Virus will evolve, but worst behind us, says White House Covid-19 head

The world is now safely on the other side of the pandemic and the worst of Covid-19 should be behind us, the US government’s topmost official on the coronavirus response has said, citing widespread immunity in the global population.

Speaking at the opening session of the 20th Hindustan Times Leadership Summit, Ashish K Jha outlined the hits, such as the global scientific collaboration, and the misses — “the worrying persistence of misinformation” — two-and-a-half years after Sars-CoV-2 arrived, and how he sees the pandemic’s next phase.

“Covid is not over, and it will continue to be with us for some more time. But if the question is, is the worst over? My answer is absolutely. Given how much immunity is in the population the worst of the pandemic should be behind us,” he said. P10
HEALTH MINISTRY SIGNS OFF ON PLAN TO COMBAT ILLNESSES LINKED TO AIR POLLUTION (Hindustan Times: 20221109)

The Union ministry of health and family welfare has cleared a dedicated pollution-linked ‘health adaptation action plan’ to create infrastructure and train manpower to deal with health-related ailments when pollution spikes, officials aware of the matter said on Tuesday.

Work on the plan, prepared under the government’s National Programme for Climate Change and Human Health (NPCCHH), started in 2016, officials said, adding it was submitted for approval to the ministry last year. The plan has now been sent out to states to be implemented in the coming months, officials said. To be sure, the action plan is a framework set by the Centre much like the heat action plan, and the states will be allowed to work around it.

The plan details steps to develop infrastructure and train manpower in hospitals, and identify vulnerable people and pollution hot spots to control health complications arising from deteriorating air quality, especially during the winter.

“This health action plan is similar to the heat action plan. The plan broadly proposes that a well-oiled machinery be set up in states to ensure when the air quality deteriorates during winter, the related health complications are handled efficiently,” a senior official of the Delhi government’s health department said.

The official said that since the Capital has already done a lot of work around pollution management, the health action plan will be implemented from next year.

Experts approved of the idea.

Anumita Roychowdhury, executive director (research and advocacy), Centre for Science and Environment) said, “The key is implementation. We have enough plans in place but we lack proper implementation and that is the reason why we see ourselves in this position over and over again, every year.”

Smoking (The Asian Age:20221109)
A cigarette by any other name is just as bad

Dr V Rajankhe, senior interventional cardiologist and electrophysiologist, Symbodia Hospital, says, “It is a misconception that e-cigarettes are a safer alternative to conventional cigarettes. They may be slightly less harmful as they do not involve direct consumption of tobacco. But nevertheless, when the liquid in the cartridge is heated, it gets converted to nicotine vapour (a tobacco extract), which comes with the usual harmful effects of consuming nicotine. Various chemical flavouring substances are also used.”

Listing the harmful effects of nicotine, he says “the risks of damage to the arteries and developing heart diseases and stroke are enhanced.”

“Other substances, especially younger users, tend to get addicted to it. The problem is, they consider e-cigarettes safer and therefore tend to over-indulge and get addicted, resulting in damage to their health. Those who have not started smoking or using tobacco products are advised not to turn to vaping either,” adds the doctor.

Speaking about the adverse impact of vaping on lungs, Dr C. Vishal Kumar, consultant clinical and interventional pulmonologist at KIMS Hospital, notes that “in Western countries, where vaping is common, it was noticed that an increasing number of young adults are suddenly suffering from acute lung injury. There were reports of youngsters with lung fibrosis and lung injury who needed to be on ventilators; some of the cases turned out to be fatal.”

It was sort of an epidemic, which was found to be related to smoking e-cigarettes and vaping. He added, “The symptoms of acute lung injury include coughing, shortness of breath, fall in oxygen saturation level, and X-ray reports similar to those with a pneumonia-type infection. Other flavoured chemicals used in e-cigarettes may also be harmful to health besides being addictive. Therefore, vaping is not at all a safe alternative to routine smoking.”

Multi-cancer early detection (MCED) tests, which are blood tests designed to detect the presence of more than one cancer at a time in early, more treatable stages, are a new development, says Dr Ashok Kumar Vaid, Chairman of Medical and Haemato-Oncology, Cancer Institute, Medanta.

Cancer can be detected at any age. The age is determined by the type of cancer and risk factors. (Source: Getty Images/Thinkstock)

Early screening of cancer helps in detecting symptomatic patients as early as possible so that they have the best chance of successful treatment and making it through. If the treatment of cancer is delayed or inaccessible, there is a decreased chance of survival, complex treatments and their attendant high costs.

Why are cancer screenings important?
The primary goal of screening is to detect cancer at an early stage, especially when an individual is asymptomatic. If detected early, the cure rates are high and the treatment is not prohibitively expensive, allowing patients to achieve the best results. Furthermore, it reduces the number of people who succumb to the disease and decreases the number of people who develop the disease.

There is still a lack of awareness about the disease, which prevents people from getting screened. An education awareness campaign is urgently needed apart from a behavioural shift towards health and regular health check-ups, as is a shift in perspective, which can only be achieved through education.

To detect cancer early, a well-planned national strategy is required, including cancer screening policies, initiatives and tie-ups with non-governmental organisations (NGOs).

Policy makers, the government, the healthcare community, non-governmental organisations and educational institutions should all work together to make a difference around minimising cancer cases, their early detection and qualitative treatment throughout the country.

There are templates. India had such a massive HIV/AIDS campaign, the National AIDS policy resulting in massive awareness. We need a similar space for cancer awareness in India. For example, since India has a very high dependency on tobacco consumption, there could be a massive campaign to reduce smoking among the young. Such collaborative efforts will aid in prevention of cancer. The approach to educating the masses is multi-stakeholder, with the media playing an important role. The government must develop a policy that will be implemented by various organisations at various levels.

Is there any specific age to undergo cancer screenings?

Cancer can be detected at any age. The age is determined by the type of cancer and risk factors. For example, people with average risk factors for colorectal cancer should start regular screening at the age of 45 years, women with breast cancer genetic mutations should start screening at 25 years and have the option to start annual breast cancer screening as they age, say from 40 years, with mammograms (x-rays of the breast) if they wish to do so. Similarly, the screening programme for each cancer (uterine, cervical, oral, lung and so on) is determined based on their risk factors and occurrence at specific ages.

Cancer screening tests seek to detect cancer before symptoms appear, when it may be easier to treat successfully. Several cancer screening tests are considered effective and recommended by expert groups based on the individual’s risk factors.

Breast cancer screening: According to the National Cancer Institute, mammography has been shown to reduce breast cancer deaths among women aged between 40 and 74, particularly those aged between 50 and 69. For women at average risk, doctors generally recommend starting screening at the age of 50.

Cervical cancer screening: Human papillomavirus (HPV) tests and Pap tests are recommended for cervical cancer screening. These tests help prevent the disease by detecting and treating abnormal cells before they become cancerous. Doctors recommend that testing should begin at
the age of 21 and continue until the age of 65 (for women who have had adequate prior screening and are not otherwise at high risk for cervical cancer).

Colorectal cancer screening: Several screening tests have been shown to reduce the risk of dying from colorectal cancer, including colonoscopy, sigmoidoscopy and stool tests (high-sensitivity faecal occult blood tests and stool DNA tests). Doctors recommend that people, who are at average risk for colorectal cancer, get one of these tests done between the ages of 45 and 50 and 75.

Lung cancer screening: A CT scan for lung cancer has aided in early detection and, as a result, has reduced lung cancer deaths among heavy smokers. Doctors recommend screening people aged 50 and 80 who are current or former heavy smokers.

Why are cancer rates increasing in India? What are the reasons behind the rising cancer cases among young people?

As we grow older, there is a higher risk of acquiring mutations, and as a result, cancer. Having said that, cancer is becoming more common in younger age groups as well, which is a very concerning trend. The case is becoming more common in India as a result of rising consumption of packaged foods, containing harmful preservatives, as well as junk food. Tobacco use is linked to 40 per cent of cancers in India, followed by obesity, which is linked to 20 per cent of cancers. Other aggravating factors are alcohol consumption, family history, sedentary lifestyle and environmental factors like excessive pollution. Furthermore, because of advanced facilities, more and more cases are being diagnosed in comparison to the past, which ultimately accounts for the cancer surge in India.

Are there any new screening methods that could help in detecting cancer earlier?

The advancements and spiking experiments in healthcare can now enumerate lung, colorectal and prostate cancer cells while only using a small sample of blood (2 ml).

Multi-cancer early detection (MCED) tests, which are blood tests designed to detect the presence of more than one cancer at a time in early, more treatable stages, are a new development in cancer early detection.

**Chemotherapy**

16 cycles of chemotherapy, one surgery, radiation, Covid: The mother who fought cancer to give birth to her child (The Indian Express: 20221109)

Deepika was suffering from Pregnancy Associated Breast Cancer (PABC), a special variant of cancer that can complicate 1 in 3,000 pregnancies. Dr Pranjali Gadgil, Breast Surgeon at Pune’s Jupiter hospital, saved her with chemo and a multi-disciplinary treatment protocol. A story that busts myths on National Cancer Awareness Day.

There are just three of them now. The man, woman and child, who wrestled with fate to stay together as a family and are happy with a simple Sunday in the park. Just like any other millennial couple, Deepika Gopnarayan and husband Sugat had their life neatly packaged for them. Both engineering graduates, they got the jobs they wanted, travelled around and decided to have a baby five years after they got married and settled down in Pune. She was 28 then, he was 32, a perfectly healthy age to become parents. And then midway through her pregnancy, she was diagnosed with a rare cancer.

Fertility

Can air pollution affect fertility in men and women? Experts answer (The Indian Express: 20221109)


"Though the largest causal factor of infertility is a woman’s age, many studies have shown that daily exposure to high levels of pollution is also linked with a decline in potential fertility,” Dr Ratna Saxena said

Air pollution, which has once again shrouded the Delhi skies with the air quality reaching ‘severe’ levels in most parts of the National Capital Region, has been linked to a host of health concerns including breathlessness, chronic bronchitis, chest tightness, lung and chest infections, among others. But, did you know that air pollution can significantly impact one’s fertility, too? “Though the largest causal factor of infertility is a woman’s age, many studies have shown that daily exposure to high levels of pollution is also linked with a decline in potential fertility,” Dr Ratna Saxena, IVF Specialist in Bijwasan, Nova Southend IVF and Fertility, said.
Nutrigenomics

*Nutrigenomics: Find out what it is, and how it impacts your diet (The Indian Express: 20221109)*


Nutrigenomics is the study of how genes and diet (nutrients) interact. "Gene variants (genetic differences) predict how an individual’s body will respond to certain nutrients," says an expert nutrigenomics, what is nutrigenomics, diet and genes, dietary decisions personalised nutrition, healthy diet, healthy food, genes, genetics, indian express newsWhat is the connection between your diet and genes? (Photo: Getty/Thinkstock)

Do you often wonder why a certain diet does wonders for your friend, but does nothing for your body? Or if you are likely to succeed or fail on a ketogenic diet? Or, when it comes to losing weight, is exercise more effective than food choices? The answers to these questions could lie in your genes.

Caesarean delivery

*When do doctors recommend a caesarean delivery? (The Indian Express: 20221109)*

Suggesting that "caesarean deliveries are very common and usually safe", Dr Ruby Sehra said that it might be tempting to want to schedule your baby's birth to avoid the uncertainty and anguish of labour.

Caesarean delivery and what should pregnant women know (Source: Getty Images/Thinkstock)

A woman can give birth to a child normally (vaginal birth), or through a caesarean or C-Section procedure. But on what basis is the same decided by the treating doctor? “Caesarean or C-section deliveries are often advised in case of a complication at the time of pregnancy. These include placenta issues, such as a low-lying placenta (placenta praevia); the baby is in an awkward position for labour, like bottom-up (breech); if you are carrying twins who share a placenta; or if you have a gestational pregnancy,” said Dr Shobha Gupta, medical director, gynaecologist and IVF expert from Mother’s Lap IVF Centre New Delhi and Vrindavan, told indianexpress.com.
Bone health

Six things menopausal women can do for their bone health (The Indian Express: 20221109)

https://indianexpress.com/article/lifestyle/health/menopausal-women-bone-health-healthy-lifestyle-calcium-vitamin-d-8223224/

"Osteoporosis, which translates to 'porous bone', results in a significant loss of bone mass and strength. The disease typically progresses without any symptoms or pain," said Amol Naikawadi, preventive healthcare specialist

Menopause is a turning point in a woman’s life when it comes to health. It is the end of the menstrual cycle, and is usually accompanied by a lot of hormonal changes. The signs and symptoms can differ from person to person. While some people have it easy, for others, it is accompanied by discomfort, anxiety, hot flashes, mood swings, and hormonal abnormalities.

Seasonal fruits regularly

This is why you must consume seasonal fruits regularly (The Indian Express: 20221109)


Apart from their varied health benefits, seasonal fruits are also cheaper as farmers harvest an abundance of produce due to the crop being in season

Fruits make for an extremely healthy eating option as they are rich in fibre, vitamins, minerals and antioxidants. According to dietician Ambica Dandona, a diet rich in fruits can “can lower blood pressure, reduce the risk of heart disease and stroke, prevent some types of cancer, lower
risk of eye and digestive problems, and have a positive effect upon blood sugar, which can help keep appetite in check”.

**Surya namaskar**

**How many calories can you burn with surya namaskar in 5-10 minutes? (The Indian Express: 20221109)**


How many calories you burn also depends on various other factors such as age, which influences the rate of metabolic activity in your body, said Himalayan Siddha Akshar, founder of Akshar Yoga Institutions.

Surya namaskars have become an essential part of many people’s fitness routines. While they definitely help tone the body (and also have many other health benefits), it is important to understand that surya namaskar, or the series of 12 yoga postures is not a full-fledged cardio workout unless done at a quick pace. “Rather, it is a warm-up exercise and needs to be supplemented with a good yoga routine or cardio workout for better results,” said Ira Trivedi, a yoga coach, in an exclusive interaction with indianexpress.com.

**Healthy food**

**Healthy food swaps to keep your gut health in check(The Indian Express: 20221109)**


Nutritionist Bhakti Kapoor shared some healthy food choices that will keep your gut issues at bay!

Some healthy swaps that you must make for your gut health (Source: Getty Images/Thinkstock)

‘A healthy gut = healthy you’ — you must’ve heard this phrase countless times. And, rightly so! Keeping your gut health in check not only aids digestion but also keeps a host of illnesses
at bay. And, taking care of it starts by making some conscious food decisions. To make it easy for you, nutritionist Bhakti Kapoor recently shared some healthy swaps that you must make for your gut health.

**COVID**

Go slow and accept your limitations – how to exercise if you’re recovering from long COVID (The Indian Express: 20221109)


It's important to recognise that your progress is unlikely to consistently improve each week, and sometimes you may need to pull back on the amount of exercise you're attempting to complete.

As you're recovering from long COVID, you may begin to feel motivated to get back to the physical activity you once enjoyed (Source: Getty Images/Thinkstock)

A significant proportion of people who contract COVID are left with ongoing symptoms, commonly termed “long COVID”. The nature of these symptoms and the duration of the illness differ between people. While some people are still suffering more than two years after their initial infection, others have recovered, or at least improved.

Go slow and accept your limitations – how to exercise if you're recovering from long COVID

Priyanka Chopra, Priyanka Chopra news, Priyanka Chopra in India, Priyanka Chopra fashion, Priyanka Chopra pantsuit, Priyanka Chopra in Rahul Mishra couture, indian express news

Lifestyle

Priyanka Chopra is bringing 'desi' charm to this Rahul Mishra couture; check it out
egg freezing, egg freezing and fertility, social egg freezing, clinical egg freezing, female reproductive system, fertility, reproductive options, indian express news

Lifestyle

What is the difference between clinical egg freezing and social egg freezing?

**Clinical egg freezing**

What is the difference between clinical egg freezing and social egg freezing? (The Indian Express: 20221109)
"There are several myths surrounding fertility. There is a misconception that babies born from frozen eggs are unhealthy -- this is not true," says Dr Souren Bhattacharjee, consultant, Birla Fertility and IVF egg freezing, egg freezing and fertility, social egg freezing, clinical egg freezing, female reproductive system, fertility, reproductive options, indian express news

The eggs can be retrieved at a later stage and used to induce pregnancy, offering the woman to have a biological baby of her own at a time of her choice. (Photo: Getty/Thinkstock)

There are now numerous treatments available to improve the chances of conceiving a baby for couples who are not able to do it naturally or have planned to delay their pregnancy for various reasons. Among them are treatments that involve fertility drugs, hormonal drugs, or surgeries including in vitro fertilization (IVF).

**Coconut water**

**Fact check: Coconut water is no cancer cure (The Hindu: 20221109)**

https://www.thehindu.com/sci-tech/health/fact-check-coconut-water-is-no-cancer-cure/article66110069.ece

A post attributed to one Dr. Rajendra A. Badwe from the Tata Memorial Hospital, claiming that coconut water could cure cancer, has gone viral on WhatsApp.

It claims, among other things, that hot coconut water releases an “anti-cancer substance”, which is the “latest advance in the effective treatment of cancer”.

The Hindu could not find any credible evidence to support these claims.

While tracing the origins of the post, we found that it first went viral in 2019, and has been periodically resurfacing on various social media platforms ever since.

Earlier this year, the same message was doing the rounds on Facebook.

When contacted, Dr. C.S. Pramesh, Director, Tata Memorial Hospital, shared a press release issued by the institution, denying the claims.

The press release, issued by Dr. Badwe himself categorically refutes all claims mentioned in the message. “Neither Dr. Badwe nor the Tata Memorial Centre subscribe to this view,” the release stated.

In a report published by The Hindu in 2019, oncologists warned against ‘miracle’ treatments for cancer being circulated on social media.
Fact check: Don’t fall for this WhatsApp message pushing lemon as cancer cure

“This is being repeated often. We thought it was necessary for us to clarify,” Dr. Badwe was quoted as saying.

According to a report by the Indian Council for Medical Research, India’s cancer burden is projected to increase from 26.7 million in 2021 to 29.8 million in 2025.

**Cancer -ICMR report**

**India’s cancer burden to rise to 29.8 million in 2025: ICMR report (The Hindu: 20221109)**


According to a report by the ICMR on the ‘Burden of cancers in India’, seven cancers accounted for more than 40% of the total disease burden: lung (10.6%), breast (10.5%), oesophagus (5.8%), mouth (5.7%), stomach (5.2%), liver (4.6%) and cervix uteri (4.3%).

Mizoram, Delhi and Meghalaya had the highest cancer DALYs and the most vulnerable are people in the 65–69-year age group.

The number of Indians suffering from cancer is projected to increase to 29.8 million in 2025 from 26.7 million in 2021. The highest incidence last year was in the North (2,408 patients per 100,000) and the Northeast (2,177 per 100,000). It was higher among men.

According to a report by the Indian Council for Medical Research on the ‘Burden of cancers in India’, seven cancers accounted for more than 40% of the total disease burden: lung (10.6%), breast (10.5%), oesophagus (5.8%), mouth (5.7%), stomach (5.2%), liver (4.6%) and cervix uteri (4.3%).

Explaining the 2021-2025 projections, Dr Prasant Mathur, Director, National Centre for Disease Informatics and Research (NCDIR) said men will contribute to 14.7 million Years of Life Lost (YLLs), 0.72 million Years Lived with Disability (YLDs) and 15.5 million Disability Adjusted Life Years (DALYs) in 2025. The figure for women will be 13.6 million YLLs, 0.69 million YLDs and 14.3 DALYs.

The findings of the report have been published in BMC Cancer Journal.

Mizoram, Delhi and Meghalaya had the highest cancer DALYs and the most vulnerable demographic are people in the 65–69-year age group, said Dr Mathur.
“The information will be useful in understanding differences in the cancer burden across the country, resource allocation, prioritization of interventions, and monitoring indicators at national and state levels,” said Dr Mathur.

Oncologists said increasing consumption of packaged food with harmful preservatives and junk food could be contributory factors.

“The increasing burden of cancer is quite worrisome. Earlier tobacco and alcohol consumption were considered the major reasons for cancer. Obesity, radiation from mobile phone towers, vegetables grown in toxic water like rivers near industries, adulteration in food, artificial colouring of food and vegetables also increase the risk of cancers,” Dr. Anshuman Kumar, Director Surgical Oncology, Dharamshila Narayana Superspeciality Hospital.

vaccination

What is inflammation? Two immunologists explain how the body responds to everything from stings to vaccination and why it sometimes goes wrong (The Hindu: 20221109)


Inflammation is critical for fighting infections and repairing damaged tissue. Image for Representation.

Inflammation is critical for fighting infections and repairing damaged tissue. Image for Representation. | Photo Credit: AP

Inflammation is when the immune system is trying to fight off potential or real infections, clear toxic molecules or recover from physical injury.

When your body fights off an infection, you develop a fever.

If you have arthritis, your joints will hurt. If a bee stings your hand, your hand will swell up and become stiff. These are all manifestations of inflammation occurring in the body.

We are two immunologists who study how the immune system reacts during infections, vaccination, and autoimmune diseases where the body starts attacking itself.

While inflammation is commonly associated with the pain of an injury or the many diseases it can cause, it is an important part of the normal immune response. The problems arise when this normally helpful function overreacts or overstays its welcome.

What is inflammation?

Generally speaking, the term inflammation refers to all activities of the immune system that occur where the body is trying to fight off potential or real infections, clear toxic molecules or recover from physical injury.
There are five classic physical signs of acute inflammation: heat, pain, redness, swelling and loss of function.

Low-grade inflammation might not even produce noticeable symptoms, but the underlying cellular process is the same.

Also Read | Omicron variant of SARS-CoV-2 can evade immunity provided by vaccines: ICMR study

Take a bee sting, for example. The immune system is like a military unit with a wide range of tools in its arsenal.

After sensing the toxins, bacteria and physical damage from the sting, the immune system deploys various types of immune cells to the site of the sting. These include T cells, B cells, macrophages and neutrophils, among other cells.

The B cells produce antibodies. Those antibodies can kill any bacteria in the wound and neutralise toxins from the sting.

Macrophages and neutrophils engulf bacteria and destroy them. T cells don’t produce antibodies, but kill any virus-infected cell to prevent viral spread.

Additionally, these immune cells produce hundreds of types of molecules called cytokines — otherwise known as mediators — that help fight threats and repair harm to the body. But just like in a military attack, inflammation comes with collateral damage.

The mediators that help kill bacteria also kill some healthy cells. Other similar mediating molecules cause blood vessels to leak, leading to accumulation of fluid and influx of more immune cells.

This collateral damage is the reason you develop swelling, redness and pain around a bee sting or after getting a flu shot. Once the immune system clears an infection or foreign invader — whether the toxin in a bee sting or a chemical from the environment — different parts of the inflammatory response take over and help repair the damaged tissue.

After a few days, your body will neutralise the poison from the sting, eliminate any bacteria that got inside and heal any tissue that was harmed.

Inflammation as a cause of disease

Inflammation is a double-edged sword. It is critical for fighting infections and repairing damaged tissue, but when inflammation occurs for the wrong reasons or becomes chronic, the damage it causes can be harmful.

Allergies, for example, develop when the immune system mistakenly recognises innocuous substances – like peanuts or pollen – as dangerous. The harm can be minor, like itchy skin, or dangerous if someone’s throat closes up.

Also Read | Scientists find evidence of ‘substantial’ transmission of monkeypox before symptoms appear
Chronic inflammation damages tissues over time and can lead to many noninfectious clinical disorders, including cardiovascular diseases, neuro-degenerative disorders, obesity, diabetes and some types of cancers.

The immune system can sometimes mistake one’s own organs and tissues for invaders, leading to inflammation throughout the body or in specific areas.

This self-targeted inflammation is what causes the symptoms of autoimmune diseases such as lupus and arthritis.

Another cause of chronic inflammation that researchers like us are currently studying is defects in the mechanisms that curtail inflammation after the body clears an infection.

While inflammation mostly plays out at a cellular level in the body, it is far from a simple mechanism that happens in isolation. Stress, diet and nutrition, as well as genetic and environmental factors, have all been shown to regulate inflammation in some way.

There is still a lot to be learned about what leads to harmful forms of inflammation, but a healthy diet and avoiding stress can go a long way toward helping maintain the delicate balance between a strong immune response and harmful chronic inflammation.

By Prakash Nagarkatti, Professor Pathology, Microbiology, Immunology at University of South Carolina and Mitzi Nagarkatti, Professor Pathology, Microbiology, Immunology at University of South Carolina (The Conversation)

Health Ministry

Health Ministry working on guidelines to scrap bond policy for doctors (The Hindu: 20221109)


According to the bond policy, doctors are required to serve for a specific period in State hospitals after the completion of their undergraduate and postgraduate degrees.

The Union Health Ministry is working to finalise guidelines to do away with the bond policy for doctors based on the National Medical Commission's recommendations in this regard, official sources said.

According to the bond policy, doctors are required to serve for a specific period in State hospitals after the completion of their undergraduate and postgraduate degrees, failing which they have to pay a penalty (amount specified beforehand by every State and Union Territory) to the State or medical college.

In August 2019, the Supreme Court upheld the bond policy of States and observed that certain governments impose rigid conditions. It suggested that the Centre and the then Medical Council of India should frame a uniform policy regarding the compulsory service to be rendered by
doctors trained in government institutions which will be applicable across States, an official source told PTI.

In pursuance of the Supreme Court’s directions, the Health Ministry constituted a committee under the chairmanship of Dr. B. D. Athani, Principal Consultant, Directorate General of Health Services, in 2019 to examine the matter. The committee submitted its report in May 2020 and it was forwarded to the National Medical Commission (NMC) for comments.

The NMC furnished its comments in February 2021. It said the report does not clearly address the origin of the policies on compulsory imposition of bond conditions by the various State governments for students.

The NMC, in its comments, stated that since the promulgation of the bond policy by the various States, much has changed in medical education in the country and therefore, it may be worth reviewing the merits/effectiveness of this policy by the various States.

“The NMC submitted its detailed observations. In view of its observations and notwithstanding the observations of the SC upholding the legalities related to the bond policies of the state governments, the commission was of the considered view that medical students should not be burdened with any bond conditions and doing so may run contrary to the principles of natural justice,” the source said.

Further, the matter was thoroughly examined by the Ministry and it was proposed that there is a need to re-examine the entire bond policy de-novo along with the views of all States, Union Territories and other stakeholders.

Since then, meetings have been held to deliberate on operationalisation of the uniform bond policy, including finalisation of quantum of bond, manner of enforcement and timely availability of posts in States after completion of internship etc., the source said.

There is no provision of a bond under the NMC Act, 2019 or the erstwhile Indian Medical Council Act, 1956 and regulations made thereunder. The condition of bond is imposed by the State to increase access to improved healthcare services, especially in rural areas by filling the vacant position in community health centres (CHCs) and primary health centres (PHCs).

The amount of bond is decided by the State in lieu of subsidised education being provided in the government medical colleges.

The amount of bond varies from state to state and ranges widely between ₹5 lakh (Goa, Rajasthan, Tamil Nadu) and ₹1 crore (Uttarakhand) for MBBS and up to ₹2-2.5 crore (Kerala, Uttarakhand, Maharashtra) for PG and super-speciality.

The duration of compulsory service also varies between 1 year and 5 years.

“In a meeting, it was observed that there is a consensus that there should be mandatory rural service to enhance availability of doctors in rural and remote areas with flexibility. Also, the bond could be non-financial and implemented through an administrative mechanism,” the source said.

“The Health Ministry is working to finalise guidelines for doing away with the bond policy based on the recommendations by NMC,” the source added.
**Omicron variant of SARS-CoV-2**

**Omicron variant of SARS-CoV-2 can evade immunity provided by vaccines: ICMR study (The Hindu: 20221109)**


The current study noted that breakthrough infection was higher among healthcare workers as reported in previous studies. File

Omicron, a variant of SARS-CoV-2, can evade immunity provided by vaccines, states a new study published by the Indian Council of Medical Research (ICMR). It points to the need to further explore the Omicron variant’s immune evasion properties, which may be essential in planning for vaccine advocacy in the future in India.

The study, undertaken by ICMR’s Regional Medical Research Centre (ICMR-RMRC), Gorakhpur, and the maximum containment facility of the National Institute of Virology (ICMR-NIV), Pune, also advocates for universal administration of third or precautionary doses across all age groups irrespective of comorbidity status.

The study advocates universal administration of third or precautionary doses across all age groups, irrespective of comorbidity status.

Titled ‘Omicron BA.2 lineage predominance in severe acute respiratory syndrome coronavirus 2 positive cases during the third wave in North India’, the study was published on November 2 in Frontiers in Medicine, a peer-reviewed open access medical journal.

“The current study showed a predominance of the Omicron BA.2 variant outcompeting the BA.1 over a period in eastern Uttar Pradesh. Most of the cases had a breakthrough infection following the recommended two doses of vaccine with four in five cases being symptomatic. There is a need to further explore the immune evasion properties of the Omicron variant,” the study said.

It further stated that fully vaccinated individuals having the Omicron infection (breakthrough infection) were higher in the present study compared with the Chennai study, but lesser than that reported in the Delhi study done previously.
The current study noted that breakthrough infection was higher among healthcare workers as reported in previous studies. It also highlights the median duration from the second dose to Omicron infection to be around six months.

“Recent studies on severe acute respiratory syndrome coronavirus 2 [SARS-CoV-2] reveal that Omicron variant BA.1 and sub-lineages have revived the concern over resistance to antiviral drugs and vaccine-induced immunity. The present study then aims to analyse the clinical profile and genome characterisation of the SARS-CoV-2 variant in eastern Uttar Pradesh, north India,” a senior official at ICMR said.

For the study, whole genome sequencing (WGS) was conducted on 146 SARS-CoV-2 samples obtained from individuals who tested coronavirus disease 2019 (COVID-19) positive between the period of January 1, 2022, and February 24, 2022, in three districts of eastern U.P.

'Substantial' transmission of monkeypox

Scientists find evidence of 'substantial' transmission of monkeypox before symptoms appear (The Hindu: 20221109)


While previous research on pox viruses did not rule out transmission prior to symptoms, this work represents the first evidence to support this

Scientists have found evidence to show that the monkeypox virus can spread from an infected person up to four days before they even start exhibiting symptoms of the disease, a new study has claimed.

The researchers behind the study estimated that 53% of the transmission of monkeypox occurred in this pre-symptomatic phase, meaning that many infections cannot be prevented by asking individuals to isolate after they notice their symptoms.

According to them, if these findings published in the British Medical Journal are supported by other studies, pre-symptomatic transmission "would have important implications for infection control globally".

While previous research on pox viruses did not rule out transmission prior to symptoms, this work represents the first evidence to support this. To explore this further, researchers at the United Kingdom Health Security Agency set out to analyse the transmission dynamics of the monkeypox outbreak in the country, the study said.
The two main measures of interest to the researchers were serial interval – the time from symptom onset in the primary case patient to symptom onset in the secondary contact – and incubation period – the time from exposure to onset of symptoms.

The mean incubation period was estimated to be 7.6 days in one model and 7.8 days in the other model, while the estimated mean serial interval was eight days in one model and 9.5 days in the other.

For both models, the median serial interval was between 0.3 and 1.7 days shorter than the median incubation period, indicating that considerable transmission is occurring before the appearance or detection of symptoms.

Their findings are based on routine surveillance and contact-tracing data for 2,746 individuals who tested positive for the monkeypox virus in the U. K. between May 6 and August 1, 2022. Their average age was 38 years and 95 per cent of them reported being gay, bisexual, or men who have sex with men, the study mentioned.

Statistical models
To estimate the above values, the scientists linked information on exposure and symptom onset dates from these individuals to their contacts through contact-tracing case questionnaires, which they then analysed using two statistical models.

The models were adjusted for several biases common to virus outbreaks, such as changes in infection rates over time, that would otherwise affect the results.

Analysis of individual-level patient data, collected from a subset of patients with more detailed information, seemed to confirm this explanation, with 10 out of 13 case-contact patient pairs reporting pre-symptomatic transmission. Four days was the maximum time that transmission was detected before symptoms appeared.

Based on these results, the researchers say an isolation period of 16 to 23 days would be required to detect 95 per cent of people with a potential infection.

These are observational findings, and the researchers point to several limitations, such as relying on contact tracing to identify the correct case-contact pairs and the self-reported data on the date of symptom onset. Further, the results may not necessarily be directly applicable to other populations with different transmission patterns.

Important implications
Nevertheless, this was a large study using robust methods and adjusting for key biases that are present in the data, providing greater confidence in the conclusions.

The monkeypox virus: origin, symptoms and vaccine

These findings have important implications for isolation and contact-tracing policies, the researchers said, adding that backward contact-tracing strategies (tracing from whom disease spreads) should account for a pre-symptomatic infectious period when trying to find the contacts of confirmed cases.
In a linked editorial, researchers based in the U. S., U. K., and Nigeria argued that pre-exposure vaccination and vaccine equity are urgently needed worldwide.

Vaccination is likely to be more cost-effective than managing the consequences of preventable infections, including hospital admissions, loss of income during isolation, and long-term complications, they explained.

However, they pointed out that many of the public health measures that have been critical during monkeypox outbreaks in high-income countries remain unavailable in much of Africa.

"As the monkeypox outbreak declines in Europe and North America, we have a responsibility to deploy effective tools for viral control on a global level – not just in wealthy nations," the researchers said. "These tools include research into understanding transmission dynamics in African settings and the inclusion of endemic countries in vaccine trials."

Although case numbers are now declining, it is still important to understand the "transmission dynamics" of the virus – for example, how it spreads from one person to another and how quickly symptoms appear – to help inform policy decisions and future interventions.

Since the international outbreak of monkeypox in May 2022, more than 70,000 cases have been recorded globally, with just over 3,500 cases in the U. K.

Mild disease

COVID-19 | Mild disease, no severity among Indian patients: INSACOG on Omicron's XBB variant(The Hindu: 20221109)


Expert panel says XBB variant of COVID-19 has been detected in multiple States in the country

Indian patients infected with Omicron sub-lineage XBB of COVID-19 have mild disease and no increase in severity is noted, the INSACOG said.

The expert panel said the XBB variant has been detected in multiple States in the country.

Data | Omicron variant BA.2 and its sub-lineages responsible for latest COVID-19 surge

The Indian SARS-CoV-2 Genomics Consortium (INSACOG), in a statement, said it is keeping a close watch and monitoring the emergence and evolution of XBB and XBB.1 and any new sub-lineages.
“The community need not panic and adherence to coronavirus appropriate behaviour is recommended in the light of ongoing festivities,” it said.

Among the Indian patients the disease is mild like with other Omicron sub-lineages and no increase in severity is noted, the panel said.

Also read: Researchers claim new COVID-19 test CoVarScan can identify all variants in hours

In the current phase of the pandemic, the INSACOG said the SARS-CoV-2 virus is continuously accumulating mutations, some of which might contribute to increased transmissibility and immune evasion resulting in transmission advantage over other variants.

“XBB, a BJ.1/BM.1.1.1 recombinant lineage with breakpoint in the spike protein is presently appearing in multiple countries. This recombinant lineage was first detected in Singapore and the U.S., and has also been identified in multiple States in India,” it said.

A sub-lineage of XBB with an additional mutation is also detected (XBB.1).

“Modest increase in the spread of XBB in Singapore has been observed. However, there has been no report of increase in severity of disease or increase in hospitalisation associated with these variants,” it added.

Prostate cancer

Prostate cancer: Pain in THESE 3 areas in the body can be a sign (The Hindu: 20221109)


There are a number of cancers that can affect us. According to the World Health Organization (WHO), breast, lung, colon and rectum and prostate cancers are some of the most common cancers in the world. Collectively, all these types of cancers are the leading cause of death worldwide, accounting for nearly 10 million deaths in 2020.

Prostate cancer is a common type of cancer that mostly develops in men over the age of 50 and the risk increases as one grows older. These can cause several symptoms and if left untreated, can spread to other parts of the body.

Cancers take their time to develop and spread, which is why it tends to grow slowly and gradually over many years. Most men with early prostate cancer do not experience any noticeable signs. Only as the tumour grows and progresses, signs of prostate cancer begin to appear.
There are times, when men develop early signs of prostate cancer, but mistake them for other benign illnesses. This can be concerning as delay in diagnosis means delay in treatment too.

Also read: Chikungunya versus Dengue: How their symptoms differ

Prostate cancer, as most of us know, is the cancer of the prostate. It occurs when the cells in the prostate start to grow uncontrollably. Prostate is a walnut-shaped gland, located at the base of the bladder. This is why some of the common symptoms include:

- Frequent urination
- A weak flow when you urinate
- A sudden need to urinate
- Feeling as though the bladder is never full empty, even after peeing

With the progress in the disease and depending on how far it has advanced, you may experience more unusual signs in your body.

According to Jeremy Oates, consultant urological surgeon at The Christie Private Care in Manchester, you can develop a dull ache in the back, hip and pelvis.

“If the cancer has spread to surrounding areas, such as the bones in the hips and pelvis, it could be causing pain in the form of a dull ache, or sharp stabbing sensations,” Mr Oates told Express.co.uk.

Other signs of advanced prostate cancer include: unexplained weight loss and painful ejaculation and blood in the semen.

According to the Mayo Clinic, some of the common risk factors of prostate cancer include:

- Older age i.e. people aged 50 and above
- Race - many health bodies suggest that black people are at a greater risk of prostate cancer than other races.

- A family history of prostate cancer or genetics.

- Obesity

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06/6 Get tested regularly

If you have any urinary symptoms, it is best to visit a urologist and get yourself tested. Depending on your symptoms, your doctor may advise you to get a PSA blood test, which helps detect high levels of the protein in your blood - indicative of cancer. They may examine your prostate gland and also do an MRI scan to be more accurate about the diagnosis. Biopsies may be required to reach a conclusion.

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When we say cardio, we often think of running or cycling. While these types of exercises are also beneficial to help improve cardiovascular health, staying active overall is a good way to maintain a healthy heart and avoid heart-related diseases. Cardio exercises elevate your heart rate, making your blood pump faster. This delivers more oxygen throughout your body, which keeps your heart and lungs healthy. It further helps avoid conditions like diabetes, cholesterol, high blood pressure, etc. There are many low-intensity and low-impact exercises that can be done to improve your quality of health. Here are the top 5 recommended workout forms to keep the blood pumping:

02/6 Strength training

Strength training

“While it might be slower in pace and not perceived as a cardio workout, performing at the right intensity can help elevate the heart rate. Furthermore, resistance training can help increase lean muscle mass which is beneficial to decrease the chances of chronic conditions,” says Spoorthi, Fitness Expert, Cult.fit
Yoga or Pilates

These forms of exercises are known to improve overall health and wellbeing while focusing on breath, flexibility, and balance. Research says that beyond off-loading stress, practicing yoga may help lower blood pressure, blood cholesterol, and blood glucose levels, as well as heart rate, making it a useful lifestyle intervention.

Walking

It is probably the most easy and simple exercise to do, but also very effective. Walking can be done anywhere and anytime, and also at the pace that you wish to. Other ways to make your walks more challenging are by walking with some weights in hand, adding more distance every time you go for a walk or even adding short jogs in between.

Play a sport

When you play a sport that you like, you’re sure to have fun while you’re at it and also not overexert yourself. Most sports demand rapid movements and this can in turn elevate the heart rate when done for a duration of time. It can be a fun but effective approach to cardio based workouts.

Just be active all day

While all the above workouts, including cardio exercises, can be really beneficial to improve heart health, nothing beats the perks of staying active throughout the day. This helps increase NEAT (Non-Exercise Activity Thermogenesis) which further increases ones’ energy expenditure. This can include, walking, playing a sport, doing household chores or just switching options such as taking the stairs instead of the lift. You can also build a regime with all the above workout formats to have a holistic approach towards bettering your heart function, without adding a lot of running and/or cycling.

COVID or dengue

COVID or dengue: How to differentiate common symptoms like fever, chills and body ache (The Times of India: 20221109)
Coronavirus and dengue cases, coupled with the air pollution, makes for a deadly cocktail for the health of people, especially in places like Delhi, with a poor Air Quality Index and around 295 positive cases of dengue reported in just the first week of November.

Both the infections have several overlapping symptoms like fever, chills, headache and body ache. So how do we differentiate between the two? Read on to find out.

02/6 Warning signs commonly associated with dengue

According to the US Centers for Disease Control and Prevention, here are some signs that are more consistent with dengue:

- Persistent vomiting

- Mucosal bleeding

- Difficulty breathing

- Lethargy/restlessness

- Liver enlargement

READMORE

03/6 Warning signs commonly associated with COVID-19

Experiencing these symptoms may be caused by a COVID infection, according to the US CDC:

- Difficulty breathing

- Persistent pain or pressure in the chest

- New confusion
Inability to wake or stay awake

Bluish lips or face

Note that this list is not all possible symptoms as COVID-19 can lead to multiple other symptoms too, depending on person to person.

Anti-Pollution Foods

**Anti-Pollution Foods: प्रदूषण के असर को बेअसर कर सकते हैं डाइट में शामिल ये 5 एंटी-पॉल्यूशन फूड (Hindustan: 20221109)**

Anti-Pollution Foods: वायु प्रदूषण और स्मॉग में कई सारे खतरनाक पदार्थ मौजूद होते हैं, जो फेफड़े, दिल व अन्य शरीरक अंगों को डैमेज कर सकते हैं। ऐसे में खुद को इस प्रदूषण के असर से बचाए रखने के लिए आप अपनी डाइट में शामिल कर सकते हैं ये 5 एंटी-पॉल्यूशन फूड।


वायु प्रदूषण के असर से बचने के लिए खाएं ये फूड- आंवला-

एंटी-पॉल्यूशन फूड में सबसे पहला नाम आंवला का आता है। आंवला में विटामिन-सी प्रथम मात्रा में मौजूद होता है। जो खतरनाक हानिकारक पदार्थों से होने वाले सेल्लर डैमेज को होने से रोकता है। वायु प्रदूषण के असर से बचने के लिए आपको अपनी डाइट में रोजाना आंवला को जमाए देनी चाहिए।

हल्दी-
हल्दी में शैक्षु करक्षण्म कागु प्रदूषण के खतनाक असर इस्ताम्बेन न को होने से मेराह न रोकता है। प्रदूषण के कारण होने वाले लंग्स इलेक्शन से बचने के लिए व्यक्ति को रोजाना 500 एमजी करक्षण्म सप्लीमेंट लेना चाहिए।

अलसी के बीज -
बायु प्रदूषण के साइड इलेक्शन से बचने के लिए आपको रोजाना फैलक सीई (अलसी के बीज) का सेवन करना चाहिए। अलसी के बीज में फादोटियोन और ऑमेगा-3 फैट एसिड इलेक्शन मौजूद होता है। इन बीजों का सेवन नियमित रूप से करने से स्मार्क के कारण अस्थाय के जोरों में करते हुए बायु प्रदूषण के खराब असर रोकता है।

पत्तेदार सदजजयां -
हरी पत्तेदार सदजजयों में बीटा कैरोटीन पाया जाता है। बीटा कैरोटीन में मौजूद एंटी-ऑक्सिडेंट इलेक्शन को दकयात्रत करने में महत्वपूर्व महत्व है। इसका सेवन दूर रूपसे करने से स्मॉग के कारण अस्त्र्या के मरीजों में होने वाला परक एल्जर एलेक्शन कम रहता है।

डेंगू, कोरोना या वायरल,
डेंगू, कोरोना या वायरल, रोजमें असरदार हैं ये घरेलू उपाय, डेंगू और कोरोना के लिए खाएं ये फूड्स

Platelets Home Remedy: डेंगू, वायरल और कोरोना के लक्षण मिलते-जुलते होते हैं। ऐसे में तबीयत खराब होते हैं कुछ बालों का ध्यान रखना व्याध जस्ती है। यहां जानें कैसे करें इन बीमारियों से मुकाबला (Hindustan: 20221109)

भी सावधानी जरूरी है। अगर आपको 3 दिन तक तेज बुखार है तो बेस्ट तरीका है कि डॉक्टर की सलाह पर टेस्ट करवाएं। समय पर इलाज से किसी भी बीमारी को हराया जा सकता है। यहां जानें आपको क्या सावधानियां बतानी चाहिए।

3 दिन तक तेज बुखार हो तो टेस्ट करवाएं।

अगर आपको वायरस है या कोरोना हुआ है तो इसके लिए दवाएं नहीं हैं। आपको चेक उपचार लेने होगे और प्रीपरेशन से सावधानी से ध्यान देना होगा। यदू है तो तेज हल्का तेज कर देना चाहिए। देंगू में सबसे ज्यादा खतरा प्लेटलेट्स डाउन होने का होता है। यहीं यह ध्यान देना भी जरूरी है कि सिर्फ देंगू ही नहीं कई वायरल इन्फेक्शन ऐसे होते हैं जिनमें प्लेटलेट्स घट जाती है। इसलिए अगर रिपोर्ट में प्लेटलेट्स कम दिखे तो सीधे देंगू के सार्वजनिक टेस्ट करवाएं।

हर तरह के इन्फेक्शन में एक ही सूचना है।

डॉक्टर की मांग तो देंगू जैसे की सावधानियां भी किसी भी तरह के इन्फेक्शन में कुछ कौशल चीज़ें प्राप्त होती हैं। इसलिए अगर कोई भी तरह के इन्फेक्शन में कुछ कौशल चीज़ें प्राप्त होती हैं जैसे- नाइटिक डायरेक्ट डे, फ्रेम बेन, कम, दर और बुखार के लिए ओवर द लाइन डे, टेक्स्ट करवाएं। डॉक्टर की सलाह पर लें। ये भी पढ़ें: खांसी बढ़ाते हैं ये हेल्दी फूड्स, गला खराब हो तो भूलकर भी न खाएं।

प्लेटलेट्स के लिए चेक उपचार

आपको वायरस या वायरल भी तरह का इन्फेक्शन हो तो ध्यान-पान पर ध्यान दें। अगर आपको डाउट है तो यह समझें कि देंगू हुआ है या देंगू की रुचि हो गई हो तो तेज प्लेटलेट्स सावधानी, तुलसी, फलों, पपीते के पत्ते का रस, अनार, कदमू की सब्जी, दूध जैसी चीज़ें खा सकते हैं। इसलिए इन्फेक्शन का प्राकृतिक ठिकाना माना जाता है। डॉक्टर की सलाह जरूर लें।

संबंधित खबरें