World Parkinson’s Day 2022

World Parkinson’s Day 2022: Why symptoms like tremors, rigidity, and stiffness must not be ignored (The Indian Express: 20220411)

"The goal should to be improve the quality of life with appropriate care and management of the disease," said Dr Pavan Pai, interventional neurologist


brain scan, Parkinson's disease, Parkinson's disease treatment, indian express, indian express news Parkinson's is a muscle movement disorder that impacts the muscles used in swallowing (Photo: istock/Getty Images)

Parkinson’s disease can be described as a movement disorder that impacts the nervous system, said Dr Pavan Pai, interventional neurologist, Wockhardt Hospitals, Mira Road. This World Parkinson’s Disease Day, observed annually on April 11, know everything you need to know about the condition. This year, the theme is integrated healthcare.

Also Read | Parkinson’s disease: Everything you need to know about the neurological disorder  “Since the disease, if not diagnosed on time, can lead to multiple complications, symptoms such as tremors, rigidity, and stiffness — seen due to the low dopamine levels in the brain — must not be ignored. Doing so can even lead to fatal health issues,” he said.

World Parkinson's Day, Parkinson's Awareness Month, Parkinson's disease, Parkinson's disease myths and facts, health, indian express, indian express news Did you know that tremors are not the only features of Parkinson’s disease? (Source: Getty/Thinkstock)

Some of the issues that Parkinson’s patients face include:

Cognitive problems: One may have problems with thinking, memory, judgment, and problem-solving. Patients, usually, become forgetful and have trouble finding words, difficulty in making decisions, have brain fog, and are unable to focus.
Swallowing problems: Parkinson’s is a muscle movement disorder that impacts the muscles used in swallowing. If the symptoms are ignored, one may develop a condition called dysphagia (inability to swallow food). This can be accompanied by voice changes, coughing, and even choking.

Sleep problems: This disease can invite a plethora of sleep problems. One may encounter issues such as sleep apnea, daytime sleepiness, nightmares, difficulty falling asleep or staying asleep, and inability to get a sound sleep after waking up.

Also Read | Can a simple swab test help diagnose and monitor Parkinson's disease?

Psychological issues: Those having Parkinson’s for a long time often exhibit drastic changes in behaviour, including being depressed, anxious, stressed, irritated, frustrated, agitated, violent, restless, impatient, and will also have poor self-esteem. Hence, counselling and timely medication is a must, stressed Dr Pai.

Sexual dysfunction: Drop in sexual interest and physical functioning will occur owing to the fall in dopamine levels. One will have a low sex drive, and an inability to have an orgasm or erection. Women may experience vaginal dryness.

Sensory problems: Loss of smell, vision changes, aches, pains, and balance problems are commonly seen in those with Parkinson’s disease. Neglecting the condition can lead to disruption in day-to-day life activities.

Bladder problems: The disease weakens the muscles in the digestive system which will slow down digestion, causing constipation. People will also be unable to pass urine.

Dementia: A majority of patients with Parkinson’s disease may suffer from dementia in later life. They will also have problems with speech, hallucinations, and delusions.

“Ignoring the disease can worsen one’s well-being. Hence, it is advisable to stay in touch with the doctor once the symptoms show and seek further medical attention. The goal should to be improve the quality of life with appropriate care and management of the disease,” said Dr Pai, stressing that there is no cure available currently.

Poverty

Tackling extreme poverty (The Tribune: 20220411)


IMF paper presents positive data, but a long road ahead
The role played by subsidised foodgrain programmes in eliminating extreme hunger in the country has an all-round stamp of approval. Their impact on reducing the level of poverty, however, cannot be considered a foregone conclusion since poverty is not just a measure of hunger. Peer scrutiny, thus, is expected over the claims of a working paper of the International Monetary Fund (IMF) that extreme poverty was as low as 0.8 per cent of the population in the pre-pandemic year, 2019, and food handouts ensured that it remained at that low level in 2020. The methodology used to arrive at the conclusion would attract attention since estimates indicate that extreme poverty — defined as living on less than $1.9 a day — increased worldwide for the first time in decades in 2020.

India as an exception bucking the trend should be a cause for celebration, but the reality on the ground may not warrant it. The scenes of human suffering post the lockdown are fresh in memory. For many, the pandemic’s fallout on livelihoods has been traumatic. What the paper does bring out clearly, though, is the life-saving, if not life-altering, potential of subsidy schemes, provided the delivery systems are robust and well managed. If the government has ensured that no poor household is left hungry, it deserves credit. Launched in March 2020, the Pradhan Mantri Garib Kalyan Yojana has been extended till September this year, indicating its success but also dire requirement.

The widening poor-rich gap is no figment of the imagination. The World Inequality Report released in December ranked India among the most unequal countries, with the top 1 per cent of the population holding more than one-fifth of the national income in 2021. ‘Garibi hatao’ has been a national slogan for half a century, and its permanency in policy reflects the slow progress despite the huge economic growth. It’s certainly a long road ahead.

Maternal Mortality Rate (The Asian Age: 20220411)

http://onlineepaper.asianage.com/articledetailpage.aspx?id=16289309
16 women die post delivery every month in 4 big govt hospitals: RTI

New Delhi, April 10: Despite efforts to bring down the maternal mortality rate, 16 women die after childbirth every month in four major government hospitals of Delhi. The hospitals made this information available in response to separate applications filed by PTI-Bhasha under the Right to Information (RTI) Act.

According to the information received, 1,291 women died after childbirth between January 2015 and September 2021 at the All India Institute of Medical Sciences (AIIMS), Ram Manohar Lohia Hospital (RML), Safdarjung Hospital, and Sucheta Kripalini Hospital. According to information, the worst situation is of Safdarjung Hospital, where in the last 81 months, on an average, more than 11 women lost their lives after delivery every month.

The RTI applications had asked how many babies were born in these hospitals between January 2015 and July 2021, how many women died after delivery, and what the reason was for their death.

In response, Safdarjung and Sucheta Kripalini Hospitals provided numbers up to September 2021 while the other two hospitals provided figures up to July 2021. According to the information received, more than 2.73 lakh children were born in the four hospitals during this period.

Safdarjung Hospital said that between January 2015 and September 2021, more than 1.68 lakh children were born and 943 women died after delivery. However, the hospital did not give reasons for the women’s death.

The lowest maternal mortality rate after delivery was in AIIMS and between January 2015 and July 2021, 29 women died after the birth of their baby.

Fifty-nine women died at RML Hospital during this period while in Sucheta Kripalini Hospital, 250 women died after delivery.

Barring Safdarjung, all three hospitals reported that life threatening infections, excessive bleeding, septic strokes, heart attacks, and impaired bowel function were the main causes of women’s death after caesarean delivery.

Many women also lost their lives due to liver disease, blood clots in the arteries of the lungs, severe anaemia, blood infection, breathing problems, uterine rupture, tuberculosis, and complications arising from Covid.

— PTI

Covid Cases (The Asian Age: 20220411)
141 Covid-19 cases, 1 more death in Delhi

New Delhi, April 10: Delhi reported 141 fresh Covid cases and one more death on Sunday, while the positivity rate stood at 1.29 percent, according to data shared by the city health department. With this, the national capital’s Covid-19 caseload has increased to 18,65,243 and the death toll to 26,157, the latest bulletin stated.

There has been an uptick in Covid-19 cases in Delhi over the last few days. The capital had on Saturday reported 160 new Covid-19 cases with a positivity rate of 1.55 percent.

On Friday, it had reported 146 new cases and one more death, while the positivity rate stood at 1.39 percent.

— PTI
SII to give free Covishield vials to pvt vaccination centres to compensate for price difference
The inventories at the private CVCs would be verified by SII representatives


SII to give free Covishield vials to pvt vaccination centres to compensate for price difference
Image for representational purpose. iStock

A day after slashing the price of the precaution dose of Covishield to Rs 225 per shot for private hospitals, the Serum Institute of India (SII) told the Centre on Sunday that it will compensate for the price difference for the unexpired stocks lying with private centres in the form of free vials of fresh stocks, official sources said.
Vaccine majors SII and Bharat Biotech on Saturday said they have decided to cut the prices of the precaution dose of their respective COVID-19 vaccines to Rs 225 per shot for private hospitals after discussions with the government.

Bharat Biotech had also announced that the price differential with any existing stocks of Covaxin in private hospitals shall be compensated in the form of additional doses.

In a communication to the Union health ministry, Prakash Kumar Singh, director, government and regulatory affairs at the SII, on Sunday said, "As per direction of Dr Adar C Poonawalla, we want to inform you that we will compensate the price difference for the current unexpired stocks lying with private Covid vaccination centres (CVCs)." "The difference between Rs 600 plus GST and our recent price of Rs 225 plus GST would be compensated in the form of free vials of the fresh stocks of Covishield," Singh is learnt to have conveyed in the communication.

The inventories at the private CVCs would be verified by SII representatives and the claim would then be processed on the basis of their approval.

India began administering the precaution dose of COVID-19 vaccines to all beneficiaries aged above 18 years at private vaccination centres from Sunday.

Those above the age of 18 and who have completed nine months after the administration of the second dose of the vaccine will be eligible to receive the precaution dose.

**Microplastics**

**After cosmetics and blood, now scientists detect microplastics in lungs**

While synthetic fibres have previously been found in lung tissue, there are limited studies confirming the presence of microplastics, and none as robust as this (The Tribune:20220411)


After cosmetics and blood, now scientists detect microplastics in lungs

Photo for representation. — iStock

A team of scientists have for the first time discovered microplastics in live human lungs, a finding that indicates we are inhaling the dangerous substances without knowledge that can have a major impact on our respiratory health.

Micro-plastic pollution is one of the most crucial environmental issues in recent times. The latest finding comes after two major studies, published last month, showed the presence of microplastics in cosmetic products and in human bloodstream in detectable levels.
While synthetic fibres have previously been found in lung tissue, there are limited studies confirming the presence of microplastics, and none as robust as this.

The research led by a team from the University of Hull and Hull York Medical School found 39 microplastics in 11 of the 13 lung tissue samples tested, considerably higher than any previous laboratory tests.

The study showed 11 microplastics were found in the upper part of the lung, seven in the mid part, and 21 in the lower part of the lung, which was an unexpected finding.

“Microplastics have previously been found in human cadaver autopsy samples, this is the first robust study to show microplastics in lungs from live people,” said Laura Sadofsky, lead author on the paper published in the journal Science of the Total Environment.

“We did not expect to find the highest number of particles in the lower regions of the lungs, or particles of the sizes we found. This is surprising as the airways are smaller in the lower parts of the lungs and we would have expected particles of these sizes to be filtered out or trapped before getting this deep into the lungs,” she added.

Lung tissue was collected from surgical procedures carried out on patients who were still alive, as part of their routine medical care. It was then filtered to see what was present.

Of the microplastics detected, there were 12 types, which have many uses and are commonly found in packaging, bottles, clothing, rope/twine, and many manufacturing processes. There were also considerably higher levels of microplastics in male patients compared to females.

“The characterisation of types and levels of microplastics we have found can now inform realistic conditions for laboratory exposure experiments with the aim of determining health impacts,” Sadofsky said.

Covaxin booster

Covaxin booster enhances antibody response against Covid variants including Omicron: Study

"The antibody response was higher for participants administered with booster doses for B.1 and the VoCs -- Delta, Beta and Omicron variants," Dr Gajanan Sakpal, another senior scientist at the NIV, said(The Tribune:20220411)

Covaxin booster enhances antibody response against Covid variants including Omicron: Study
Photo for representational purpose only.

A booster dose of Covaxin administered six months after the two dose primary vaccination has shown elevated immune responses against SARS-CoV-2 variants of concern including Omicron and protection from severe disease, a study by ICMR and Bharat Biotech has found.

The emergence of Omicron with at least 30 mutations within most vaccines' target region -- the spike protein -- raised an alarm about its immune escape from vaccine-induced neutralising antibodies, thereby leading to increased transmissibility and causing breakthrough and reinfection, senior scientist at the National Institute of Virology (NIV) in Pune, Dr Pragya Yadav, told PTI.

Additionally, reports of waning of antibody responses against the emerging variants of concern (VoCs) of virus for other approved vaccines have raised concern globally, she said.

As a part of the study the antibody responses in sera of 51 participants who received two doses of Covaxin collected six months post second dose and 28 days after receiving a third (booster) dose (given on day 215th post second dose) and its impact against the Omicron VoC was evaluated.

The study by the Indian Council of Medical Research (ICMR) and Covaxin manufacturer Bharat Biotech was conducted in January and the findings were published in the Journal of Travel Medicine on March 24.

"The antibody response was higher for participants administered with booster doses for B.1 and the VoCs -- Delta, Beta and Omicron variants," Dr Gajanan Sakpal, another senior scientist at the NIV, said.

This indicates that the booster dose of Covaxin robustly triggered neutralising antibody responses and efficiently neutralised the multiple variants of SARS-CoV-2, Sakpal said.

"We conclude that the neutralising antibody responses were significantly elevated after third dose of BBV152/Covaxin against the homologous B.1 (19.11 fold) and other heterologous strains (16.51 fold), Beta (14.70 fold) and Omicron (18.53 fold) VoCs, providing assurance of a protective immune response of booster in recipients," the study stated.

"The data emphasises the need for speedup of the booster doses to individuals for dealing with emerging VoCs and its outcome to protect against death, severity and hospitalisation burden," it stated.

The government on Saturday announced that precaution dose of COVID-19 vaccines will be available to all aged above 18 years at private vaccination centres from April 10.

Those above the age of 18 who have completed nine months after the administration of the second dose will be eligible for the precaution dose, it has said.
viagra

Use of viagra may lead to blindness: Study (The Tribune:20220411)


Regular users who find any changes in their vision should take it seriously and seek medical attention

Regular use of viagra, used to treat erectile dysfunction, can harm your vision leaving you blind, a study has claimed.

Researchers from the University of British Columbia in Canada have found that people regularly taking the common erectile dysfunction pill may be at increased risk of sudden losses of vision, flashes of light, and dark spots, Daily Mail reported.

The reason may be an increase in blood flow to the genitals which could be hindering its supply to the eyes, the researchers said.

The team also named other impotence medicines - Cialis, Levitra and Spedra - as being potential triggers of eye problems.

Regular users of the impotence pills are 85 per cent more likely to develop serious vision-robbing conditions, revealed the study published in JAMA Ophthalmology.

"These are rare conditions, and the risk of developing one remains very low for any individual user. However, the sheer number of prescriptions dispensed each month in the US - about 20 million - means that a significant number of people could be impacted," lead researcher Dr Mahyar Etminan, an ophthalmologist at the varsity, was quoted as saying.

"Regular users who find any changes in their vision should take it seriously and seek medical attention," he suggested.

In the study, the team analysed insurance claim records of 213,033 men using ED pills: 123,347 men took sildenafil - the medication branded as Viagra by Pfizer, 78,609 were on tadalafil (Cialis); 6,604 took vardenafil (Levitra), and 4,473 were on avanfil (Spedra), the report said.

The team followed the claim records from 2006 to 2020 to see which ones went on to develop eye conditions. None of the men had suffered eye problems in the year before they became regular users of the medication.

They found that regular intake of one of the medications was 158 per cent more likely to lead to serious retinal detachment. It occurs when a collection of fluid builds up behind the back of the eye and causes the sudden appearance of spots in the field of vision and flashes of light.
The men were 102 per cent more likely to suffer ischemic optic neuropathy - a compromised blood supply to the optic nerve. The condition causes a loss of central vision. And they were 44 per cent more likely to develop retinal vascular occlusion - a type of blood clot in the retina. People with it suffer a sudden loss of vision and dark spots or 'floaters' in their vision, the report said.

**XE Omicron variant and its severity**

**Know the new XE Omicron variant and its severity**

XE recombinant (BA.1-BA.2), was first detected in the United Kingdom on January 19 and more than 600 sequences have been reported and confirmed since(The Tribune:20220411)

**Know the new XE Omicron variant and its severity**


With new coronavirus variants emerging every four months on average, UN Secretary-General Antonio Guterres has cautioned that the Covid-19 pandemic is far from over as large outbreaks are spreading in Asia.

Guterres also called for governments and pharma companies to work together to deliver vaccines to every person, everywhere.

In a video message “One World Protected - Break Covid Now” to the GAVI COVAX Advance Market Commitment Summit 2022, Guterres said Friday that the gathering is a critical reminder that the "Covid-19 pandemic is far from over."

“We're seeing 1.5 million new cases each day. Large outbreaks are spreading in Asia. A new wave is sweeping across Europe,” he said, adding that some countries are reporting their highest death rates since the start of the pandemic.

He said the Omicron variant of the coronavirus is a “startling reminder” of how quickly Covid-19 can mutate and spread — especially in the absence of high vaccination coverage.

While some high-income countries are preparing for their second booster doses, one-third of humanity remains unvaccinated, he rued.

“This is a brutal indictment of our deeply unequal world. It’s also a prime breeding ground for new variants… more deaths… and increased human and economic misery,” he said.

Guterres said the next variant is not a question of “if” but of “when.” “We are far from our target of every country reaching 70 per cent vaccination coverage by the middle of this year.”
And with new variants emerging every four months on average, time is of the essence,” he said.

He added that governments and pharmaceutical companies need to work together to deliver vaccines to every person, everywhere — not just in wealthy countries.

A new strain of the Covid-19 Omicron variant, first detected in the United Kingdom, appears to be more transmissible than previous strains of the virus, the World Health Organization (WHO) had said.

WHO said last week that the XE recombinant (BA.1-BA.2), was first detected in the United Kingdom on January 19 and more than 600 sequences have been reported and confirmed since.

“Early-day estimates indicate a community growth rate advantage of 10 per cent as compared to BA.2. However, this finding requires further confirmation,” WHO had said.

It added that XE belongs to the Omicron variant until significant differences in transmission and disease characteristics, including severity, may be reported.

“WHO continues to closely monitor and assess the public health risk associated with recombinant variants, alongside other SARS-CoV-2 variants, and will provide updates as further evidence becomes available.”

The WHO Covid-19 Weekly Epidemiological Update issued this week said that after the increase observed during the first half of March 2022, the number of new Covid-19 cases has decreased for a second consecutive week, with a 16 per cent decline during the week of March 28 through April 3 as compared to the previous week.

The number of new weekly deaths also decreased sharply (-43 per cent) as compared to the previous week, when an artificial spike in deaths was observed.

Across the six WHO regions, over nine million new cases and over 26,000 new deaths were reported. All regions reported decreasing trends both in the number of new weekly cases and new weekly deaths.

As of April 3, over 489 million cases and over 6 million deaths have been reported globally.

At the country level, the highest number of new weekly cases were reported from South Korea (2,058,375 new cases; a decline of 16 per cent), Germany (1,371,270 new cases; a 13 per cent decrease), France (959,084 new cases; a 13 per cent increase), Vietnam (796,725 new cases; a 29 per cent decline), and Italy (486,695 new cases; a 3 per cent fall).

The highest number of new weekly deaths were reported in the United States of America (4,435 new deaths; a 10 per cent decline), Russia (2,357 new deaths; an 18 per cent decline), South Korea (2,336 new deaths; a 5 per cent decline), Germany (1,592 new deaths; a 5 per cent rise) and Brazil (1,436 new deaths; a 19 per cent fall).

Noting that the supply of Covid-19 vaccines is not the issue as manufacturers are producing 1.5 billion doses per month, Guterres said progress in achieving vaccine equity is possible but the window is closing fast.
“This means countries fulfilling and accelerating dose-sharing and donation commitments to COVAX with better quality of supply. And it means having strong national vaccine-delivery systems at the ready — including efforts to counter disinformation and get vaccines into arms.” He called on countries to commit new funding for the ACT-Accelerator and COVAX this year.

The COVAX Facility is the global pooled procurement mechanism for Covid-19 vaccines through which COVAX seeks to ensure fair and equitable access to vaccines for all 190 participating economies, using an allocation framework formulated by WHO.

**Booster dose cuts Omicron infection three days earlier than Delta**

**Booster dose cuts Omicron infection three days earlier than Delta: Lancet (The Tribune:20220411)**

People who have taken a booster dose are likely to recover from Omicron three days earlier than in the case of a Delta infection, claims a study published in The Lancet journal.

The study led by a team at King’s College London showed that the duration of symptoms were significantly shorter for people infected with Omicron compared to the Delta variant, (6.87 days versus 8.89 days) and participants were less likely to be hospitalised.

Researchers noted that symptoms associated with an Omicron infection have less involvement of the lungs and do not last as long in vaccinated people, and more so in people with three doses.

Omicron showed a predominance of viral replication in the upper respiratory tract or in the nose unlike Delta, which majorly affected the lower respiratory tract or in the lungs leading to severe illness, hospitalisation as well as death.

"A third dose of vaccine was associated with a greater reduction in symptom duration in participants infected during Omicron prevalence compared with those infected during Delta prevalence," said Dr Cristina Menni, from Department of Twin Research and Genetic Epidemiology at King's, wrote in the paper.

To understand, the team studied the symptoms of 62,002 vaccinated participants in the UK using the ZOE COVID Study App, who tested positive between June 1, 2021 and November
27, 2021, when Delta was dominant, and from December 22, 2021 to January 17, 2022 when Omicron was dominant.

There was also a lower rate of hospital admission during Omicron than during Delta (1.9 per cent vs 2.6 per cent). It was apparently due to the less involvement of the lower respiratory tract, the researchers said.

This is in line with different studies that showed the Omicron variant of Covid to be mild compared to all previous strains, requiring less need for hospitalisation.

The most striking difference between variants was the difference in loss of sense of smell, a common symptom of earlier variants- appearing in 52.7 per cent of Delta cases, only appearing in under 20 per cent of Omicron cases and often days later.

The two symptoms that were consistently more prevalent among Omicron than Delta cases (regardless of vaccination status) were a sore throat and a hoarse voice.

Moreover, many debilitating symptoms, such as brain fog, eye burning, dizziness, fever, and headaches, though still occurring, were all significantly less prevalent in Omicron cases.

"We observe a different clinical presentation of symptoms in those infected with Omicron compared to Delta. As we are moving even further away from the average patient having UK government acore' symptoms that is, fever, persistent cough, loss of smell, our results point to a different selection of symptoms that may indicate infection. To protect others, it is still important to self-isolate for five days as soon as you see any symptoms," Menni said.

Health Care Services

365 procedures added to Ayushman health package (The Tribune:20220411)


365 procedures added to Ayushman health package
Photo for representational purpose only.

The National Health Authority has launched a new version of the Health Benefit Package, 2022, under the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana, adding 365 new procedures taking the total to 1,949, the Union Health Ministry said on Friday.

VDO.AI
With Health Benefit Package, 2022, differential pricing is being introduced under the scheme based on the type of city and level of care, it said.

The package was launched on Thursday at a two-day meeting held at Tamil Nadu’s Mahabalipuram to review Ayushman Bharat Pradhan Mantri Jan Arogya Yojana and
Ayushman Bharat Digital Mission in the southern states and UTs. The National Health Authority also announced the rollout of the new initiative of patient classification systems through ICD-11 (International classification of disease) and International Classification of Health Intervention for Ayushman Bharat Pradhan Mantri Jan Arogya Yojana, it said. —

Booster shot for adults

Review rule, make it free for all (The Tribune:20220411)


Booster shot for adults
Picture for representational purpose only.

INDIA has extended the much-anticipated booster shots to all adults who took the second shot at least nine months ago. They were introduced free of cost in mid-January for the frontline workers and senior citizens with comorbidities and extended to all in the 60-plus category last month. It is the way forward as the coronavirus is still going strong with its newer and contagious variants striking every few months. Right now, parts of Asia, Europe and North America are grappling with huge surges in Covid cases. With most curbs, including restrictions on international travel, having been lifted, this precautionary jab is vital for building immunity.

However, by making this shot a paid one, the government seems to have washed its hands of its duty to ensure that all adults are not only administered the booster dose but also encouraged to get themselves jabbed again. The guideline that the adults newly eligible for the booster shot — there are crores of them — would have to get it from private centres and also pay for it is discriminatory. At the same time, it portends probabilities that are awash with discouraging and chaotic scenarios. Given the present hesitancy towards the vaccine, as is apparent from the tepid response to the booster shot in the past three months, not many are likely to be willing to shell out at least Rs 225 to get the vaccine. With an overwhelming majority of the beneficiaries having preferred free-of-cost shots at government hospitals to the paid ones at private ones last year, the authorities should have known better. Also, private hospitals do not have the wherewithal, including staff and infrastructure, needed to cater to crores of adults. Past experience points to the majority not being comfortable with booking appointments through the CoWin or Aarogya Setu apps and opting for walk-ins.

For the booster shots to be a success, the Centre must make them available free of cost for all in government as well as private hospitals.
**Micro-swimmers’**

Micro-swimmers’ may soon help with drug delivery (The Hindu :20220411)


The technique makes use of light as a fuel to induce the tiny robots to move in simulations. In the 1966 Hollywood film, Fantastic Voyage, a group of scientists enter the bloodstream of a colleague to remove a blood clot from his brain, by shrinking themselves and their submarine, Proteus, to the size of a cell. This element of science fiction is on its way to becoming a reality, as recent research aims at moving microbots into the bloodstream to deliver drugs. Speaking of this work, Varun Sridhar from Max Planck Institute for Intelligent Systems (MPI-IS), Stuttgart, Germany, says, “Our work has shown that it is possible to use light as a fuel to move microbots in real-body conditions with intelligent drug-delivery that is selectively sensitive to cancer cells.” The research is led by MPI-IS and Max Planck Institute for Solid State Research (MPI-FKF), Stuttgart, Germany.

Imagine trying to swim in a pool of honey. Any effort to push backwards and thus generate forward motion would be hindered by the high viscosity of the honey. At the microscopic level, the viscosity of even water is overwhelming. “A Hollywood film can take liberties; miniaturising a submarine is all that is [needed]. However, in real life, locomotion of microscopic swimmers is not that simple,” says Metin Sitti, a director at MPI-IS, who is part of the collaboration.

**COVID-19 vaccine, and not ‘booster dose’**

Explained | Why India administers ‘precaution dose’ of COVID-19 vaccine, and not ‘booster dose’ (The Hindu :20220411)


A medical staff member seen showing Corbevax vaccine during covid 19 vaccination drive in progress at a centre in Daryaganj, in New Delhi.
A medical staff member seen showing Corbevax vaccine during covid 19 vaccination drive in progress at a centre in Daryaganj, in New Delhi. | Photo Credit: SUSHIL KUMAR VERMA

As India gears up to administer ‘precaution doses’ of COVID-19 vaccine to eligible population above 18 years from Sunday, the debate over ‘booster’ vs ‘precaution’ doses has arisen.
On December 25, Prime Minister Narendra Modi announced that healthcare, frontline workers and those who are above 60 years and have comorbidities will be eligible for a 'precaution dose' from January 21. The use of 'precaution' doses had arisen as the question is to why Centre had not termed it 'booster' doses as is the global norm.

What are India’s ‘precautionary doses’?
As per Ministry of Health and Family Welfare (MoHFW)'s guidelines, beneficiaries above 18 years who have received two doses, are eligible to receive another dose of COVID-19 vaccine. The prioritisation and sequencing of this precaution dose would be based on the completion of 9 months, or 39 weeks, from the date of administration of the second dose.
Co-WIN system will send SMS to such beneficiaries for availing the precaution dose when the dose becomes due.
The details of administration of the precaution dose will be suitably reflected in the vaccination certificates.
Private vaccination centres can charge up to a maximum of Rs 150 as service charge for vaccination, over and above the cost of the vaccine.
Precaution dose will be of same vaccine which has been used for administration of first and second dose.
ICMR on ‘booster doses’
Technically, the ‘precaution dose’ is effectively a ‘booster dose’, differing only in nomenclature. As late as December 12, 2021, the Indian Council of Medical Research (ICMR) maintained that the “need for a booster or additional COVID-19 vaccine dose” was being examined.

“There is currently no strong evidence that those who have been vaccinated will not get the virus. Also many have been vaccinated and have got the infection later. The protection that this combination [getting infected and getting vaccinated] offers is also a matter of study.”
Dr. Samiran Panda
Head, Epidemiology and Communicable Diseases, ICMR
Dr. Samiran Panda of ICMR added that there was no immediate recommendation to introduce booster or additional dose. He said from a public health point of view also more coverage is what India is looking at.

Twenty-three days later, PM Narendra Modi announced the launch of 'precautionary' doses for frontline workers and eligible population over 60 years.

How is it different from a ‘booster’ dose?
The main difference between 'precautionary' and 'booster' doses is that mixing of vaccines is not allowed in India's 'precaution' doses.

After Mr. Modi's announcement of 'precaution' doses, Dr V.K. Paul, Member-Health, NITI Aayog said that the 'precaution dose' of COVID-19 vaccine will be of the same vaccine which was administered previously. That is, beneficiaries who have gotten two Covishield doses, will be given a 'precaution dose' of Covishield only.

However, an ICMR study titled ‘Serendipitous COVID-19 Vaccine-Mix in Uttar Pradesh’ found that mixing of Covishield and Covaxin was safe and showed better results. The study was based on a group of Covishield recipients in Uttar Pradesh who had inadvertently received Covaxin as their second dose.
“It is observed that the neutralizing NAbs were 1.25, 3.95 and 1.30 fold reduced in the heterologous (mix dose) group for Alpha, Beta and Delta. Similarly the NAb were reduced homologous Covishield [1.33, 3.9, and 2.74], homologous Covaxin [1.4, 2.45, and 2.08] for Alpha, Beta and Delta”

ICMR
On a comparative study of this group to two groups of 40 people who had received two doses of Covishield and Covaxin respectively, ICMR found that those who received a mix of vaccines (an adenovirus vector platform-based vaccine followed by an inactivated whole virus vaccine) elicited better immunogenicity than two doses of using the same vaccines.

‘Booster’ doses across the world
In US, which is currently administering booster doses, the government allows its eligible population above 18 years to get either Pfizer-BioNTech or Moderna vaccine as booster doses, five months after getting the primary doses.

For those who got two doses of Johnson & Johnson’s Janssen vaccine, the Centre for Disease Control (CDC) recommends getting either Pfizer-BioNTech or Moderna as a booster. Similarly in UK, either Pfizer-BioNTech or Moderna are offered as booster inspite of Oxford-AstraZeneca vaccine (i.e Covishield) being the main vaccine to be administered.

WHO on ‘booster doses’
In September, The World Health Organisation (WHO) had called for a moratorium on booster vaccination for healthy adults until the end of 2021 to counter the persisting and profound inequity in global vaccine access.

“While many countries are far from reaching the 40% coverage target by the end of 2021, other countries have vaccinated well beyond this threshold, already reaching children and implementing extensive booster vaccination programmes”
Dr Tedros Adhanom Ghebreyesus
WHO director-general
The WHO prioritises Global COVID-19 Vaccination by mid-2022 and has stated “Vaccine effectiveness data for a booster dose are being published from an increasing number of countries, but remain limited in follow-up time. All studies demonstrate an improvement in protection against infection; milder disease; as well as severe disease and death”.

XE variant

Explained | Is it difficult to diagnose the XE variant? (The Hindu :20220411)

https://www.thehindu.com/sci-tech/health/explained-is-it-difficult-to-diagnose-the-xe-variant/article65305857.ece
Who has the competence in India to interpret genome data from the newer strains of the coronavirus?

The story so far: In a field plagued by rapid developments, Tuesday brought more drama. Brihanmumbai Corporation declared that it had detected the country’s first XE recombinant variant of SARS-CoV-2, a claim that was, not long after, contested by the Union Health Ministry. In a statement, it said: “FastQ files in respect of the sample, which is being said to be ‘XE’ variant, were analysed in detail by genomic experts of INSACOG, who have inferred that the genomic constitution of this variant does not correlate with the genomic picture of ‘XE’ variant.” At the end of the day it was agreed that Mumbai would send the sample to an INSACOG laboratory — the National Institute of Biomedical Genomics — for further analysis.

Homeopathy

Homeopathy could become first choice for students seeking medical education: Sonowal(The Hindu :20220411)

https://www.thehindu.com/sci-tech/health/homeopathy-could-become-first-choice-for-students-seeking-medical-education-sonowal/article65306985.ece

Union Minister for AYUSH Sarbananda Sonowal during the inauguration of two-day scientific convention on the occasion of World Homeopathy Day, in New Delhi. Union Minister of State for AYUSH Munjapara Mahendrabhai and other dignitaries are also seen.

Mr. Sonowal inaugurated a two-day scientific convention on ‘Homoeopathy: People’s Choice for Wellness’ here on the World Homoeopathy Day (WHD).

World Homoeopathy Day is observed to commemorate the birth anniversary of the founder of homoeopathy, Dr. Christian Fredrich Samuel Hahnemann.

The convention is being organised by three apex bodies under the Ministry of AYUSH -- Central Council for Research in Homoeopathy, National Commission for Homoeopathy, and National Institute of Homoeopathy.

Minister of State for AYUSH Mahendrabhai Munjpara was also present at the event.
Addressing the gathering, Mr. Sonowal emphasised that a transformative shift is underway in the education, practice and drug development sectors of AYUSH.

He said the National Commission for Indian Systems of Medicine and the National Commission for Homoeopathy have aligned AYUSH education according to the new education policy, and are attracting new talents to the extent that not only AYUSH is the first choice of treatment, but could also become the first choice for students seeking medical education.

The minister said homeopathy medicines are easily administered and acceptable to a large number of people.

He further said public acceptance of homeopathy is high, and people seek treatment from family physicians for generations, an official statement said.

Mr. Munjpara highlighted that homoeopathy is very effective in treating various diseases and improve individual health by safer means, at a lesser cost.

The delegates of the convention included homoeopathic researchers, scientists from interdisciplinary streams, practitioners, students, industrialists along with representatives of various homoeopathic associations.

**AB-PMJAY adding 365 new procedures**

**NHA launches new version of Health Benefit Package under AB-PMJAY adding 365 new procedures (The Hindu :20220411)**


The two-day Southern Region Review meeting — 'Ayushman Sangam' — organised by the National Health Authority on April 7 and 8 was the third edition of the event. The National Health Authority has launched a new version of the Health Benefit Package, 2022, under the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana, adding 365 new procedures which took the total to 1,949, the Union Health Ministry said on Friday.

With Health Benefit Package, 2022, differential pricing is being introduced under the scheme based on the type of city and level of care, it said.

The package was launched on Thursday at a two-day meeting held at Tamil Nadu's Mahabalipuram to review Ayushman Bharat Pradhan Mantri Jan Arogya Yojana and Ayushman Bharat Digital Mission in the southern states and Union Territories, according to a statement.
The National Health Authority also announced the rollout of the new initiative of patient classification systems through ICD-11 (International classification of disease) and International Classification of Health Intervention for Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY), it said.

Another highlight was the pilot launch of Diagnosis Related Grouping (DRG) in Chhattisgarh, Haryana, Kerala, Maharashtra and Meghalaya. AB-PMJAY will be the first insurance scheme in India to provide a payment mechanism through DRG, the statement noted.

The two-day Southern Region Review meeting — 'Ayushman Sangam' — organised by the National Health Authority on April 7 and 8 was the third edition of the event covering the Andaman and Nicobar Islands, Andhra Pradesh, Karnataka, Kerala, Lakshadweep, Puducherry, Tamil Nadu and Telangana.

The National Health Authority had earlier organised similar regional review meetings covering north and west zones.

Positive living

Positive living: Here are five healthy habits to inculcate right now
The 20s are the most crucial years, when many people prepare for a secure future; it is a 'self-improvement' phase (The Indian Express :20220411)

https://indianexpress.com/article/lifestyle/life-positive/5-habits-to-inculcate-right-now-7860012/

lifestyle, positivity, healthy habits, heathy lifestyle, growth, meditation, self improvement, positive thoughts, optimistic, morning habits, good habits, life positive, indian express news Do you lead a positive life? (Photo: Pexels)
The 20s are a self-improvement phase. A very small habit that you build in your early 20s determines the rest of your life. Habit can either make you or break you completely. So, it is important to understand the sensitivity of this time and take action upon it. This YouTube video talks about the five habits that every youngster should inculcate.

Jot down your thoughts

It is time for self-discovery, and in this process, lots of people start juggling with their thoughts which consume an immense amount of energy. Jotting down the self-doubt, and inner thoughts on a piece of paper can save a lot of energy and give clarity.

Be grateful
Be grateful for what you have. Showing gratitude towards certain things helps you stay grounded. Practising this on a regular basis will lower your stress levels and improve your interpersonal and intrapersonal relationships.

Clean your own mess

Start by making your own bed in the morning. It gives you the feeling of self-accomplishment. Cleaning your room, and hanging the clothes correctly gives a certain amount of confidence, and satisfaction.

Healthy lifestyle | Healthy lifestyle habits that can help avoid obstructive sleep apnea

Start meditating

Mediation is one of the best things you can do if moving forward peacefully is a goal in your life. Just simple breathing exercises bring a lot of positive change. It is said if a person wants to control their mind and emotions then first they should learn to control their breath.

Interact with new people

We all can learn so much about life, career, and people just by having a normal conversation with somebody who is not known to us. So keep interacting with people who are not of your age, are way more experienced. This will make you aware of the things you don’t know.

Fertility

New study says no increased fertility chances from weight loss; here’s why experts disagree The Indian Express :20220411)

Experts say obesity and pregnancy chances are inversely related, which means more the weight, lesser the chances of conception and having a healthy baby


fertility

Pregnancy and weight: what's the relation? (Source: Getty Images/Thinkstock)

Unlike what has been in practice and long considered, a new clinical study says weight loss may not translate into better odds of getting pregnant. Published in the PLOS Medicine, the randomised study of 379 women with obesity and unexplained infertility found that intensive lifestyle changes did not result in better chances of pregnancy.

“We have known for decades that obese women often have difficulty getting pregnant,” noted researcher Daniel J Haisenleder, PhD, of the University of Virginia School of Medicine’s Center for Research in Reproduction. “For this reason, many physicians advise weight loss
prior to conception. However, there are few studies that have addressed the issue comparing a healthy lifestyle — i.e., exercise — vs. exercise plus weight loss.”

Also Read | What you need to know about managing PCOS/PCOD
The study divided participants in two groups. While half the women were on a diet using meal replacements, increased physical activity, and medications, other half simply increased their physical activity without trying for weight loss. Both the groups after completing the respective programs received three rounds of standard infertility treatments.

Notably, women in the weight loss program ended up losing seven per cent of their body weight, while participants in the exercise-only group maintained their weights.

World Obesity Day, World Obesity Day 2022, obesity, being obese, health risks obesity, obesity surgery, weight loss surgery, bariatric surgery, indian express news New study says weight loss may not affect fertility chances (Photo: Getty/Thinkstock)
The FIT-PLESE study then noted that eventually there was no significant difference between the two groups in terms of healthy birth frequency. In total, 23 of the 188 women who completed the 16-week intensive weight loss program ended up giving birth; among the 191 who completed the exercise-only program, 29 gave birth.

However, the intensive dieting program did offer various benefits like reduced metabolic syndrome that increases the chances of diabetes, stroke, and heart disease.

“Weight loss improved metabolic health in these subjects. Unfortunately, the changes seen did not improve fertility,” Haisenleder said in the study. “Infertility within this population remains an important health issue, and will require further studies to address the problem in the future.”

However, experts say that obesity and pregnancy chances are inversely related which means that more the weight, lesser the chances of conception and having a healthy baby.

Also Read | PCOS Awareness Month: From weight loss to infertility, commonly-asked questions answered
If a person is overweight with a BMI (body mass index) of more than 25, weight loss will improve their chances of conception, even if they have (or do not have) Polycystic Ovary Syndrome (PCOS), said Dr Manjiri Mehta, consultant gynecologist, Hiranandani Hospital, Vashi – A Fortis network Hospital.

Dr Mehta is of the opinion that obesity affects fertility in both men and women. “Excessive weight affects fertility by changing the way the body stores female sex hormones. Fat cells convert a male hormone (androstenedione) to female hormone (estrone). This further has effect on brain centre that regulates ovarian and testicular hormones. While being healthy is super important, excessive weight loss with high-impact exercise and crash dieting may be counterproductive. Start by eating healthy and maintaining a healthy body weight so that you do not put undue stress on your body. Making these lifestyle changes will make a difference to your overall health, even if they don’t lead to weight loss,” she told indianexpress.com.

Dr Kinjal Shah, obstetrician and gynecologist, Bhatia Hospital Mumbai also stated, “definitely chances of fertility increases with weight loss.
It has been seen that 20 per cent of the PCOS women conceive with five per cent weight loss”. “This is because weight loss has significantly been associated with ovulation and has a benefit in women planning to conceive. Stress and sedentary lifestyle are the leading causes of uncertain fertility. Regular 45 minutes of exercise and healthy diet needs to be emphasised to women with fertility issues,” Dr Shah said.

According to Mehta, a study was done in 2014 that showed that even 10 per cent weight loss increased the chances of conception from 50 to 80 per cent. This means that a person has a greater chance of getting pregnant and having a healthy baby if they are close to a healthy weight. “If a person is overweight with a BMI of more than 25, weight loss will improve their chances of conception, even if they have (or do not have) PCOS,” said Mehta.

Obesity in women can also increase the risk of miscarriages and impair the outcomes of assisted reproductive procedures and pregnancy, asserted Dr Bhavini Shah Balakrishnan, consultant obstetrician and gynecologist, Masina Hospital, Mumbai. “Infants of diabetic mothers are also prone to various neonatal adverse outcomes, including metabolic and hematologic disorders, respiratory distress, cardiac disorders and neurologic impairment due to perinatal asphyxia and birth traumas,” said Dr Balakrishnan.

Stating that there has been a lot of controversy regarding the effect of weight on fertility and whether weight loss really helps conception, Dr Balakrishnan said that “despite all the argument, a healthy lifestyle which includes age and height appropriate weight” has been beneficial for a woman not just during the reproductive age group but also helps makes the peri-menopausal to menopause transition smooth.

**Physical Fitness**

**Strength training for 30 minutes a week can help one live longer: Study**

Strength training not only tones the body but also helps you live longer, a new study claims The Indian Express:20220411)

https://indianexpress.com/article/lifestyle/fitness/study-30-60-minutes-strength-training-a-week-live-longer-7808206/

strength trainingHere's why strength training is essential (Source: Pexels)

A new study suggests regular strength training routine can help add years to your life. Published in the British Journal of Sports Medicine, it states that people who did 30 to 60 minutes of resistance, or strength, or weight training had a 10 to 20 per cent lower risk of early death from all causes.

For the unversed, strength or resistance training is often associated with lifting of weights that help improve endurance and strength, but it can also include bodyweight exercises or calisthenics, isometrics, and plyometrics.
The researchers in the study stated that people who regularly did weight training also had a lower risk of developing heart disease (46 per cent) or cancer (28 per cent). The study also noted people who did up to 60 minutes a week of muscle-strengthening activities had a lowered risk of developing diabetes.

Also Read | 6 reasons why women should not give up on strength training
Even a study by National Institute on Ageing (NIA) and Harvard Medical School stated that women averaging 62.6 years, who did any type of regular strength training, achieved a 30 per cent reduction in the incidence of type 2 diabetes. Their risk of developing cardiovascular disease dropped by 17 per cent too.

Can just walking help?

One should be doing at least 30 minutes of HIIT (high-intensity interval training) which should start with specific floor exercises and bodyweight training. This means a good exercise routine has three main components — endurance training, resistance training, and flexibility. And walking falls short on all three aspects, informed Dr Manjunath Sukumaran, holistic health coach, chief facilitator, and founder of Harmony Wellness Concepts, in a previous interview with this portal.

For some time now, Dr Sukumaran has been advocating for a switch to an effective three-component exercise regimen to alleviate lifestyle ailments like blood pressure, diabetes or weight gain through his Facebook videos. According to him, if there is “not any serious restriction”, one should look at other forms of cardio activity rather than walking which is “not a whole, complete exercise”.

Why is strength training essential?

Dr Aashish Contractor, director: rehabilitation and sports medicine, Sir HN Reliance Foundation Hospital stated that as one ages, muscle mass is lost, so strength training becomes “vitally important to help carry out activities of daily living, as well, and hence must be part of everyone’s exercise program”.

Strength training is one of the best ways to improve strength in areas such as the core, legs, lower back and upper body.

Strength training speeds up the metabolic rate, which aids faster absorption of nutrients. More importantly, strength training helps in burning calories not only during the workout but also while the body is at rest. “The reason is muscles need more energy to sustain as well as repair after strength training. Therefore, strength training is an effective way to achieve fat loss, said Jitendra Chouksey, Founder of FITTR.”
With resistance training, one can achieve all the health benefits considering the workout and diet programs are designed as per the specific need, said Rachit Dua, a senior fitness consultant at Team Aminder, an online fitness training platform, and a co-founder of FitPathshala, an online fitness academy.

Also Read | These 7 strength training exercises will supercharge your home workout
How does it help one live longer?

Dua is of the opinion that since it helps enhance the oxygenated blood supply throughout the body and allows the internal organs to function optimally, it could be one of the reasons for the observation (live longer). “When we do resistance training, the muscle tissues go through lengthening and contracting effect which improves the flexibility aspect. Slight intense movement takes your heart rate on higher side covering the cardio respiratory parameter, the muscle gain allows you to enjoy ideal body composition along with some strength gain. Improvement in bone density also comes as by-product of resistance training. More the muscle mass a person carries, better becomes the glucose storage capacity of body and the overall metabolism also improves. Higher repetitions training programs improve muscular endurance component of the fitness,” he said.

How much to do?

The good news, as amplified by this study, is that you do not need to spend hours in the gym, to get this benefit. In fact, research has shown that 2-3 strength training sessions, a week is adequate to get these benefits, said Dr Contractor. “Each of these sessions can be as little as 15 minutes. It’s important to do one set of 10-15 reps of the large muscle groups for your upper and lower body, such as your chest, back, arm and leg muscles. These can also be done at home, using your body weight as resistance, such as push-ups and squats, or very basic home equipment. For greater benefit, a larger volume of training will certainly help, but is not necessary,” he said.