



DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY
Thursday 20220519

NFHS data on diet practices

NFHS data on diet practices should lead to more informed debate on nutrition, remove blinkers of policymakers

The gender disparities in the consumption of non-vegetarian food, highlighted by the NFHS-5, should make policymakers revisit the debates on reducing the protein deficit of the country's women. Hanging on to facile stereotypes will do more harm than good. (Indian Express: 20220519)

<https://indianexpress.com/article/opinion/editorials/nfhs-data-diet-practices-non-vegetarian-india-7922598/>

More than two-thirds of people in the 15-49 age group eat non-vegetarian food daily, weekly or occasionally — a steady rise compared to NHFS-4 when the figure stood at a little over 70 per cent people.

Data from the recently-released National Health and Family Survey (NFHS-5) confirms the hypothesis of a sizeable section of nutrition scholars. The number of Indians who eat non-vegetarian food has been increasing steadily. More than two-thirds of people in the 15-49 age group eat non-vegetarian food daily, weekly or occasionally — a steady rise compared to NHFS-4 when the figure stood at a little over 70 per cent people. The survey's latest edition also shows that more people in the country eat meat at least once a week compared to 2015-16. The proportion of Indians who eat eggs too has gone up appreciably. The survey's data on dietary practices, however, shows a distinct gender skew: The increase in the number of men eating non-vegetarian food is far more pronounced compared to women. All this has significant implications for planning on nutrition-related matters — it is especially salutary for policymakers who obstinately hold on to the stereotype of India being a country of vegetarians.

In India, food practices have been, for long, informed by complex rules of religion and caste. In recent times, these habits have become part of the country's political discourses in ways that have bred acrimony between social groups and stoked violence against minorities. The myth of the vegetarian nation has also influenced policy matters such as serving eggs in the mid-day meal scheme for children attending government and government-aided schools. Barely a third of the states provide eggs to children under the scheme despite the Hyderabad-based National Institute of Nutrition — it works under the aegis of the Indian Council of Medical Research —

certifying that eggs are loaded with more nutrients and easier to procure compared to alternatives such as milk and bananas.

In 2011, the National Sample Survey data revealed the declining protein intake of Indians. This was confirmed, in 2019, by the EAT-Lancet Commission Study on Sustainable Food Systems, which pointed out that Indians consume more simple carbohydrates than proteins as well as less complex carbohydrates, fruits and vegetables. Given that non-vegetarian diets are protein-rich, it wouldn't be an overstatement to say that restrictions on eating meat and eggs could increase the nutritional deficits of a section of the country's population — a worrying proposition given India's poor report card in repeated Global Hunger Index surveys. In fact, the gender disparities in the consumption of non-vegetarian food, highlighted by the NFHS-5, should make policymakers revisit the debates on reducing the protein deficit of the country's women. Hanging on to facile stereotypes will do more harm than good.

Sudden infant death syndrome (SIDS):

New study throws light on a possible cause of sudden infant death syndrome (SIDS): What is it?

SIDS is defined as the sudden, unexplained death in a previously-healthy infant, and the cause of death remains unknown (Indian Express: 20220519)

<https://indianexpress.com/article/lifestyle/health/study-babies-risk-sudden-infant-death-syndrome-7924169/>

sudden infant death syndrome, what is sudden infant death syndrome or SIDS, SIDS causes, SIDS prevention, study on SIDS, research on sudden infant death syndrome, indian express news Babies born prematurely and those who have low birth weight may be at a higher risk, says a doctor. (Photo: Getty/Thinkstock)

A new research, conducted by scientists in Australia have found that babies who are at risk of sudden infant death syndrome or SIDS, have low levels of an enzyme called butyrylcholinesterase (BChE) in their blood. Published in the journal eBioMedicine, the study could pave the way for newborn screening and timely intervention if results are corroborated by more research.

Dr Carmel Harrington, who led the research at the Children's Hospital at Westmead, in Sydney, Australia, was quoted as saying, "It's the first time we've ever had a potential biomarker for SIDS."

ALSO READ |Dia Mirza recalls son's health condition of necrotizing enterocolitis on his first birthday; know all about it

According to a report in The New York Times, SIDS remains a leading cause of sudden and unexpected death in infants under the age of 1 in Western countries.

The report states that for the research, Dr Harrington and her team compared dried blood samples from 655 healthy babies, 26 babies who died from SIDS and 41 babies who died from another cause. It was found that about nine out of 10 babies who died of SIDS had significantly lower BChE levels than those in the other groups.

Dr TJ Antony, director and HOD, neonatology at Fortis Memorial Research Institute, Gurugram told indianexpress.com that SIDS is defined as the sudden unexplained death in a previously-healthy infant, and the cause of death remains unknown despite a thorough investigation.

|Priyanka Chopra-Nick Jonas' baby comes home after 100 days in hospital; know more about NICU care

“It is, therefore, a diagnosis of exclusion. In the US, between 2,000-3,000 babies die of SIDS every year. There is, however, no reliable data from India on the number of cases,” he said.

sudden infant death syndrome, what is sudden infant death syndrome or SIDS, SIDS causes, SIDS prevention, study on SIDS, research on sudden infant death syndrome, indian express news Babies should sleep on a firm mattress, and all soft objects and loose bedding should be kept away. (Photo: Getty/Thinkstock)

Is there a way to prevent it?

According to the doctor, prevention includes:

1. The most important recommendation to prevent SIDS is to make the babies sleep only on their backs.
2. They should sleep on a firm mattress, and all soft objects and loose bedding should be kept away from the sleeping area.
3. Avoid overheating , and over-covering.
4. Preferably have babies sleep in the same room as the parents, but on a different surface, especially if parents are smokers or have consumed alcohol, or are on sedative drugs.
5. Avoid smoke exposure during pregnancy and after birth.

ALSO READ |Parents, this is what you need to know about treating diarrhoea in children

“Parents should be aware of it, and also know how to prevent it. Babies born prematurely and those who have low birth weight may be at a higher risk than their term counterparts,” he explained.

“The study regarding the lower levels of butyrylcholinesterase in these babies is an exciting development, but it is still early days. The finding needs to be confirmed by other studies, and there is still a long way to go before we can really say this is the cause of SIDS,” Dr Antony concluded.

Monkeypox

US reports first case of monkeypox in man who recently travelled to Canada Monkeypox typically begins with a flu-like illness and swelling of the lymph nodes (The Tribune:20220519)

<https://www.tribuneindia.com/news/world/us-reports-first-case-of-monkeypox-in-man-who-recently-travelled-to-canada-396171>

US reports first case of monkeypox in man who recently travelled to Canada
Monkeypox is fatal for up to 1 in 10 people. Gay men asked to be alert as monkeypox cases rise to 7 in UK Photo for representational purpose only. iStock

Massachusetts on Thursday reported a rare case of monkeypox in a man who recently travelled to Canada, and health officials are looking into whether it is connected to small outbreaks in Europe.

Monkeypox is typically limited to Africa, and rare cases in the US and elsewhere are usually linked to travel there. A small number of confirmed or suspected cases have been reported this month in the United Kingdom, Portugal, and Spain.

US health officials said they are in contact with officials in the UK and Canada as part of the investigation. The US case poses no risk to the public, and the Massachusetts resident is hospitalised but in good condition, officials said.

The case is the first in the US this year. Last year, Texas and Maryland each reported a case in people who travelled to Nigeria.

Monkeypox typically begins with a flu-like illness and swelling of the lymph nodes, followed by a rash on the face and body. In Africa, people have been infected through bites from rodents or small animals, and it does not usually spread easily among people.

However, investigators in Europe say most of the cases have been in gay or bisexual men, and officials are looking into the possibility that some infections were spread through close contact during sex.

Monkeypox comes from the same family of viruses as smallpox. Most people recover from monkeypox within weeks, but the disease is fatal for up to 1 in 10 people, according to the World Health Organization. (AP)

Lung disorder

Researchers decode why people with lung disorder face risk of severe Covid-19

In the study, published in the American Journal of Respiratory and Critical Care Medicine, the researchers infected differentiated airway cells from COPD patients and healthy people with SARS-CoV-2 (The Tribune:20220519)

<https://www.tribuneindia.com/news/health/researchers-decode-why-people-with-lung-disorder-face-risk-of-severe-covid-19-395934>

Researchers decode why people with lung disorder face risk of severe Covid-19
Photo for representational purpose only. iStock

Researchers have revealed why people with chronic obstructive pulmonary disease (COPD) are at higher risk of developing severe Covid-19, an advance that could lead to the development of new therapeutic interventions to reduce the infection in patients with the lung condition.

The researchers from the Centenary Institute and the University of Technology Sydney in Australia noted that in inflammatory lung condition, COPD causes airway blockage and makes it difficult to breathe. It affects around 400 million people globally.

In the study, published in the American Journal of Respiratory and Critical Care Medicine, the researchers infected differentiated airway cells from COPD patients and healthy people with SARS-CoV-2.

They found that the COPD airway cells had 24-fold greater infection with SARS-CoV-2 than the healthy cells.

“We examined the genetic information of infected cells through advanced single cell RNA-sequencing analysis,” said study lead author Matt Johansen, from the Centenary UTS Centre for Inflammation.

“Seven days after SARS-CoV-2 infection, there was a 24-fold increase of viral load in the COPD patient airway cells compared to the cells taken from healthy individuals,” Johansen said.

The team found that the infected COPD cells had increased levels of transmembrane protease serine 2 (TMPRSS2) and cathepsin B (CTSB). Both are enzymes that SARS-CoV-2 uses to enter into the host cell.

“These two enzymes are increased in COPD patients and favour greater SARS-CoV-2 infection compared to healthy people. Simply put, easier and increased cell infection makes it far more likely that individuals with COPD will have more severe disease outcomes,” said Johansen.

Other results from the study showed additional reasons for COPD patient susceptibility to severe Covid-19. Key anti-viral proteins (interferons) that protect against infection were largely blunted in the COPD patient airway cells.

This was a likely trigger in causing increased viral production in COPD patients, the researchers said.

Johansen said that infected COPD patient airway cells also had higher levels of pro-inflammatory cytokines, which are linked to more severe Covid-19 and COPD outcomes.

“COPD is an inflammatory disease with patients having increased inflammation at baseline compared to healthy people. It is highly likely that SARS-CoV-2 exacerbates this existing high inflammation level which leads to even poorer outcomes,” he said. Initial laboratory drug testing by the researchers, to inhibit the enzymes TMPRSS2 and CTSB, and to target the high inflammation levels, successfully and substantially reduced SARS-CoV-2 viral levels in COPD patient cells, ultimately confirming the study’s results. “Collectively, these findings have allowed us to understand the mechanisms of increased Covid-19 susceptibility in COPD patients,” said Professor Phil Hansbro, the study’s senior author and Director of the Centenary UTS Centre for Inflammation.

“We believe that new drug treatments targeting relevant enzymes and pro-inflammatory responses in SARS-CoV-2 infection could have excellent therapeutic potential in reducing the severity of Covid-19 in patients with COPD,” Hansbro said.

The finding was critical with hundreds of millions of people affected by COPD globally and with Covid-19 likely to be around for many years to come, the researchers added.

Alzheimer’s disease

**Pineapple extract may help treat Alzheimer’s disease, animal study suggests
Alzheimer’s is a neurodegenerative disease generally characterised by
gradual memory loss due to increased levels of amyloid-beta protein in the
brain(The Tribune:20220519)**

<https://www.tribuneindia.com/news/health/pineapple-extract-may-help-treat-alzheimers-disease-animal-study-suggests-395933>

Pineapple extract may help treat Alzheimer’s disease, animal study suggests
Photo for representational purpose only. iStock

An extract derived from pineapple stem may potentially improve the symptoms of Alzheimer's disease, according to a study conducted in mice.

Alzheimer's is a neurodegenerative disease generally characterised by gradual memory loss due to increased levels of amyloid-beta protein in the brain.

The affected patients are not able to remember things. In severe cases, people lose the ability to respond to their environment, carry on a conversation and, eventually, control movement.

Researchers at Lovely Professional University in Phagwara, Punjab noted that the current treatment is not effective in managing the long-term effects of Alzheimer's disease on patients' quality of life.

The study, recently published in the journal *NeuroToxicology*, found that the compound bromelain could improve Alzheimer's disease-related behaviour symptoms in mice.

The behaviour symptoms were supported by the results of biochemical and histopathological—microscopic examination of tissue—studies, the researchers said.

Biochemical studies included evaluation of activity of acetylcholinesterase, an enzyme that regulates neurotransmission and antioxidant parameters in mice brains which were significantly improved by the treatment with bromelain, they said.

“We also found significant amelioration of levels of the beta-secretase enzyme, beta-amyloid, brain-derived neurotrophic factor, tumour necrosis factor- α and interleukin-6 in the mouse brain after treatment with bromelain,” said study corresponding author Navneet Khurana, Professor at the School of Pharmaceutical Science, LPU. “The histopathological analysis also suggested amelioration of structures of mouse brain neurons by treatment with bromelain. All these results suggested the possible potential of bromelain for the treatment of Alzheimer's disease,” Khurana told PTI.

The researchers first induced Alzheimer's disease in mice using a combination of $AlCl_3$ and D-galactose.

In this disease, mice were not able to recognise the places due to loss of cognitive function in the brain.

After the induction of the disease, animals were treated with different doses of bromelain and the standard drug donepezil.

The study found that bromelain was observed to improve Alzheimer's disease behaviour symptoms in mice.

“This biomolecule, bromelain, appears to be a promising therapeutic for the treatment of Alzheimer's disease,” said Rakesh Kumar, Assistant Professor at the School of Pharmaceutical Science, LPU.

“It can be converted into a pharmaceutical formulation that may help in improving the quality of life of Alzheimer's disease patients. Even the routine consumption of this biomolecule in

the form of juice may also benefit Alzheimer's disease patients in improving their condition but further studies are required in this direction to warrant its clinical use," Kumar told PTI.

The research team also included Rajan Kumar, Neha Sharma, Sachin Kumar Singh, Saurabh Satija, Meenu Mehta, and Manish Vyas, all from LPU.

The researchers said bromelain is commonly consumed by people of all age groups and is present in a variety of food products, adding it has been determined to be safe for consumption.

"The mouse was used as an animal model to study its beneficial effects on Alzheimer's disease. This beneficial effect of bromelain was not known earlier," said Khurana.

"The current treatment for Alzheimer's disease is not effective in managing the long-term effects of this disease condition on patients' quality of life," he added.

Pollution

Pollution led to over 23.5 lakh premature deaths in India in 2019, highest in world: Lancet study

Pollution of any kind responsible for 90 lakh deaths globally

Pollution led to over 23.5 lakh premature deaths in India in 2019, highest in world: Lancet study (The Tribune:20220519)

<https://www.tribuneindia.com/news/nation/india-and-china-lead-the-world-in-pollution-deaths-global-pollution-kills-9-million-people-a-year-study-395906>

India saw over 23.5 lakh premature deaths due to pollution of all types, including 16.7 lakh fatalities caused by air pollution, in 2019, the highest among all countries globally, according to a new study published in The Lancet Planetary Health journal.

The majority of air pollution related 9.8 lakh deaths in India were caused by ambient PM2.5 pollution -- tiny pollution particles in the air that are two and one half microns or less in width, the researchers said.

Another 6.1 lakh were due to household air pollution, they said.

Globally, pollution of any kind was responsible for nine million deaths in 2019, equivalent to one in six deaths worldwide.

Air pollution, both household and ambient, was responsible for the greatest number of deaths at 6.67 million worldwide.

"The health impacts of pollution remain enormous, and low- and middle-income countries bear the brunt of this burden. Despite its enormous health, social and economic impacts, pollution prevention is largely overlooked in the international development agenda," said study lead author Richard Fuller, from Global Alliance on Health and Pollution, Geneva, Switzerland.

In India, air pollution is most severe in the Indo-Gangetic Plain (northern India), where topography and meteorology concentrate pollution from energy, mobility, industry, agriculture, and other activities, the researchers said.

According to the study, burning of biomass in households was the single largest cause of air pollution deaths in India, followed by coal combustion and crop burning.

Population-weighted mean exposure to ambient air pollution peaked nationally in India at 95 milligram per cubic metre (mg/m³) in 2014, was reduced to 82mg/m³ by 2017, but more recently has been rising slowly again, the researchers said.

"India has developed a range of instruments for tackling air pollution, including a National Clean Air Program, and in 2019 launched a Commission for Air Quality Management in the National Capital Region," the authors of the study noted.

"However, India does not have a strong centralised administrative system to drive its air pollution control efforts and consequently improvements in overall air quality have been limited and uneven," they said.

The report noted that India's PM_{2.5} pollution remains well above World Health Organisation's guidelines of 10 microgram per cubic metre in 93 per cent areas of the country.

Deaths due to traditional pollution (household air pollution from solid fuels and unsafe water, sanitation, and hand washing) in India have reduced by more than 50 per cent since 2000, the report said.

Economic losses due to modern forms of pollution: ambient particulate matter air pollution, ozone pollution, lead exposure, occupational carcinogens, gases, fumes -- have increased between 2000 and 2019 in India and are now approximately 1 per cent of its gross domestic product (GDP), it said.

"Pollution is still the largest existential threat to human and planetary health and jeopardises the sustainability of modern societies," said study co-author Professor Philip Landrigan, Director, Global Public Health Program and Global Pollution Observatory at Boston College, US.

The researchers said water pollution was responsible for 1.36 million premature deaths globally. Lead contributed to nine lakh premature deaths, followed by toxic occupational hazards at 8.7 lakh deaths.

Monkeypox

32 cases in Portugal, Spain put Europe on alert for monkeypox (Hindustan Times:20220519)

<https://epaper.hindustantimes.com/Home/ShareArticle?OrgId=195295f2e08&imageview=0>

Officials in Spain and Portugal announced on Wednesday that they have detected around 32 suspected cases of monkeypox, days after the UK reported new cases that have triggered concerns that there may be an undetected transmission in parts of Europe.

Monkeypox is a virus that often infects people in DR Congo, Nigeria and other parts central and West Africa, leading to an eruption of lesions and other symptoms in an illness that can last 2-4 weeks. The disease is not particularly deadly, but is estimated to have a fatality rate of up to 10%. In all, Portugal had five confirmed and 20 suspected cases, Spain eight suspected cases and UK seven confirmed infections as on Wednesday.

The World Health Organization said Tuesday it was coordinating with UK, where cases have been found in those without a travel history to Africa, to investigate the outbreak. The virus typically has an incubation period of 6-13 days and leads to fever, headache, muscle aches, backache, swollen lymph nodes, a general feeling of discomfort, exhaustion, and rash.

Unusual spread

The UK Health Security Agency (UKHSA) said on Monday it detected four new cases after registering three cases earlier in May. Health officials noted some of the UK infections may be through sexual contact, which would be a new development in understanding transmission of the virus. The disease is not sexually transmitted per se, but infection can occur due to respiratory droplets, contact with lesions or a person's clothing.

A US Centers for Disease Control (CDC) official said in a new media report that the spread needs to be watched. "We do have a level of concern that this is very different than what we typically think of from monkeypox. And I think we have some concern that there could be spread outside the UK associated with this," Jennifer McQuiston, a senior CDC official, told STAT News in an interview.

Risks and precautions

A monkeypox infection is mostly serious for younger age group, according to a WHO information sheet. The US CDC in its own assessment notes that there are vaccines that work. "Because monkeypox virus is closely related to the virus that causes smallpox, the smallpox vaccine can protect people from getting monkeypox. Past data from Africa suggests that the smallpox vaccine is at least 85% effective in preventing monkeypox," the CDC says.

The agency recommends the vaccine be given within 4 days from the date of exposure in order to prevent onset of the disease and, if given between 4-14 days after the date of exposure, vaccination may reduce the symptoms of disease, but may not prevent the disease.

To avoid the virus, much of the same precautions as those for Covid-19 will work – especially avoiding close contact.

WHO

**Where WHO went wrong on India's Covid death count
Shailaja Chandra writes: By using modelling, and not national data sources,
it has ignored UN convention (The Indian Express:20220519)**

<https://indianexpress.com/article/opinion/columns/where-who-went-wrong-on-indias-covid-death-count-7919099/>

The controversy over the under-reporting of Covid deaths in India has spiralled. A World Health Organisation report has projected, through mathematical modelling, that India had 4.7 million, or 47 lakh, excess Covid deaths in 2020-2021. Surprisingly, none of the authors seems to have engaged with the Registrar General of India (RGI) who is responsible for the Civil Registration System (CRS). The responsibilities for reporting and registering births and deaths are enunciated in the Registration of Births and Deaths (RBD) Act, 1969, which draws its strength from the Concurrent List of the Constitution

Muscle Health Awareness Week

Muscle Health Awareness Week: How does vitamin E help build muscle health?

Vitamin E is necessary for healthy skin, hair, and muscles, as well as to maintain the immune system, says a doctor(The Indian Express:20220519)

<https://indianexpress.com/article/lifestyle/health/muscle-health-awareness-week-vitamin-e-muscles-health-7922038/>

Muscle Health Awareness Week, healthy muscles, how to obtain healthy muscles, vitamin E and muscle strength, role of vitamin E, vitamin E for health, vitamin E deficiency, indian express news Seeds, nuts, oils, fruit and vegetables all are great sources of vitamin E, which can easily be incorporated into our diets. (Photo: Getty/Thinkstock)

It is no secret that diet impacts health. The food you eat can determine the quality of your life. When it comes to muscles, there are some things that must be included in your diet and among them is vitamin E.

“Vitamin E, which is anti-inflammatory and has antioxidants protects the body from free radicals caused by environmental pollutants and stresses. These molecular components attack cells and tissues, causing oxidative stress which, in the long run, can lead to cell damage. It can make the skin look dull, wrinkly, with hair falling and muscles becoming prone to injury,” says Dr Sachin Pawar, MD, head — medical and technical affairs – India Cluster, Procter & Gamble Health Limited.

ALSO READ |From muscle pains to diarrhoea: NHS lists new Covid symptoms in the UK; here’s what doctors say

According to him, vitamin E is necessary for healthy skin, hair, and muscles, as well as to maintain the immune system.

What happens when there is a vitamin E deficiency?

“Fat absorption or digestive problems are almost always associated with vitamin E deficiency. The lack of vitamin E can result in nerves and muscles being damaged, resulting in loss of feeling in the arms and legs, trouble with balance, and problems with vision. Weakened immunity is another sign of vitamin E deficiency; frequent occurrence of colds, as well as slow-healing wounds, are signs,” Dr Pawar says.

Muscle Health Awareness Week, healthy muscles, how to obtain healthy muscles, vitamin E and muscle strength, role of vitamin E, vitamin E for health, vitamin E deficiency, indian express news Over-exercising, dehydration, and mineral deficiency are the main causes of muscle cramps. (Photo: Getty/Thinkstock)

Role of vitamin E in muscle health

He adds that muscle health depends on exercise and nutrition. “Muscles contract and relax constantly and a muscle cramp occurs when one is suddenly contracted, causing a shooting pain. Over-exercising, dehydration, and mineral deficiency are the main causes of muscle cramps. Vitamin E works as a powerful antioxidant to repair damaged cell membranes, thus easing muscle cramps.”

Lack of Vitamin E may affect learning skills in babies

The sources of vitamin E

Seeds, nuts, oils, fruit and vegetables all are great sources of vitamin E, which can easily be incorporated into our diets, the expert says.

“Vitamin E requirements may vary based on age, gender, and whether you’re pregnant or breastfeeding. Consult your doctor if you’re unsure. Supplements of vitamin E should be taken with a full meal since it is a fat-soluble vitamin. ICMR recommends 7.5 mg to 10 mg of vitamin E per day as a dietary allowance (RDA),” he concludes.

‘HIV vaccine

‘HIV vaccine development has taken a back seat’

With no commercial vaccine available after 35 years, there are very few companies and research laboratories who would invest in further R&D, Dr Ishwar Gilada, president, AIDS Society of India, tells Anuradha Mascarenhas on World AIDS Vaccine Day today (n The Indian Express:20220519)

<https://indianexpress.com/article/lifestyle/health/hiv-vaccine-development-has-taken-a-back-seat-7924378/>

There are an approximate 2.3 million people living with HIV (PLHIV) in India. (Credit: Wikimedia Commons)

With antiretroviral therapy, HIV has become a chronic but manageable disease. Still there are challenges that need to be tackled to eliminate AIDS by 2030, warns Dr Ishwar Gilada, president, AIDS Society of India. Considering India diagnosed its first case in 1986 and there’s enough scientific evidence to adopt ways to prevent HIV transmission and care for people living with HIV (PLHIV), the knowledge acquired is still not being actualised on the ground. What are the obstacles?

Current status of the HIV disease burden in India

There are an approximate 2.3 million people living with HIV (PLHIV) in India. Of these 76% know their HIV status. Of those aware of their status, 84% are on antiretroviral treatment (ART). Among those on ART, the virus has been suppressed in 84% cases. New HIV infections in India have declined by 37% between 2010 and 2019 compared to the global average of 23%. Similarly, during the same period, AIDS-related deaths have declined in India by almost 66% against the global average of 39%, according to the NACO report of 2020. The decline is higher in states like Andhra Pradesh, Maharashtra, Karnataka, Telangana, Tamil Nadu and West Bengal and noticeably among women and children at 73.7% and 65.3% respectively.

Dr Ishwar Gilada, president, AIDS Society of India.
HIV burden higher in Mizoram, Nagaland and Manipur

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Despite commendable progress, challenges continue to confront our goal to end AIDS by 2030. Mizoram (2.32%), Nagaland (1.45%), and Manipur (1.18%) had higher than 1% HIV prevalence in the adult population in 2019. HIV prevalence in injection-prone drug users is almost 28 times higher than overall adult prevalence. Similarly, HIV prevalence among transgender people, LGBTQ and female sex workers is six to 13 times higher than adult prevalence. Among inmates in central jails, where the population with high-risk behaviour is over-represented, HIV prevalence is nine times higher than the adult prevalence. More than 69,000 people were newly infected with HIV in 2019, twice the number envisaged by NACO, 2020 (75% reductions since 2010).

Newer generation of candidate vaccines with better ability to induce immune response against HIV

Currently, all are candidate vaccines because there is no finished product which has been commercialised or licensed for human usage. The first candidate vaccine was made in 1987 by Dr Jonas Salk and went into phase I trial in 1989. With Dr Salk's track record, who had invented the polio vaccine, we were all very hopeful but that failed.

Broadly, here are two types of vaccines: One for those who are HIV negative, termed a preventive vaccine or immunoprophylaxis. The other one is for PLHIV, to prevent disease progression to clinical stages and that is called a therapeutic vaccine or immunotherapy, akin to treatment. There has been a lot of progress in this area after the success of long-acting antiretrovirals, Cabotegravir and Rilpivirine, where the PLHIV needs to be treated with a monthly or bimonthly injectable rather than daily oral medicines.

Several studies are on with broadly neutralising antibodies (BNAb) for both types of vaccines. In prophylactic HIV vaccines, a total of some 95 candidates were assessed, of which more than 30 HIV candidate vaccines have been tested in approximately 60 Phase I/II trials, involving more than 10,000 healthy volunteers. Most of the initial trials were conducted in the USA and Europe, but several have also been conducted in developing countries like Brazil, South Africa, China, Cuba, Haiti, Kenya, Peru, Thailand, Trinidad, and Uganda. The results have confirmed the safety of the vaccines and have provided important scientific information to develop newer generations of candidate vaccines with better ability to induce immunogenicity or anti-HIV specific immune responses.

After Covid vaccines, two specific platforms that can be used for HIV

After the COVID vaccine success story, there are two specific COVID vaccine platforms, which can be used for HIV – an mRNA and DNA one. Broadly neutralising antibodies (BNAbs) are produced by certain types of B immunity cells, which are rare. May be only one in 300,000 B cells have this capability. The mRNA vaccine aims to stimulate production of bnAbs that can act against many variants of HIV. So, the mRNA vaccine will instigate B-cells and try to produce more neutralising antibodies.

Vaccine research and development is a long-drawn and very expensive proposition. With no commercial vaccine in 35 years, there are very few companies and research laboratories which

would invest in vaccine development. Moreover, with a very high success rate of ART in India, HIV vaccine development has taken a back seat. Even if candidate vaccines against HIV are found successful in phase 2 and can be taken forward to phase 3 of trials, the chances of getting emergency use authorisation or listing are less as HIV is no more an emergency.

Muscle Health Awareness Week

Muscle Health Awareness Week: How does vitamin E help build muscle health?

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ALSO READ |From muscle pains to diarrhoea: NHS lists new Covid symptoms in the UK; here’s what doctors say

According to him, vitamin E is necessary for healthy skin, hair, and muscles, as well as to maintain the immune system.

What happens when there is a vitamin E deficiency?

“Fat absorption or digestive problems are almost always associated with vitamin E deficiency. The lack of vitamin E can result in nerves and muscles being damaged, resulting in loss of feeling in the arms and legs, trouble with balance, and problems with vision. Weakened immunity is another sign of vitamin E deficiency; frequent occurrence of colds, as well as slow-healing wounds, are signs,” Dr Pawar says.

Muscle Health Awareness Week, healthy muscles, how to obtain healthy muscles, vitamin E and muscle strength, role of vitamin E, vitamin E for health, vitamin E deficiency, indian express news Over-exercising, dehydration, and mineral deficiency are the main causes of muscle cramps. (Photo: Getty/Thinkstock)

Role of vitamin E in muscle health

He adds that muscle health depends on exercise and nutrition. “Muscles contract and relax constantly and a muscle cramp occurs when one is suddenly contracted, causing a shooting pain. Over-exercising, dehydration, and mineral deficiency are the main causes of muscle cramps. Vitamin E works as a powerful antioxidant to repair damaged cell membranes, thus easing muscle cramps.”

ALSO READ |Lack of Vitamin E may affect learning skills in babies
The sources of vitamin E

Seeds, nuts, oils, fruit and vegetables all are great sources of vitamin E, which can easily be incorporated into our diets, the expert says.

“Vitamin E requirements may vary based on age, gender, and whether you’re pregnant or breastfeeding. Consult your doctor if you’re unsure. Supplements of vitamin E should be taken with a full meal since it is a fat-soluble vitamin. ICMR recommends 7.5 mg to 10 mg of vitamin E per day as a dietary allowance (RDA),” he concludes.

Food Safety licence

Food Safety licence mandatory for eateries: Kerala Minister (The Hindu:20220519)

<https://www.thehindu.com/news/national/kerala/food-safety-licence-mandatory-for-eateries-kerala-minister/article65427087.ece>

Kerala Health Minister Veena George. File photo

Kerala Health Minister Veena George. File photo | Photo Credit: THULASI KAKKAT

Food Safety licence /registration is mandatory for all food business operators (FBO) in the State and all FBOs should have secured the FSSAI licence within three months, Health Minister Veena George has said.

All FBOs are required to exhibit the toll-free number of the Food Safety department in their shop premises.

In view of the upcoming monsoon season, maintenance of food safety and hygiene has become all the more important. Hence more inspections by the Food Safety wing would be initiated, she said. The department has a key role to play in the prevention of infectious disease outbreaks, Ms. George said, while addressing a high-level meeting of Food Safety officials here on Wednesday.

She directed officials to make the food safety inspections a continuous affair and to take stringent measures to ensure that only hygienic and safe food is sold to people. Shops which were issued closure notices may be allowed to reopen only if the food safety norms are being followed without fail and strict follow up measures should be taken to ensure that the offences are not repeated,

Steps are needed so that surveillance sample results are available in a timely manner . All activities should be reviewed at the district-level every two weeks by Assistant Commissioners of Food Safety, while State-level reviews should be conducted every month, Ms. George said.

Food safety awareness programmes for the public should be taken up on a regular basis and in every shop, at least one person should be well-trained on the FSSAI norms

The meeting assessed that Operation Matsya had been very effective in checking the arrival of adulterated fish in the market from across the border. About 6,597 kg of stale fish had been destroyed as part of the drive.

In the last 16 days, a total of 3,297 food safety checks were carried out across the State and 283 outlets which were functioning without the mandatory FSSAI licence/registration were ordered shut and 1,075 outlets issued notices for violation of hygiene norms. Over 400 kg of meat which was unfit for human consumption were seized and destroyed. Juice shops were also inspected. While eight juice shops were asked to down shutters, notices were served on 96 shops for failing to comply with the food safety standards

The Principal Secretary(Health), Rajan Khobragade, Commissioner of Food Safety, V. R. Vinod were present, along with other senior officials.

Additional booster dose of mRNA vaccine

Some short-term benefit of additional booster dose of mRNA vaccine in health workers: WHO(The Hindu:20220519)

<https://www.thehindu.com/sci-tech/health/some-short-term-benefit-of-additional-booster-dose-of-mrna-vaccine-in-health-workers-who/article65425721.ece>

A researcher holding an mRNA type vaccine candidate for COVID-19. File
A researcher holding an mRNA type vaccine candidate for COVID-19. File | Photo Credit:
REUTERS

Interval of 4-6 months since completion of the primary series of the vaccine could be considered for a first booster, says the WHO

The World Health Organisation (WHO) has said that there is benefit of administering an additional booster dose of the mRNA COVID-19 vaccine for highest risk groups, health workers, those over 60 years of age or with immunocompromising conditions.

As a general principle, an interval of 4-6 months since completion of the primary series of the vaccine could be considered for a first booster, especially in the context of Omicron, said the WHO, with the support of the Strategic Advisory Group of Experts (SAGE) on immunisation and its COVID-19 Vaccines Working Group.

The WHO said that in considering additional booster doses, the two main scenarios to assess are the use of additional booster doses in those who are not able to mount and sustain adequate immune responses and considerations for additional booster doses to be administered in order to protect high risk populations and health workers to maintain the health system during periodic waves of disease surges.

It said that available data for WHO EUL COVID-19 vaccine products suggest that vaccine effectiveness and immunogenicity are lower in immunocompromised persons (ICPs), compared to persons without immunocompromising conditions.

“An additional dose included in an extended primary series enhances immune responses in some ICPs. Given the significant risk of severe COVID-19 for ICPs, if infected, WHO has already issued a recommendation for an extended primary series (i.e. third dose) as well as a booster dose (i.e. fourth dose) for ICPs, for all COVID-19 vaccines,” it said.

The WHO noted that additional booster doses beyond the first booster dose are currently being offered by some countries, adding that data on additional booster doses as of May 2022 only exists for the mRNA vaccines, and not for other vaccine platforms.

The WHO cited seven studies, conducted during a time when Omicron was the predominant circulating strain globally, that evaluated the relative effectiveness of a fourth dose four months after a third dose of mRNA vaccine compared to those who received three doses.

“Taken together, these studies show some short-term benefit of an additional booster dose of mRNA vaccine in health workers, those over 60 years of age or with immunocompromising conditions,” the WHO said.

It said that data to support an additional dose for healthy younger populations are limited; preliminary data suggest that in younger people, the benefit is minimal.

“The limited available data suggest that for highest risk groups, there is a benefit that supports the administration of an additional booster dose,” the WHO said, adding that in those most at risk for severe disease or death (i.e. adults above the age of 60 years, or those who are not able to mount a full immune response), the additional benefit of an additional booster dose of mRNA vaccine might be “warranted”.

It said while seasonality is not yet fully established for SARS-COV-2, evidence from the past two years support the notion of more substantial transmission during the winter season.

“Therefore, for countries with either a Northern or Southern Hemisphere winter season, plans for catch-up to improve primary series coverage and boosting for those at highest risk, campaigns should take seasonality into account,” the WHO added.

India’s ‘other’ COVID vaccines

India’s ‘other’ COVID vaccines: The status of under-trial, approved and unused jabs(The Hindu:20220519)

<https://www.thehindu.com/sci-tech/health/indias-other-covid-vaccines-status-of-under-trial-approved-but-unused-jabs/article65410283.ece>

While Covishield and Covaxin lead the Covid-19 vaccination effort in India, other vaccines, too, are under development or remain unused after approval from the Centre

As India nears the 200-crore COVID-19 vaccination mark, Serum Institute of India’s (SII) Covishield accounts for 80 per cent (154 crore) of the jabs, while Bharat Biotech’s Covaxin accounts for 16.75 per cent (32 crore) jabs.

Of the 191 crore jabs administered till now, the remaining three vaccines used — Gamelaya’s Sputnik –V, Biological E’s Corbevax and Novovax-SII’s Covovax — account only for 3.25 per cent (6.25 crore) altogether.