process."

According to the Centers for Disease Control and Prevention (CDC), muscles lose strength, flexibility, and endurance over time. Muscle mass decreases three to five per cent every decade after 30 years of age, and that rate increases over age 60. Therefore, strategies to improve muscle progenitor cell proliferation and lower oxidative stress may also benefit muscle regeneration during the ageing process.
Research on the role that blueberries may play in promoting good health is ongoing across multiple areas, including cardiovascular health, diabetes management, brain health, exercise and the gut microbiome.

**Cannabis**

The chemicals in cannabis have been linked to an increased risk of heart attacks, heart failure and atrial fibrillation in observational studies; however, a full understanding of how the use of cannabis affects the heart and blood vessels is limited by a lack of adequate research, according to a new Scientific Statement. (New Kerala: 2020806)


The statement was issued by the American Heart Association (AHA) and is published in its flagship journal Circulation.

According to the statement, although cannabis, also known as marijuana, may be helpful for conditions such as spasticity associated with multiple sclerosis, among others, cannabis does not appear to have any well-documented benefits for the prevention or treatment of cardiovascular diseases. Preliminary studies have found that cannabis use could negatively impact the heart and blood vessels.

"Attitudes towards recreational and medicinal use of cannabis have changed rapidly, and many states have legalized it for medical and/or recreational use. Health care professionals need a greater understanding of the health implications of cannabis, which has the potential to interfere with prescribed medications and/or trigger cardiovascular conditions or events, such as heart attacks and strokes," said Robert L. Page II, Pharm.D., M.S.P.H., FAHA, chair of the writing group for the statement and professor in the department of clinical pharmacy and the department of physical medicine/rehabilitation at the University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences in Aurora, Colorado.

A recent study cited in the statement suggests that cannabis use is present in 6% of heart attack patients under 50 years of age. Another study found that cannabis users ages 18 to 44 had a significantly higher risk of having a stroke compared to non-users. "Unfortunately, most of the available data are short-term, observational and retrospective studies, which identify trends but do not prove cause and effect," said Page.

The most common chemicals in cannabis include THC (tetrahydrocannabinolic acid), the component of the plant that induces a "high," and CBD (cannabidiol), which can be purchased over the counter, but to date, the FDA has only approved one CBD-derived product. Importantly, the FDA has not approved any other cannabis, cannabis-derived, or cannabidiol (CBD) products currently available on the market.
Some studies have found that within an hour after cannabis is smoked, THC may induce heart rhythm abnormalities, such as tachycardia, premature ventricular contractions, atrial fibrillation and ventricular arrhythmias. Acutely, THC also appears to stimulate the sympathetic nervous system, which is responsible for the "fight or flight" response, resulting in a higher heart rate, a greater demand for oxygen by the heart, higher blood pressure while laying down and dysfunction within the walls of the arteries.

In contrast, studies on CBD, which does not produce a "high" or intoxication, have found associations with reduced heart rate, lower blood pressure, increased vasodilation (the ability of the arteries to open), lower blood pressure and potentially reduced inflammation. Inflammation is linked to atherosclerosis, the slow narrowing of the arteries that underlies most heart attacks and, possibly strokes.

Smoking and inhaling cannabis, regardless of THC content, has been associated with cardiomyopathy (heart muscle dysfunction), angina (chest pain), heart attacks, heart rhythm disturbances, sudden cardiac death and other serious cardiovascular conditions. In states where cannabis has been legalized, an increase in hospitalizations and emergency department visits for heart attacks has been observed.

The way cannabis is consumed may influence how it affects the heart and blood vessels. "Many consumers and health care professionals don't realize that cannabis smoke contains components similar to tobacco smoke," said Page. Smoking and inhaling cannabis, regardless of THC content, has been shown to increase the concentrations of blood carboxyhemoglobin (carbon monoxide, a poisonous gas) five-fold, and a three-fold increase in tar (partly burnt combustible matter), similar to the effects of inhaling a tobacco cigarette.

Carbon monoxide intoxication from inhaled tobacco or cannabis has been associated with several heart problems, such as heart muscle disease, chest pain, heart attacks, heart rhythm disturbances and other serious conditions.

Cannabis use should be discussed in detail with a health care professional so that an individual's potential health risks can be reviewed. "If people choose to use cannabis for its medicinal or recreational effects, the oral and topical forms, for which doses can be measured, may reduce some of the potential harms. It is also vitally important that people only use legal cannabis products because there are no controls on the quality or the contents of cannabis products sold on the street," said Page.

In addition to the poisonous compounds in cannabis smoke, vaping cannabis may also result in serious health outcomes, especially when it is mixed with vitamin E acetate oils, which are linked to EVALI (e-cigarette or vaping product use-associated lung injury), the potentially fatal illness that emerged among e-cigarette users last year.

"People who use cannabis need to know there are potentially serious health risks in smoking or vaping it, just like tobacco smoke. The American Heart Association recommends that people not smoke or vape any substance, including cannabis products, because of the potential harm to the heart, lungs and blood vessels," said Rose Marie Robertson, M.D., FAHA, the deputy chief science and medical officer for the American Heart Association and co-director of the AHA Tobacco Center for Regulatory Science.
The statement also discusses cannabis use among older adults, people diagnosed with cardiovascular diseases and other populations including youth. Some studies have suggested that cannabis use--both CBD and THC--may be safe and effective for older populations. Though they are the least likely to use cannabis, older adults often use it to reduce neuropathic pain (common among people with type 2 diabetes), improve quality of life and decrease prescription drug use (including opioids).

Additionally, benefits for patients with age-related diseases, including Parkinson's and Alzheimer's, have also been reported in some studies; however, there is very little research on the long-term effects of cannabis use among this group of people. Another concern about older adults using cannabis is the potential of interactions with other medications, including blood thinners (anti-coagulants), anti-depressants, antipsychotics, antiarrhythmics for heart rhythm abnormalities, and statin drugs, which reduce cholesterol levels.

For people diagnosed with heart disease, cannabis should be used with extreme caution because cannabis increases the heart's need for oxygen at the same time as it decreases available oxygen supply, which could cause angina (chest pain). In addition, in some studies, cannabis triggered a heart attack in people with underlying heart disease. Other studies have linked cannabis use to a higher risk of strokes and heart failure.

Research into the effects of cannabis on the heart and blood vessels has been limited because cannabis is categorized as a Schedule I controlled substance by the U.S. Drug Enforcement Agency (DEA). Schedule I controlled substances are defined as having no accepted medical use, a high potential for abuse and an unacceptable safety profile. The AHA's Scientific Statement suggests that the DEA remove cannabis from the Schedule I of the U.S. Controlled Substances Act so that it can be widely studied by scientists. Forty-seven U.S. states, the District of Columbia, and 4 of 5 U.S. territories allow some form of cannabis use, and its use has risen considerably over the past decade, particularly among people 18-25 years of age. Although many states have legalized medical and/or recreational cannabis use, cannabis growing, sales and use are illegal at the federal level, further complicating scientific research.

"We urgently need carefully designed, prospective short- and long-term studies regarding cannabis use and cardiovascular safety as it becomes increasingly available and more widely used," Page said. "The public needs fact-based, valid scientific information about cannabis's effect on the heart and blood vessels. Research funding at federal and state levels must be increased to match the expansion of cannabis use--to clarify the potential therapeutic properties and to help us better understand the cardiovascular and public health implications of frequent cannabis use."

The legalisation of cannabis for medical purposes should align with patient safety and efficacy. Legalization for recreational use will remain a significant concern until more research can be conducted on the safety and long-term population health effects across the life course and the equity and social justice impact of these laws. In those states where cannabis is legal for recreational or medical purposes, there should be a robust public health infrastructure that is adequately funded and implemented to minimize its impact on CVD mortality, especially among young people those who have heart disease. The statement calls for the federal government to create standardized labelling about the amount of THC and CBD and require it on all legal cannabis products.
The Association believes cannabis should be tightly integrated into comprehensive tobacco control and prevention efforts that include age restrictions for purchasing, retailer compliance, excise taxes, comprehensive smoke-free air laws, professional education, screening within the clinical environment--for example, when a patient is admitted to the hospital and routinely screened to avoid medication interactions or potential toxicity--and coverage of cessation treatment programs by insurers, Medicare and Medicaid. These efforts should be adequately funded, and at least some portion of the revenue from cannabis taxation should be directed toward programs and services that improve public health.

**Breastfeeding**

**Post-partum fitness for breastfeeding mothers (New Kerala: 2020806)**


Post-partum fitness for breastfeeding mothers
New Delhi, Aug 5 : Exercise, along with a balanced diet, is an essential part of a healthy lifestyle. Light to moderate physical activity is safe and beneficial for breastfeeding moms, as it does not affect the amount, taste, or composition of your breast milk.

Common issues faced by post-natal moms is back pain, bulging stomach, postural changes, weight gain etc. If you're just starting an exercise program, be sure to start slow.

If you are unsure if an exercise is safe, call your doctor's office. If the delivery was not complicated and as a new mom, you were exercising till the end of your pregnancy, then soon after delivery you can begin light exercises as well as stretches, Ruth Patterson, Chief Lactation Consultant - Cloudnine Group of Hospitals tells IANSlife on the occasion of World Breastfeeding Week, marked from August 1-7 every year.

Basic core exercises within the first three days post birth like isometric abdominals, pelvic floor exercises, gradual back exercises along with breathing exercises, ankle movements ease swollen feet and aid in circulation, the expert says.

"Start working out for short periods of time a few days a week, then gradually increase your activity level. Stop exercising if you feel pain or experience palpitations, dizziness, shortness of breath, or an increase in vaginal bleeding. Breastfeed or pump your breast milk before you begin your work out. Full breasts can make exercising uncomfortable and wear breast pads if you're concerned about leaking."

What you should know about workout and breastfeeding

As you begin your work out journey, there are a few things to keep in mind, Patterson points out

Always check with your doctor first before you begin an exercise program.
Start working out for short periods of time a few days a week, then gradually increase your activity level.

Stop exercising if you feel pain or experience palpitations, dizziness, shortness of breath, or an increase in vaginal bleeding.

To prevent injury, spend a few minutes warming up before beginning your routine, and take a few moments afterward to cool down.

You should drink plenty of fluids to avoid dehydration, so have a glass of water before and after your workout. You can even keep a water bottle with you during your workout and have a drink when you take breaks.

Breastfeed or pump your breast milk before you begin your work out. Full breasts can make exercising uncomfortable.

Wear breast pads if you're concerned about leaking breast milk while you're working out.

Wear a supportive bra that fits you properly. A very tight bra or one that does not provide enough support can be uncomfortable and put you at risk for mastitis.

If you tend to develop mastitis, you should limit upper-body exercises, especially lifting weights.

Some babies don't like nursing when mom has been sweating (due to the salt on mom’s skin) so you may wish to rinse your breasts or take a shower before nursing.

If you regularly lift weights or do other exercises involving repetitive arm movement and you develop plugged ducts.

Avoid losing weight rapidly

Consume at least 1,800 calories per day

How does strenuous exercise affect breastfeeding?

Although light to a moderate fitness program is safe and healthy, vigorous exercise can lead to a breast infection and cause a decrease in your breast milk supply. It can also change the taste of your breast milk. Strenuous exercise can cause lactic acid to build up in your body and enter your breast milk, giving your usually sweet milk a bitter taste. Sweat can also change the taste of breast milk making the breasts taste salty. Some babies are not bothered by these changes, but others may refuse to breastfeed.

There are many benefits to exercise. It’s good for your circulation, muscles, strength, and even your mood. Some ways working out benefits breastfeeding moms

It improves overall health and well-being
It stimulates the release of endorphins, those feel-good hormones that help chase away the baby blues, boost your mood, and make you feel happy.

It raises your body's level of prolactin, the hormone responsible for the production of breast production.

It gives you energy.

It helps relieve stress.

It increases lean muscle and keeps you fit.

It can help prevent heart disease.

It may lead to a better night's sleep.

Along with a healthy diet and breastfeeding, regular exercise can help you lose your pregnancy weight.

Here are a few safe and easy ways to get started.

Go for a walk Carrying your baby in a baby carrier or pushing a stroller is an excellent way to get moving and enjoy the fresh air.

Join a Mommy and me exercise program Find a yoga class or other exercise class that incorporates the baby into the workout routine. Mommy and Me classes are also an excellent way for new moms to meet and socialize.

Go for a swim. Swimming is a fantastic low-impact, whole-body exercise.

Work out at home. Use a workout or dance DVD or hop on the treadmill.

Always remember that exercises release endorphins which are great mood elevators, sleep enhancers, weight loss solution and improve fitness levels giving you more energy to handle the new responsibilities and relieve stress. This also reduces the baby blues, boost your mood, and makes you feel happy. Along with a healthy diet and breastfeeding, regular exercise can help you lose your pregnancy weight.

**Vitamin D**

**Vitamin D does not reduce risk of depression in adults, confirms new study** *(New Kerala: 2020806)*

Boston, August 5: Vitamin D supplements do not show any significant benefit in the protection against depression in middle-aged or older adults, according to the results from one of the largest ever studies of its kind.

In this study, however, "There was no significant benefit from the supplement for this purpose. It did not prevent depression or improve mood," said Olivia I. Okereke, MD, MS, of Massachusetts General Hospital MGH's Psychiatry Department.

Okereke is the lead author of the report and principal investigator of this study, published in JAMA. It included more than 18,000 men and women aged 50 years or older. Half the participants received vitamin D3 (cholecalciferol) supplementation for an average of five years, and the other half received a matching placebo for the same duration.

Vitamin D is sometimes called the "sunshine vitamin" because the skin can naturally create it when exposed to sunlight. Numerous prior studies showed that low blood levels of vitamin D (25-hydroxy vitamin D) were associated with higher risk for depression in later life, but there have been few large-scale randomised trials necessary to determine causation. Now Okereke and her colleagues have delivered what may be the definitive answer to this question.

"One scientific issue is that you actually need a very large number of study participants to tell whether or not a treatment is helping to prevent the development of depression. With nearly 20,000 people, our study was statistically powered to address this issue," Okereke explained.

This study, called VITAL-DEP (Depression Endpoint Prevention in the Vitamin D and Omega-3 Trial), was an ancillary study to VITAL, a randomised clinical trial of cardiovascular disease and cancer prevention among nearly 26,000 people in the US.

From that group, Okereke and her colleagues studied the 18,353 men and women who did not already have any indication of clinical depression to start with, and then tested whether vitamin D3 prevented them from becoming depressed.

The results were clear. Among the 18,353 randomised participants, the researchers found the risk of depression or clinically relevant depressive symptoms was not significantly different between those receiving active vitamin D3 supplements and those on placebo, and no significant differences were seen between treatment groups in mood scores over time.

"It's not time to throw out your vitamin D yet though, at least not without your doctor's advice. Some people take it for reasons other than to elevate mood," said Okereke.

"Vitamin D is known to be essential for bone and metabolic health, but randomised trials have cast doubt on many of the other presumed benefits," said the paper's senior author, JoAnn Manson, MD, DrPH, at Brigham and Women's Hospital.
Tips to maintain oral hygiene

New Delhi, Aug 5: Foul breath can be a very embarrassing, putting one in an uncomfortable position. With a little bit of care, this common condition can easily be prevented.

The roots of this dental issue is not secretive oral cavities, gum ailments, faulty dental hygiene and coated tongue are among the most commonly known causes. Umpteen number of bacteria reside in our mouths and some of them on the tongue. Some of these are also present beneath the gum line or in pockets formed between gums and teeth. Other causes may encompass undernourishment, unrestrained diabetes, and dry mouth.

Infections like sore throat or sinusitis, or stomach issues, like gastrointestinal ulcers, heartburn problems, and being intolerant to lactose, can all contribute to this oral issue. Bad breath can also be instigated by underlying oral maladies such as dental cavities, food lodgement and gum ailments.

Read through these useful tips, shared by Dr. Karishma Jaradi, Head Dental Surgeon at Dentzz Dental, to help you in combat this oral health issues

Efficient brushing technique It is recommended to brush enamels twice a day and it is prudent to properly brush all teeth surfaces, including the gum line and internal portion of the enamels situated in proximity to the tongue. To totally avoid bad breath, you must consider investing your time in thoroughly brushing the overall tongue surface.

Daily flossing Flossing will help in removing the food fragments that tend to get stuck in between the enamels that a toothbrush possibly cannot reach out to.

Stimulating saliva production Saliva plays a very significant role in lessening bad breath in the mouth by moistening it. A dry mouth is the chief cause that can lead to halitosis. To avoid this problem, you must consider the consumption of sugar-free chewing gum which will certainly embolden the saliva production in your mouth.

Eat Healthy Indulging in wholesome edibles help in stepping up the flow of your saliva to facilitate in washing away bacteria present in the teeth, tongue, and gums that can lead to bad breath.

Avert smoking and intake of tobacco Smoking majorly contributes to bad breath. Tobacco has an ability to dry out your mouth and can leave a nasty smell that stays even post brushing your teeth.
Ensure you are always hydrated. Sipping over water will help in keeping the foul smell under control owing to the fact that it facilitates in washing away the stuck food particles and the accumulated bacteria, which are the foremost causes of bad breath.

In addition to these guidelines, you must practice well-timed oral healthcare visits and suitable dental hygiene for a reinstated mouth and above all to condense bad breath snags.

**Antibiotics**

**Antibiotics may up heart disease risk in people with diabetes (New Kerala: 2020806)**


Researchers have found that bacterial infections may elevate the risk of coronary heart disease in individuals with type 1 diabetes.

For the findings, published in the Journal of Internal Medicine, the research team wanted to investigate the association between bacterial infections and the risk of coronary heart disease (CHD) in type 1 diabetes.

"We were able to study the association between antibiotic purchases, endotoxemia and incident coronary heart disease in one of the largest cohorts of individuals with type 1 diabetes," said study authors from Folkhalsan Research Centre (FRC), in Finland.

"As diabetic nephropathy has a substantial impact on both the risk of CVD as well as the risk of infections, we further studied this association at different stages of diabetic nephropathy," authors added.

The findings showed that among 3,781 individuals with type 1 diabetes, 370 developed coronary heart disease over an average follow-up of 13.7 years.

Antibiotic purchases, reflecting bacterial infections in outpatient care, were significant risk factors for coronary heart disease, with a 21 per cent increased risk for each annual antibiotic purchase, according to the researchers.

A high blood level of bacterial lipopolysaccharides (large molecules derived from the outer layer of gram-negative bacteria) was also a risk factor for coronary heart disease.

"In broader terms, the present study demonstrates how infections associate with the development of late diabetic complications and perhaps even more importantly, how infections associate with the development of coronary heart disease, as the latter relationship has been disputed during recent years," said author Johan Rasmus Simonsen from FRC.
"Interestingly, in our study this association to incident coronary heart disease was seen specifically with antibiotic purchases, making the potential pathophysiologic mechanisms behind this finding intriguing and warranting further studies."

The researchers noted that more studies are needed to further elucidate the pathophysiologic mechanisms behind this association.

**Meditation**

**How meditation can be effective during PMS, period pain (New Kerala: 2020806)**


How meditation can be effective during PMS, period pain
Meditation plays an important role in dealing with PMS and pain during menstrual cycle. Spiritual life coach Dr. Priya Kaul mentions a few tips on how meditation can be effective during PMS and menstrual pain.

Period pain affects the abdomen and the lower abdomen region. If one does meditation keeping in mind the sacral chakra, solar plexus with orange and yellow color or normally even focus on the mantra Om, it would help in pain relief. Pain killer can only suppress the pain but meditation releases the pain. Doing meditation regularly can help you get rid of the pain permanently.

It is not easy to focus during anxiety, pain or when one is having cramps. But sitting in comfortable position with mudras, sitting posture, lighting, color, sounds playing very important role when one wants to meditate.

Doing meditation the right way is very important else it would be of no help for the mind and the body. The best way to meditate during such time is to lie down comfortably with legs straight, keep in mind that legs should not be crossed. The room should peaceful and silent with good fragrant candles and music of around 300 to 535 Hz could be of great help. Mediation can be coupled with smooth tea and some good affirmations.

After 10 minutes of mediation fennel, cinnamon, turmeric in lukewarm water could be of great help. Affirmations like 'I love my body', 'I appreciate my body', 'I am getting healed' from within in a subtle voice and calm tone can give wonderful results.
A new study suggests the risk of coronary artery disease (CAD) could be identified earlier by looking at reproductive risk factors.

Study results were published in Menopause, the journal of The North American Menopause Society (NAMS).

CAD is the most common type of cardiovascular disease. Because women have different symptoms than men, and most traditional health studies have focused on men, women are often misdiagnosed or the diagnosis and treatment may be delayed, creating a greater risk for an adverse cardiac event or death.

Previous studies have provided mixed conclusions regarding the association between various reproductive risk factors, such as pregnancy and ovarian function, and CAD. However, most of these studies were small and only evaluated a limited number of risk factors.

This new study is one of the first known larger studies (involving nearly 1,500 postmenopausal women) to consider a broad range of reproductive risk factors. These include pregnancy factors, such as the number and type of pregnancy and age at first birth, as well as ovarian function factors including age at menarche, age at menopause, and reproductive life span.

Researchers in this study sought to compare reproductive factors among postmenopausal women with no apparent CAD, nonobstructive CAD, and obstructive CAD, which is the most serious form of CAD and typically leads to the worst prognoses. Because of its seriousness, the researchers specifically focused on identifying reproductive risk factors for obstructive CAD.

They concluded that multigravidity (three or more pregnancies), early menopause, and a shorter reproductive life span are independent risk factors for angiographic obstructive CAD in postmenopausal women.

Such information could be valuable in helping prevent and minimize the effect of CAD in women because pregnancy and ovarian function could serve as early indicators of a woman's risk long before symptoms appear, allowing for earlier life-changing counseling and/or pharmacologic treatment.

Study results appear in the article 'Reproductive risk factors for angiographic obstructive coronary artery disease among postmenopausal women.'
"This study expands our knowledge about the link between reproductive factors such as early menopause and shorter reproductive life span and increased cardiovascular risk. Indeed, there is a growing body of evidence suggesting that early loss of ovarian function results in accelerated aging. Future research should be directed toward identifying ways to delay ovarian aging," says Dr. Stephanie Faubion, NAMS medical director.

स्वास्थ्य हेल्थ डिसीज़ अन्य बीमारियां
आप भी थायराइड की समस्या से पाना चाहते हैं छुटकारा, तो इन घरेलू तरीकों का करें इस्तेमाल (Dainik Gagaran:: 2020806)

आप भी थायराइड की समस्या से पाना चाहते हैं छुटकारा, तो इन घरेलू तरीकों का करें इस्तेमाल थायराइड से संबंधित मामले असस सामने आते हैं, लेकिन यह बीमारी अब लाइलाज नहीं है, बल्कि इसे सही समय पर इसकी जांच कर ली जाए। कई बार उपचार के बाद भी यह थायराइड हमारे लिए एक बीमारी होने का आशय होता है। यदि इसकी जांच की जाए, तो यह खराब होने वाला होता है। इसका सीधा असस हमारी सायम, इतना गति, पाचन तत्त्व और शरीर के तापमान पर पड़ता है। जब ये हमारी आंतुलित हो जाते हैं, तो जब तक या यादा होता है, इसी ही थायराइड की समस्या कहलाते हैं। जबकि इसे नीचे लें और उसे इसमें इलाज कर लीजिए। तब ऐसा नहीं है कि इसका इलाज नहीं है, थायराइड का इलाज भी है और कई लोग इसे घरेलू उपचार की मदद से भी ठीक कर लेते हैं। आइए हम आपको इस लेख के जरिए बताते हैं कि थायराइड के लक्षण क्या है और आप इस समस्या से छुटकारा पाने के लिए इन घरेलू उपचार का इस्तेमाल कर सकते हैं।

लक्षण
वजन का लगातार बढ़ना या कम होना।
पसीना कम आना।
हड़प कम करना।
कमजोर।
शकायत।
तनाव।
रुखी त्वचा।
उच्च प्रमाण।
जोड़ीय में सुखन या दर्द।
फतहा और रुखें-बेजात झाला।
शादित बनायें होना।
मासिक धम का असामान्य होना।
प्रमाण लागता में असामान्य।
मांसपेशीय में दर्द।
चेहरे पर सुखन जतन आना।
समय से पहले बालों का पतली होना।
बालों की अन्य समस्याएं।
इसे भी पढ़ें: गले में बनने वाली गांठ हो सकती है थायराइड कैसर का संकेत, इन लक्षणों की मदद से करें पहचान

पंखुलू उपशर अध्यापा

वजन कम करने से लेकर थायराइड तक अनाहम्य हमारे लिए बहुत ही मददगार साबित होता है। अनाहम्य का एडपोजेनिक जड़-सूतियों की वृत्ति में रखा गया है। शोध में पता गया है कि अनाहम्य थायराइड हमारी को बढ़ाने में मदद कर सकता है। वहीं, एक वैज्ञानिक शोध के अनुसार अनाहम्य हार्वर्ड थायराइड के मरीजों के इलाज में काफी मददगार साबित हो सकता है। इसके साथ ही इसका असर व्यक्ति के थायराइड की स्थिति पर भी निर्भर करता है, इसलिए आपको कोशिश करनी चाहिए कि इसका इस्तेमाल करने से पहले आप डॉक्टर से जरूर संपर्क करे।

रोजमेरी और नारियल का तेल

थायराइड को ठीक करने के लिए एक्स्प्रेस पॉइंट का सहारा भी लिया जाता है, जिसकी मदद से आप आसानी से थायराइड तो ठीक कर सकते हैं। इसके लिए, आपको रोजमेरी और नारियल तेल का इस्तेमाल करना होगा। आप रोजमेरी तेल को नारियल तेल में मिश्र कर दें और पिल यह तेल को थायराइड के एक्स्प्रेस पॉइंट पर लगाएं। ये पॉइंट पतें, टांग के निकले हिस्से और पैर के नीचे होते हैं। आप उन पॉइंटों के बारे में डॉक्टर से सलाह भी ले सकते हैं। आप इस पॉइंट पर रोजमेरी को लगाएं। इसके साथ ही रोजमेरी तेल की कुछ बूटे नानापद में डालकर 15 से 20 मिनट तक उसमें बैठे भी सकते हैं।

इसे भी पढ़ें: गले में सूजन और दर्द हो सकता है लिस्टोरी कैसर का संकेत, जानें इसके लक्षण और कारण

लाइसेंस

हमारे कारण के लिए लाइसेंस लिजेन्ड फाइल कन्टेनर है या तो आप आपके जानते हैं, लेकिन क्या आप जानते हैं थायराइड के लिए भी लाइसेंस हमारी काफी मदद करता है। एक शोध के अनुसार, थायराइड में कृत्रिम खिलाफ लाइसेंस का सर्वश्रेष्ठ प्रमाण देखा गया है। आपको बता दें कि लाइसेंस में एलिसिन और फ्लोवाइड जैसे कई तरह पाए जाते हैं, जो थायराइड को ठीक करने के लिए कारण माने जाते हैं।

स्वास्थ्य स्वास्थ्य समाचार लेटेस्ट

दिल्ली में कोरोना की जांच के लिए पहली मोबाइल कोरोना टेस्टिंग बैन शुरू, जानें किन इलाकों और किस तरह करेंगी जांच(डाइनी गगरान:: 2020806)


दिल्ली में कोरोना की जांच के लिए पहली मोबाइल कोरोना टेस्टिंग बैन शुरू, जानें किन इलाकों और किस तरह करेंगी जांच।

दिल्ली में वायरस को फैलने के लिए तो आप नहीं जानते हैं, लेकिन जानते हैं कि थायराइड के लिए आपको जानते हैं कि आप नहीं जानते हैं कि करेंगी जांच।

दिल्ली में वायरस के संक्रमण को युक्ति रहे, वायरस को फैलने के लिए अचानक रोजमेरी ने कई उपायों के साथ कम करने के दो अवश्यक पाए।

दिल्ली में वायरस के संक्रमण को युक्ति रहे, वायरस को फैलने के लिए अचानक रोजमेरी ने कई उपायों के साथ कम करने के दो अवश्यक पाए।
डीएम निधि श्रीवास्तव का कहना है कि स्वास्थ्य देखभालकर्ताओं यानी की हेल्थ वकर की सुरक्षा सुनिश्चित करने के साथ-साथ कोरोना जांच का व्यवहार, सुरक्षा बनाना वेदांत महत्वपूर्ण है। इसलिए, मेह जिले ने 'टेटंग ऑफ कोवड -19 ऑन हीस' सेवा शुरू की है, जो दिल्ली की गलियों और अलग-अलग जगहों पर जाकर सभी इलाकों को कवर करेगी।

उन्होंने कहा कि ये कोरोना टेटंग का ये वाहन विदेश में जिले की संक्रमण यानी ठीक-ठीक गलियों, बड़े और छोटे इलाकों को कवर करेगा, जिसमें एक दिन में एक जिले गए नमूने की संख्या बढ़ सकती है। मोबाइल बैन एक बार में दो नमूने एक जांच कर सकती है। 

वह नाक (nasopharyngeal) और गुहर ( oropharyngeal) के भीतर लेबल्स (swabs) दोनों को एक जांच करने का काम करेगी। इसके बाद एक दिन भी कोरोना जांच की तय संख्या होगी। इसके बाद एक दिन में दो नमूने एक जांच कर सकती है। 

इसे भी पढ़ें: भारत में कोरोना वायरस निरीक्षण की संख्या 17265 पहुंची, 543 की मौत और 2547 लोग हुए ठीक

उन्होंने बताया कि ये वाहन नमूना एक जांच करेगा, वह पूर्व रूप से सिक्योरिटी में होगा, इसलिए उसे पहले तक नहीं जाने वाली पीपीई नहीं पहननी होगी, जो पहले से ही लंबी होती है।

डीएम ने बताया कि ये उनमें से अपने कर्मी को बनाने के लिए जिले में पंखा लगाया गया है, जिसे चलाने के लिए जिले में इन्टरफोक्स भी लगा हुआ है। नमूने को रखने के लिए जिले के अंदर एक आइसबॉक्स भी रखा गया है। ये मोबाइल बैन न केवल बाहरी दीवार पर किंगिटेक के माध्यम से जागरूकता फैलाएगी, बल्कि एक स्कॉर्कर से भी जुड़ी होगी, जो कोरोना वायरस से संबंधित जानकारी का प्रदान करेगी और लोगों के वीच इस वायरस को फंसने से रोकने के लिए जागरूकता फैलाएगी।

इसे भी पढ़ें: नोबेल पुरस्कार सहित दूसरे बातें भी भारत में कोरोना वायरस निरीक्षण की संख्या 17265 पहुंची