



DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY

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कोरोना वायरस

चीनी वैज्ञानिक का बड़ा खुलासा, देश की सरकारी लैब में बनाया गया कोरोना वायरस (Hindustan: 20200914)

<https://www.livehindustan.com/international/story-chinese-scientist-s-big-disclosure-corona-virus-made-in-country-s-government-lab-covid-19-3488949.html>

चीनी वीरोलॉजिस्ट डॉ. ली-मेंग यान ने दावा किया है कि नोवल कोरोना वायरस वुहान में एक सरकार नियंत्रित प्रयोगशाला में बनाया गया था और उसके पास दावा साबित करने के लिए वैज्ञानिक प्रमाण हैं।

कोरोना वायरस महामारी से निपटने के लिए चीनी सरकार के खिलाफ व्हिसलब्लोअर बनने वाले वीरोलॉजिस्ट को पिछले साल दिसंबर में चीन से निकलने वाले कोरोना-जैसे मामलों का एक समूह बनने का काम सौंपा गया था। हांगकांग में काम करने वाले शीर्ष वैज्ञानिक ने दावा किया कि उन्होंने अपनी जांच के दौरान एक कवर-अप ऑपरेशन की खोज की और कहा कि चीनी सरकार को सार्वजनिक रूप से स्वीकार करने से पहले ही वायरस के प्रसार के बारे में पता था।

हॉन्गकॉन्ग स्कूल ऑफ पब्लिक हेल्थ से वायरोलॉजी और इम्यूनोलॉजी में विशेषज्ञता प्राप्त डॉ. ली-मेंग को कथित रूप से सुरक्षा चिंताओं के कारण संयुक्त राज्य भागने के लिए मजबूर किया गया था। 11 सितंबर को, उसने एक गुप्त स्थान से ब्रिटिश टॉक शो "लूज़ वीमेन" पर एक साक्षात्कार दिया और कोरोनावायरस बीमारी पर अपने शोध और उन चुनौतियों के बारे में बात की।

डॉ. ली-मेंग ने कहा कि उन्होंने दिसंबर के अंत और जनवरी के शुरू में चीन में "न्यू निमोनिया" पर दो शोध किए और अपने सुपरवाइजर के साथ परिणाम साझा किए जो विश्व स्वास्थ्य संगठन (डब्ल्यूएचओ) के सलाहकार हैं। वह अपने सुपरवाइजर से "चीनी सरकार और डब्ल्यूएचओ की ओर से सही काम" करने की उम्मीद कर रही थी, लेकिन उसे आश्चर्य हुआ कि उसे "चुप्पी बनाए रखने के लिए कहा गया था वरना उसे गायब कर दिया जाएगा"।

भारत में कोरोना से स्थिति बेहाल है। रविवार के आंकड़ों की बात करें तो पिछले 24 घंटों में कोरोना के 94,372 नए मामले सामने आए हैं और एक दिन में 1,114 मौतों के साथ संक्रमितों की कुल संख्या 47 लाख का आंकड़ा पार कर गई है। कुल 47,54,357 मामलों में 9,573,175 सक्रिय हैं जबकि 37,02,596 पूरी तरह ठीक हो चुके हैं और 78,586 लोगों की अब तक मौत हो चुकी है।

शनिवार की बात करें तो स्वास्थ्य मंत्रालय द्वारा जारी जानकारी के मुताबिक, पिछले 24 घंटे में कोरोना वायरस के 97,570 नए केस सामने आए थे और कोविड-19 से 1201 लोगों की मौतें हुई हैं। देश में कोरोना वायरस से मरने वालों की संख्या में भी तेजी से बढ़ोतरी हो रही है।

शरीर में खून के थक्के का एक स्थान से दूसरे स्थान तक पहुंचने का खतरा 10% तक बढ़ जाता है

अध्ययन : कोरोना से ब्रेन स्ट्रोक का भी खतरा

नई दिल्ली | वरिष्ठ संवाददाता

कोरोना संक्रमण के कारण न सिर्फ सांस की तकलीफ होती है, बल्कि ब्रेन स्ट्रोक और दिल का दौरा पड़ने का खतरा भी बढ़ जाता है। एम्स के डॉक्टरों के अध्ययन में यह जानकारी सामने आई है। एम्स में पिछले दो महीने में ब्रेन स्ट्रोक से पीड़ित 31 मरीज पहुंचे हैं, जिनकी जांच करने पर कोरोना संक्रमण भी पाया गया।

एम्स के मेडिसिन विभाग के प्रोफेसर डॉक्टर नीरज निश्चल ने बताया कि कोरोना संक्रमण के मरीजों को ब्रेन स्ट्रोक और दिल का

ये सावधानियां जरूरी

- अगर दिल के मरीज हैं तो संक्रमित होते ही डॉक्टर से मिलें
- होम आइसोलेशन वाले बुजुर्ग को पल्स ऑक्सीमीटर साथ रखना चाहिए।
- सभी को मास्क लगाना चाहिए और सामाजिक दूरी रखें

दौरा पड़ने का खतरा अधिक हो सकता है। हालांकि, अभी यह प्रारंभिक नतीजे हैं। अभी इस पर और शोध होना बाकी है। उन्होंने कहा कि कोरोना से पीड़ित मरीजों में

मरीजों में खून के थक्के का पता लगाते हैं डॉक्टर

हिंदूराव अस्पताल की डॉक्टर अंकिता सिंह तोमर के मुताबिक आईसीयू में भर्ती गंभीर मरीजों के इलाज के दौरान डायमर स्तर का पता लगाते हैं, ताकि पता चल सके कि मरीज की धमनियों में खून का थक्का तो नहीं पड़ने वाला है। यही वजह है कि कोरोना के मरीजों में खून को जमने से रोकने के लिए दवाओं पर जोर दिया जा रहा है। मरीजों को रिवारोक्साबेन और एपिक्साबेन सॉल्ट की दवाएं लगातार दी जा रही हैं, ताकि खून शरीर में पतला रहे और जम न सके। दोनों दवाएं थक्कारोधी हैं, जिसका उपयोग रक्त के थक्कों के उपचार और रोकथाम के लिए किया जाता है।

वीनस थ्रम्बोएम्बोलिज्म का खतरा 10 फीसदी बढ़ जाता है। इसका मतलब है कि मरीज के शरीर में जमा खून का थक्का खून में एक जगह से दूसरी जगह तक पहुंच सकता है।

उदाहरण के लिए पैर की नसों से दिल या दिमाग की रक्त वाहिनियों तक पहुंच जाए तो दिमाग और दिल को खून की आपूर्ति बंद हो सकती है और ब्रेन स्ट्रोक हो सकता है।

‘Reserve 80% ICU beds for Covid patients’: Delhi govt to private hospitals (Hindustan Times: 20200914)

<https://www.hindustantimes.com/delhi-news/reserve-80-icu-beds-for-covid-patients-delhi-govt-to-private-hospitals/story-4kGIhbDola1oUCKhk5sXrO.html>

The total number of hospitalisations stood at 6,503, according to the daily health bulletin released by the Delhi government on Sunday. This has overshoot the highest number of hospitalisations – just over 6,200 - Delhi had seen during the surge in cases in June.

To increase the number of ICU beds, the government had first directed its own hospitals - Lok Nayak, Guru Teg Bahadur, and Rajiv Gandhi Super Speciality Hospital - to scale up the number of ICU beds as well.

With the number of hospitalisations of patients with coronavirus disease (Covid-19) on the rise, hospitals in Delhi have started running out of intensive care unit beds. Only 35% of the total 2,201 ICU beds earmarked for the treatment of Covid-19 patients across hospitals remain vacant as on Monday morning, according to the Delhi Corona App. With this in mind, the Delhi government yesterday ordered 28 big private hospitals to reserve 80% of their total ICU beds for Covid-19 patients.

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Those in hospitals account for only about 22% of the total number of active cases or those still living with the infection in Delhi.

The government had set up a committee in the beginning of June to assess the need for hospital beds. Based on the trends then, the committee had predicted that Delhi would need 15,000 beds by the end of June and 42,000 by mid-July. However, the numbers started declining in June-end.

The government, in the meantime, had ramped up its bed capacity to over 15,000 and slowly started bringing it down in August when the number of new cases as well as hospitalisations saw a dip. Currently, Delhi has 14,397 beds earmarked for the treatment of Covid-19 patients across hospitals – both government and private. Of these, only 15% beds are in the intensive care units and are either with or without ventilators.

To increase the number of ICU beds, the government had first directed its own hospitals - Lok Nayak, Guru Teg Bahadur, and Rajiv Gandhi Super Speciality Hospital - to scale up the number of ICU beds. The three hospitals currently have 600 ICU beds of which almost 48% remain vacant.

It is the big private multi-speciality hospitals that are running out of ICU beds, about 85% of the ICU beds in these hospitals are currently occupied.

“You see, the patients who had been delaying their surgeries and other planned procedures have started visiting the hospitals in the last one month, with most of the big private hospitals running at 90% of their total ICU capacity. If you look at the statistics from these bigger hospitals in the last three months, they received about 2.5 times non-Covid patients than Covid patients. This means the government would be jeopardising the lives of these non-Covid patients,” said Girdhar Gyani, director general of the Association of Healthcare Providers (India).

“Apart from that, this move is also penalising the private hospitals economically. When they say 80% of the ICU beds have to be reserved, it means the beds have to be reserved even if

there aren't any Covid-19 patients. But, the government would not be paying the hospitals. It is one thing to say, reserve 500 beds and we will pay for it. Besides, why should ICU beds be kept vacant when someone else might need it," said Gyani.

Coronavirus fears and preconception advice (The Hindu: 20200914)

<https://www.thehindu.com/opinion/lead/coronavirus-fears-and-preconception-advice/article32594804.ece?homepage=true>

With widespread community transmission, women in particular face a risk; a health advisory is essential

In our preoccupation with managing the COVID-19 pandemic, we should not lose sight of special issues that may pose problems for women in the reproductive age group. The special issues are of two kinds: one that relates to medical management of pregnancy and newborn care. The World Health Organization (WHO) and the Indian Council of Medical Research (ICMR) have provided guidelines to address this issue.

The second relates to the advisability of deliberately delaying pregnancy until the epidemic wanes and the disease becomes endemic. All available guidelines are silent on this issue. Is there a need for exercising a choice of timing of pregnancy? What should be a wise policy for the Government of India, or for that matter any government, the ICMR and WHO on this matter?

Need for protocols, follow-up

The SARS-CoV-2 virus that causes COVID-19 has a special predilection for the cells that form the inner lining of blood vessels. Therefore, organs that have a large number of blood vessels are particularly at risk. The placenta, a unique organ in pregnancy — the source of nourishment for the growing foetus — is highly vascular.

It has been clearly demonstrated that in mothers infected close to the time of delivery, the virus can infect the placenta. A small percentage of newborn babies (1.4%) of such mothers have neonatal infection acquired from the mother. While most newborn babies do not develop clinical disease, rare neurologic problems have been described in them. In this context, it is pertinent that in Indian maternity hospitals, routine reverse transcription polymerase chain reaction (RT-PCR) testing of pregnant mothers admitted for delivery reveal that about 8-10 % of mothers are indeed infected by SARS CoV-2. The ICMR along with the

professional bodies concerned should ensure that the treating teams are aware of the potential for trans-placental transmission of the virus and establish protocols for careful periodic follow-up of the new-born of infected mothers.

If the virus can infect the placenta in term pregnancy, can it not affect the placenta in the first three months (first trimester) of pregnancy? The important question that comes to mind, therefore, is whether infection of the mother during the first trimester of pregnancy, the crucial period for the development of organ systems in the foetus, can cause congenital abnormalities. In the first trimester of pregnancy, many infections such as those caused by rubella and zika virus cause severe congenital abnormalities in the foetus. Recognition of this fact led to a WHO-approved government policy of routine rubella vaccination as part of the immunisation schedule of children.

Issue of contraception

In the context of COVID-19, it is too early to say whether viral infection during the first trimester will cause congenital abnormalities but the potential for such an occurrence is real. If it is a florid abnormality it would be known by now, but if subtle, by the time the effects on the foetus are recognised, it may be too late. Therefore, there is a need to anticipate this eventuality and be prepared for it. In the epidemic context, it is wiser to be cautious and advise effective contraception to postpone pregnancies till the probability of maternal viral infection is minimal.

Cutting infection threat

What are the advantages in adopting such a policy? If women adopt contraception, they will not need antenatal clinic visits which, during epidemic times, pose a risk of contracting infection in the clinic. Antenatal women constitute a large proportion of subjects who need to visit hospitals regularly and considerable proportions of health-care workers at the primary and secondary levels are occupied with their care. If this demand is less because women in reproductive age group practise contraception, there will be less pressure on the health-care system which is already struggling under the burden of this epidemic. These health-care workers can be deployed for the much-needed care of COVID-19 patients, non-COVID illness and, more importantly, the ensuing COVID-19 vaccination programme, a mammoth task in India.

The lower birth rate till the epidemic wanes will ensure that there will be fewer children in the post-epidemic phase for economically distressed families to care for and curtail disease transmission through children.

Every day about 748,000 babies are born in India. Since the outcome is unsuccessful in about half the pregnancies (embryo/foetal loss), the daily new pregnancies in India would be more than 15,00,000. With the widespread community transmission in India now, a large number of women who conceive are likely to be exposed to the virus.

A proportion of those exposed will get infected and nearly 80% of those infected will be asymptomatic or have only trivial transient symptoms. They may not come to medical

attention unless a family contact has RT-PCR positive symptomatic disease. At present, in city maternity hospitals, RT-PCR positivity in the first trimester is about 10% of all infected pregnant women and likely to increase rapidly as the epidemic in India approaches the peak. Infected women should have a more intensive follow-up during their ante-natal period to identify and document any fetal abnormality. Analysis of these results will be vital to state clearly whether any abnormality is attributable to the viral infection.

The risk of exposure of the developing foetus is not just in those who come to hospital but also in all those asymptomatic or minimally symptomatic pregnant women with the viral infection. It is important, therefore, to advise all women in the reproductive age group to practise effective contraception over the next several months in order to prevent coronavirus infection during pregnancy and its potential impact on the foetus. The ICMR and the professional bodies concerned will do well to formulate policy on this matter and inform the profession and the public. Women who happen to conceive in spite of the advice may have to cocoon (reverse quarantine) themselves at least for the first trimester of pregnancy in order to avoid infection.

On vaccination

It is predicted that this virus will not go away but will stay on as an endemic problem after the fury of the epidemic is over. When this occurs and when an effective and safe vaccine is available, women in the reproductive age group who have not already acquired the infection and those who do not have circulating IgG antibody to indicate that they may have had asymptomatic infection, will have to be considered for priority vaccination prior to conception.

Finally, while this problem will be huge in countries with a high birth rate such as India and China, it will also be a public health problem in countries with a low birth rate, where governments are concerned about 'population wealth'. The ICMR and governments globally would do well to assess the situation, review all available scientific evidence and formulate and circulate an appropriate health advisory. India has the challenge and opportunity of adopting this policy and voicing its opinion in WHO.

India coronavirus numbers explained: Bengaluru beats Mumbai, now has third-highest caseload (The Indian Express: 20200914)

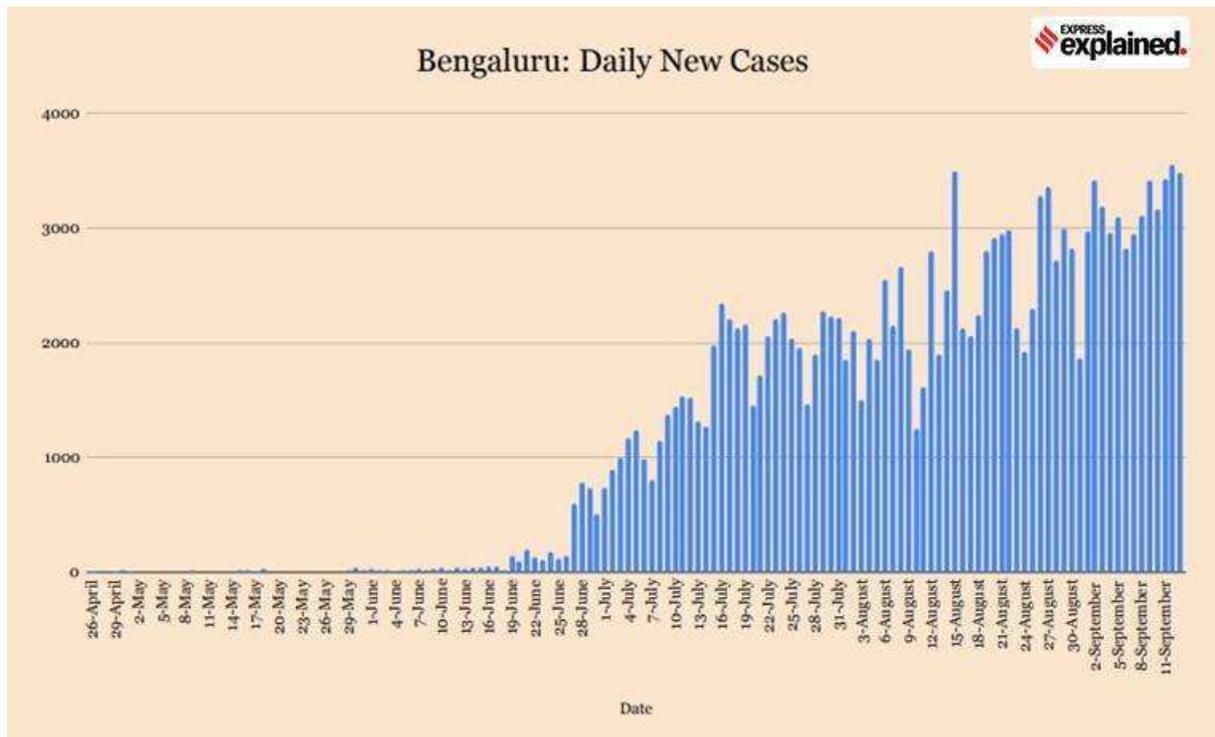
<https://indianexpress.com/article/explained/september-14-india-coronavirus-numbers-explained-bengaluru-bihar-mumbai-6595413/>

India coronavirus numbers explained: The epidemic in Karnataka has begun to grow in a big way only since July. Bengaluru accounts for almost 40 per cent of 4.59 lakh cases in Karnataka. It also has more than 43,000 active cases, the largest in any city apart from Pune, which has more than 75,000.

India coronavirus cases: Bengaluru, which was the least affected major Indian centre till the end of June, has now emerged as the city with the third-highest caseload in the country. On Sunday, the total number of confirmed infections in Bengaluru overtook that of Mumbai and is now behind only Pune and Delhi.

Bengaluru now has more than 1.7 lakh people who have been infected with the virus till now. Mumbai, once the city with the largest number of infected people, has just over 1.69 lakh confirmed infections.

The epidemic in Karnataka has begun to grow in a big way only since July. At the end of June, Bengaluru had just about 4,500 confirmed cases, when Mumbai was nearing 80,000. But there has been a rapid growth in Bengaluru after that. The city accounts for almost 40 per cent of 4.59 lakh cases in Karnataka. It also has more than 43,000 active cases, the largest in any city apart from Pune, which has more than 75,000.



For the last few days, Bengaluru has been reporting around 3,500 cases daily.

For the last few days, Bengaluru has been reporting around 3,500 cases daily. Only Pune and Delhi have been reporting more. Even Mumbai has been witnessing a gradual rise in its daily numbers for the last two weeks. In the third week of August, the daily new detections in Mumbai had dropped below 1,000, but it has begun to increase after that. In fact, last week, the new detection reached an all time high of 2,371.

Municipal officials in Mumbai say increased testing, greater interaction of people during the recently concluded Ganesh festival, and easing of lockdown restrictions, were behind the rise in numbers. Mumbai has begun to test between 12,000 and 15,000 samples every day. Many other cities, including Pune, are testing many more.

TOP TEN STATES WITH MAXIMUM CASELOAD



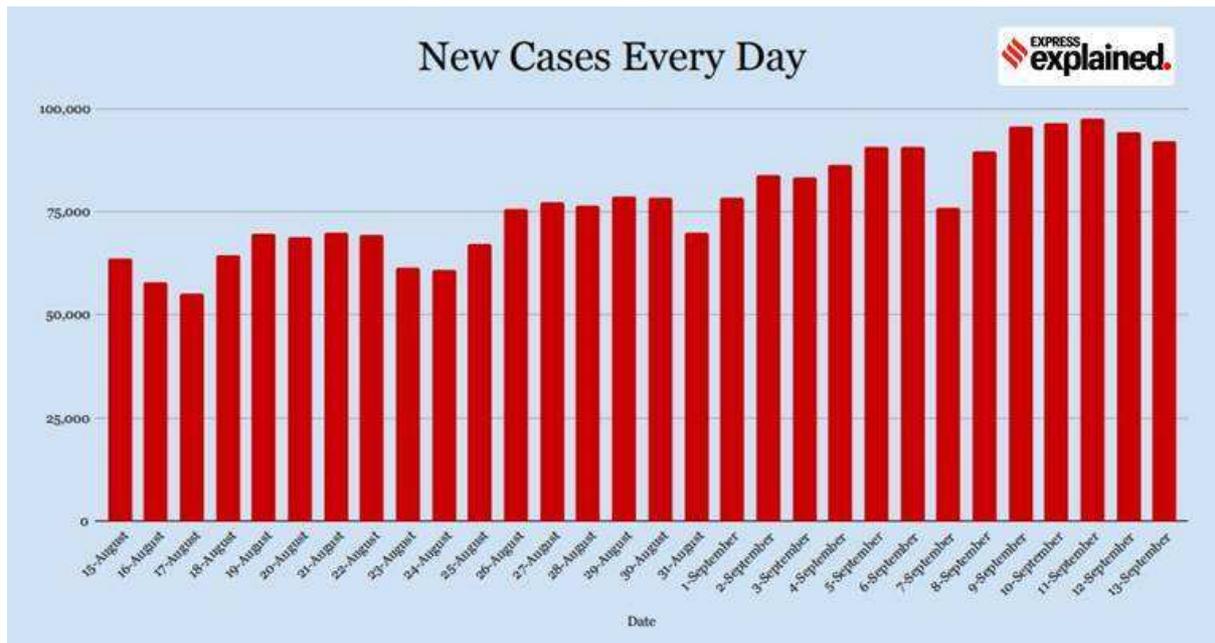
STATE	TOTAL POSITIVE	NEW CASES	TOTAL RECOVERIES	DEATHS
Maharashtra	1,060,308	22,543	740,061	29,903
Andhra Pradesh	567,123	9,536	467,139	4,912
Tamil Nadu	502,759	5,693	447,366	8,381
Karnataka	459,445	9,894	352,958	7,284
Uttar Pradesh	312,036	6,205	239,485	4,429
Delhi	218,304	4,235	184,748	4,744
West Bengal	202,708	3,215	175,139	3,945
Telangana	158,513	1,417	127,007	974
Bihar	158,389	1,523	143,053	822
Odisha	155,005	4,198	118,642	679

DATA AS ON SEPTEMBER 14, 2020

Top 10 states with maximum caseload

Meanwhile, Bihar, which till recently was growing at a very fast rate, has slowed down considerably in the last couple of weeks. In fact, its current daily growth rate of 1.01 per cent is the slowest in the country. Among the top ten states with maximum caseloads, it is Odisha which is adding the numbers at the fastest rate right now, growing at 2.38 per cent per day. On Sunday, the state reported more than 4,000 new cases for the first time. It has more than 1.55 lakh confirmed cases now.

But the overall fastest-growing state happens to be Chhattisgarh, whose daily growth rate is more than five per cent. Kerala, Punjab and Haryana are other high-caseload states with high growth rates right now.



On Sunday, more than 92,000 new infections were detected across the country

On Sunday, more than 92,000 new infections were detected across the country, the fifth consecutive day that this number has exceeded 90,000. The total number of confirmed infections in India has reached 48.46 lakh now, out of which 37.80 lakh, or 78 per cent, have recovered from the disease. The death count is nearing 80,000 now.

Tamil Nadu now has more than five lakh people who have so far been infected with the virus. It is the third state in the country, after Maharashtra and Andhra Pradesh, to cross that figure. On Sunday, West Bengal hit the two-lakh figure mark, with the addition of more than 3,200 new infections.

दवाओं की कीमत

दवाओं के दाम में पांच से लेकर 112 रुपए तक का इजाफा, इन दवाओं की बढ़ी कीमतें (Hindustan: 20200914)

<https://www.livehindustan.com/uttar-pradesh/story-increase-in-the-price-of-medicines-from-five-to-112-rupees-3489120.html>

ऑक्सीजन के साथ दवा की कीमतों में भी इजाफा हो गया है। गर्भावस्था, सांस, दिल, एंटीबायोटिक समेत दूसरी दवाओं की कीमतों में बढ़ोतरी हुई है। पांच से लेकर 122 रुपये तक दाम बढ़े हैं। इससे मरीजों को इलाज पर और पैसे खर्च करने पड़ रहे हैं।

इसलिए बढ़ी कीमतें

कोरोना संक्रमण व चीन से तनातनी की वजह से दवाओं के निर्माण में इस्तेमाल होने वाला कच्चा माल की आपूर्ति बाधित है। 60 से 70 फीसदी दवाओं का कच्चा माल चीन से आ रहा था। संक्रमण से सप्लाई चेन बाधित है। कच्चे माल की आपूर्ति प्रभावित होने का फर्क दवाओं की कीमतों पर पड़ रहा है। नतीजतन दवाओं की आपूर्ति मांग के मुताबिक नहीं हो पा रही है। कंपनियों ने इसका फायदा उठाते हुए कीमतों में इजाफा किया है।

लखनऊ केमिस्ट एसोसिएशन के अध्यक्ष गिरिराज रस्तोगी के मुताबिक हाल में कुछ दवाओं की कीमत में इजाफा हुआ है। हालांकि बाजार में दवाओं की किल्लत नहीं है। मरीजों को सभी प्रकार की दवाएं मांग के मुताबिक उपलब्ध कराई जा रही हैं। प्रवक्ता विकास रस्तोगी के मुताबिक विटामिन समेत दूसरी मल्टी विटामिन दवाओं की मांग बढ़ी है। दवा की कीमत बढ़ने का कारण कच्चे माल का संकट भी हो सकता है।

इन दवाओं की बढ़ी कीमतें

-गर्भावस्था में दी जाने वाली ड्रुफास्टॉन दवा 550 रुपये में 10 गोलियों का पत्ता मिलता था। अब 672 रुपये में यह दवा मिल रही है। करीब 122 रुपये का इजाफा हुआ है।

-पेट संबंधी परेशानी में दिया जाने वाला सिरप ड्रुफालेक 505 रुपये में था। अब इसकी कीमत 515 रुपये हो गई है।

-यूरिक एसिड की दवा फैबुस्टैट 184 रुपये का पता था। अब 202 रुपये में मरीज खरीदने को मजबूर हैं। करीब 18 रुपये का इजाफा हुआ है।

-एंजाइटी एंटेरक्स गोलियों का पत्ता 36 रुपये में था। अब इसकी कीमत 39 रुपये हो गई है।

-दिल की दवा मैफोकार्ड एक्सएल दिल की बीमारी

-सांस की दवा एबी फ्लो 112 रुपये की थी। इसमें 11 रुपये का इजाफा हुआ है। 123 रुपये में बिक रही है।

जेनेरिक दवाओं की किल्लत

प्रधानमंत्री जन औषधि केंद्रों में दवाओं की किल्लत है। मरीजों को जरूरी दवाएं तक नहीं मिल पा रही हैं। सबसे ज्यादा संकट एंटीबायोटिक, ब्लड प्रेशर और डायबिटीज दवाओं का है। बलरामपुर, लोहिया और सिविल समेत दूसरे अस्पतालों में खुली स्टोर से मरीजों को मायूस लौटना पड़ रहा है। मरीज महंगी दर पर दवाएं खरीदने को मजबूर हैं।

डिप्रेशन

अब दिल की धड़कन से खुलेगी डिप्रेशन की पोल, जानें कैसे (Hindustan: 20200914)

<https://www.livehindustan.com/lifestyle/story-link-between-our-emotions-and-heart-heart-beat-will-tell-you-the-about-the-depression-3486983.html>

डिप्रेशन 21वीं सदी की भागमभाग भरी जिंदगी की सबसे आम बीमारियों में से एक है। कोई व्यक्ति डिप्रेशन से तो नहीं जूझ रहा, इसका अंदाजा महज उसकी दिल की धड़कन नापकर लगाया जा सकता है। जर्मनी स्थित गॉएथे यूनिवर्सिटी का हालिया अध्ययन तो कुछ यही दावा करता है।

शोधकर्ताओं के मुताबिक डिप्रेशन रोगियों का दिल दिन में हर मिनट सामान्य से 10 से 15 बार अतिरिक्त धड़कता है। वहीं, रात में हृदयगति में थोड़ी कमी जरूर आती है, लेकिन यह सेहतमंद लोगों

से फिर भी अधिक होती है। दिनभर के तनाव और काम के दबाव से तन-मन को थोड़ी राहत मिलना इसकी मुख्य वजह है।

डॉ. कार्मेन शिवेक के नेतृत्व में हुए इस अध्ययन में शोधकर्ताओं ने 'ईकोकार्डियोग्राम पट्टी' की मदद से लगातार एक हफ्ते तक 32 लोगों की हृदयगति पर पल-पल नजर रखी। इनमें से आधे डिप्रेशन से जूझ रहे थे, जबकि बाकी मानसिक रूप से पूरी तरह से स्वस्थ थे। 90 फीसदी मामलों में शोधकर्ता प्रतिभागियों के दिल की धड़कन का विश्लेषण मात्र करके यह पता लगाने में कामयाब रहे कि उन्हें डिप्रेशन की शिकायत है या नहीं।

शिवेक ने बताया कि डिप्रेशन रोगी हमेशा इस उलझन में रहते हैं कि उन्हें किसी परिस्थिति का डटकर सामना करना चाहिए या फिर उससे पीछे हट जाने में ही भलाई है। इस कारण उनमें स्ट्रेस हार्मोन 'कॉर्टिसोल' का उत्पादन तो बढ़ ही जाता है, साथ ही हृदय को भी खून पंप करने के लिए ज्यादा मेहनत करनी पड़ती है।

अध्ययन में यह भी पाया गया कि डिप्रेशन रोगियों में बेचैनी की शिकायत के चलते 'वेगस' नस की सक्रियता में कमी आती है। यह नस हृदयगति को नियंत्रित रखने में अहम भूमिका निभाती है। इसकी सक्रियता घटने से दिल की धड़कन में उतार-चढ़ाव की शिकायत सता सकती है।

शोधकर्ताओं ने दावा कि शरीर के तापमान, हृदयगति और शारीरिक सक्रियता पर नजर रखने वाले फिटनेस ट्रैकर भी डिप्रेशन की पोल खोलने में मददगार साबित हो सकते हैं। व्यक्ति इसकी मदद से समय रहते खुद के अवसादग्रस्त होने का पता लगा सकता है। इससे योग-अध्यात्म अपनाने, प्रकृति के साथ समय गुजारने, खानपान में बदलाव लाने और अपनों से संपर्क बढ़ाने जैसे उपायों के जरिये डिप्रेशन के लक्षणों से जल्द राहत पाई जा सकती है। अध्ययन के नतीजे 'यूरोपियन कॉलेज ऑफ न्यूरोसाइकोफार्माकोलॉजी' के हालिया अंक में प्रकाशित किए गए हैं।

कोरोना टीका

Covid-19:ऑक्सफोर्ड-एस्ट्राजेनेका के कोरोना टीके का परीक्षण बहाल (Hindustan: 20200914)

<https://www.livehindustan.com/health/story-covid-19-oxford-to-resume-coronavirus-vaccine-trial-with-astrazeneca-3486874.html>

ऑक्सफोर्ड विश्वविद्यालय ने शनिवार को कहा कि उसने फार्मा कंपनी एस्ट्राजेनेका के साथ कोरोना वायरस के टीके के लिए परीक्षण को पुनः बहाल कर दिया है। कुछ दिन पहले ब्रिटेन में एक प्रतिभागी में टीके का दुष्प्रभाव सामने आने के बाद वैश्विक स्तर पर परीक्षण रोक दिए गए थे।

अब ब्रिटेन की मेडिसिन हेल्थ रेगुलेटरी अथॉरिटी द्वारा मिले निर्देशों के आधार पर परीक्षण पुनः शुरू कर दिए हैं। कंपनी ने कहा, वह दुनियाभर में स्वास्थ्य अधिकारियों के साथ टीके पर काम करना जारी रखेगी।

विश्वविद्यालय ने एक बयान में कहा है, इस तरह के बड़े परीक्षण में आशंका रहती है कि कुछ प्रतिभागी अस्वस्थ होंगे और हर मामले का सावधानीपूर्वक मूल्यांकन कर सुरक्षा सुनिश्चित की जाएगी। बयान में कहा गया है कि परीक्षण के तहत दुनियाभर में करीब 18,000 लोगों को यह टीका दिया गया है।

परीक्षण में भाग लेने वाले व्यक्ति की गोपनीयता बनाए रखने की वजह से मरीज की अस्वस्थता के बारे में सूचनाओं का खुलासा नहीं किया गया है। हालांकि, जोर दिया गया है कि वह अपने अध्ययन में सर्वश्रेष्ठ मानकों को अपनाते हुए भागीदारों की सुरक्षा को लेकर प्रतिबद्ध है और सुरक्षा को लेकर लगातार गहराई से मूल्यांकन किया जाएगा।

भारत में मंजूरी मिलने पर बहाल होंगे परीक्षण -

पुणे स्थित वैक्सीन निर्माता सीरम इंस्टीट्यूट ऑफ इंडिया (एसआईआई) ने कहा कि वह देश में ड्रग कंट्रोलर जनरल ऑफ इंडिया (डीसीजीआई) से अनुमति मिलने के बाद ऑक्सफोर्ड-एस्ट्राजेनेका के कोविड-19 वैक्सीन के क्लिनिकल परीक्षण को फिर से शुरू करेगा।

वहीं, एसआईआई के सीईओ अदर पूनावाला ने ट्वीट किया, जैसा कि मैंने पहले उल्लेख किया है, हमें परीक्षण पूरी तरह से समाप्त होने तक निष्कर्ष पर नहीं जाना चाहिए। घटनाओं की हाल की श्रृंखला

एक स्पष्ट उदाहरण है कि हमें प्रक्रिया को पूर्वाग्रह नहीं करना चाहिए और इसका सम्मान करना चाहिए। अंत तक की प्रक्रिया।

अस्थमा

जानें किस मौसम में जन्मे बच्चों को होता है सबसे ज्यादा अस्थमा का खतरा (Hindustan: 20200914)

<https://www.livehindustan.com/lifestyle/story-autumn-season-babies-are-at-greater-risk-to-develop-asthma-3486858.html>

पतझड़ में जन्मे बच्चों में अस्थमा, हे फीवर और खानपान से संबंधित एलर्जी होने का खतरा ज्यादा होता है। एक हालिया शोध में यह खुलासा हुआ है। ब्रिटेन में दुनिया में सबसे अधिक एलर्जी की दर है, यहां की 20 प्रतिशत से अधिक आबादी कम से कम एक एलर्जी विकार से पीड़ित है।

कोलोराडो की नेशनल ज्यूइश हेल्थ की शोधकर्ता डॉक्टर जेसिका हुई ने कहा, हमने अपने क्लिनिक में इलाज किए गए प्रत्येक बच्चे को देखा और पाया कि जो बच्चे पतझड़ में पैदा हुए थे, उनमें एलर्जी से जुड़ी सभी स्थितियों का अनुभव करने की अधिक संभावना थी। अब हम इस बारे में अधिक अध्ययन कर रहे हैं कि ऐसा क्यों है और हम दृढ़ता से मानते हैं कि यह त्वचा पर मौजूद बैक्टीरिया के कारण होता है।

वैज्ञानिकों का मानना है कि ज्यादातर एलर्जी बचपन में ही शुरू होती है जब एलर्जी फैलाने वाले रोगाणु सूखी हुई त्वचा से अंदर प्रवेश करते हैं। इससे एलर्जी की एक श्रृंखला की शुरुआत हो जाती है जिसे एटॉपिक मार्च कहते हैं।

ब्रिटेन में पांच में से एक बच्चे को एक्जीमा की शिकायत है। जिन्हें एक्जीमा की शिकायत होती है उनके शरीर में हानिकारक बैक्टीरिया का स्तर ज्यादा होता है। इससे एलर्जी पैदा करने वाले रोगाणुओं को नष्ट करने की उनकी क्षमता कम हो जाती है। शोधकर्ताओं का मानना है कि पतझड़ में पैदा होने वाले बच्चों की त्वचा बेहद कमजोर होती है और इसलिए ये बार-बार एलर्जी का शिकार हो जाते हैं।

Climate Crisis

On the climate crisis, a grave warning (Hindustan Times: 20200914)

<https://www.hindustantimes.com/editorials/on-the-climate-crisis-a-grave-warning-ht-editorial/story-ZsrgYdtKLFV2Tfw2AX57QO.html>

The United In Science report said that the final levels of emissions for 2020 would be 4-7% less than in 2019. However, on a larger scale, the world hasn't moved forward on combating the climate crisis

This year, the pandemic took care of this but there is no doubt that governments must do much more

According to a new climate change assessment that was launched by the United Nations (UN) secretary-general Antonio Guterres on September 9, the Covid-19 lockdowns have made a dent on global greenhouse gas emissions — but this is not nearly enough. Following a sharp fall in early April of 17% from 2019 levels, by June, as economies started opening up, daily emissions rose to within 5% of last year's record levels. The United In Science report has been compiled by the World Meteorological Organization based on its findings, along with the findings of five other global science bodies. The report said that the final levels of emissions for 2020 would be 4-7% less than in 2019. However, on a larger scale, the world hasn't moved forward on combating the climate crisis.

To limit global heating to less than a 2 degree Celsius rise above pre-industrial levels by 2100, emissions need to fall by 5% every year. This year, the pandemic took care of this but there is no doubt that governments must do much more. Between 2020 and 2024, global temperatures are likely to breach the 1.5 degrees Celsius threshold in multiple months. The world is now 1.1 degrees warmer than pre-industrial times, and 2016-2020 is set to be the hottest period ever since records began to be kept. This, and the fact that global sea levels are rising, shows that the climate crisis is intensifying. It is clear that countries must reduce carbon emissions over the next 10 years. The shift away from fossil fuels to renewable energy needs to be scaled up if catastrophic levels of temperature rise are to be averted. As countries seek to reboot their Covid-ravaged economies, the assessment comes as a grave warning.

Cancer

Reducing India's cancer burden (The Hindu: 20200914)

<https://www.thehindu.com/opinion/op-ed/reducing-indias-cancer-burden/article32594589.ece?homepage=true>

We need to focus on risk reduction, early detection, and programmatic and policy solutions

The Indian Council of Medical Research (ICMR)-National Centre for Disease Informatics and Research (NCDIR) National Cancer Registry Programme Report of August 2020 has estimated that the number of cancer cases in India in 2020 is 13.9 lakh. India has seen a steady rise in cancer cases over many decades. A 2017 report showed that India's cancer burden increased 2.6 times between 1990 to 2016, and deaths due to cancers doubled during the time.

Almost two-thirds of these cancer cases are at late stages. In men, the most common cancers are of the lung, oral cavity, stomach and oesophagus, while in women, breast, cervix, ovary and gall bladder cancers are the most common. Tobacco use (in all forms) is a major avoidable risk factor for the development of cancer in 27% of cancer cases. Other important risk factors include alcohol use, inappropriate diet, low physical activity, obesity, and pollution.

Cancer causes loss of lives and also has a tremendous socioeconomic impact. Reducing cancer is a prerequisite for addressing social and economic inequity, stimulating economic growth and accelerating sustainable development. But merely investing in cancer treatment is not an economically viable option. We need to focus on three key aspects: risk reduction, early detection and programmatic and policy solutions.

Community empowerment

Cancer occurrence is a complex interplay of host and environmental determinants, which makes it difficult to predict it at an individual level. But it is estimated that nearly 50%-60% of cancer cases can be avoided by tackling the known risk factors effectively. Community empowerment through a multisectoral approach that brings together government, private practitioners and civil society to increase health literacy and promote certain behaviour can go a long way in reducing potential risk factors. Improved awareness can also prevent stigma attached to the disease. We need to ensure that health systems are strengthened so that there is greater access to screening and vaccination, early detection, and timely, affordable treatment.

The importance of data

Population health approaches are also relevant for large-scale impact. Programmatic and policy-level solutions need to be driven by data. The information collected through the National Cancer Registry Programme has been used effectively over the years to advocate for better access to screening, early detection, referral, treatment and palliative care services. It has also helped shape cancer research in the country, which is of crucial importance to guide our efforts on cancer prevention and control. Making cancer a notifiable disease could be one of the ways to help drive this research further by providing greater access to accurate, relevant data that can drive policy decisions.

India is committed to achieving a one-third reduction in cancer-related deaths by 2030 as part of the Sustainable Development Goals, and it has made considerable progress. India has improved in some areas, such as personal hygiene, which are distant drivers of cancer. Government programmes such as Ayushman Bharat, Swasthya Bharat, Swachh Bharat Abhiyan, Poshan Abhiyaan and Pradhan Mantri Bhartiya Janaushadhi Pariyojana and initiatives such as FSSAI's new labelling and display regulations and drug price control can encourage inter-sectoral and multi-sectoral action. Other initiatives such as the National Health Policy, the National Tobacco Control Programme, and the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke are also paving the way for progress.

Our approach should not simply focus on diagnostics, treatment modalities and vaccines, but emphasise inclusivity in thinking and action for equitable solutions that can greatly reduce the impact of cancer across all socioeconomic levels in the country.

Medical Device

Low-cost device for deep vein thrombosis (The Hindu: 20200914)

<https://www.thehindu.com/sci-tech/science/low-cost-device-for-deep-vein-thrombosis/article32588881.ece?homepage=true>

Fighting gravity: Blood circulation from the lower parts of the body back to the heart is maintained by the pressure exerted on the deeper veins by the muscles.

It replicates the normal movement of the muscles to keep the blood flowing

A blood clot forming in one of the deep-running veins in our body can have serious consequences, even sometimes leading to pulmonary embolism. For the relief of those who

are prone to deep vein thrombosis, such as patients needing to stay in bed for longer than 24 hours, hospitals use the external pneumatic compression device also known informally as the deep vein thrombosis pump. The device is usually imported for a huge sum. Now, researchers from Thiruvananthapuram have indigenously developed this device at a much lower cost than the imported ones.

Avoiding clots

Blood circulation from the lower parts of the body back to the heart is maintained by the pressure exerted on the deeper veins by the muscles. If this process is interrupted, clots can form in the deep veins, which can travel upwards and reach the heart or lungs and cause serious problems.

“The normal movement given by the muscles to keep the blood flowing is replicated by the device,” says Jithin Krishnan, a scientist and engineer with the Department of Medical Devices Engineering at Sri Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram. The device is attached to a disposable sleeve which is wrapped around the legs from feet to thigh. The sleeve has bladders into which air is pumped sequentially, imitating the muscle action. This needs care, firstly the arteries that run along to top layers should not get ruptured, and secondly, the process should not be too fast. This is needed to avoid damage to the nerves and valves in the veins also.

Mr Krishnan, who is the principal investigator of the work, explains: “Once you compress a section of the veins, the blood from there flows up to the next section where it is held from flowing back by the valves. The pressed section now has to relax and blood should refill it. An appropriate relaxation time has to be given. All this is built into the device.” Along with that some residual pressure is built in to improve blood circulation.

Other technical features include software that adjusts the amount of pressure. This can range from 10 mm to 130 mm of mercury. The pressure is adjusted so that the patient does not feel discomfort and also for correct venous refilling etc. The device can function in six modes such as feet-only mode, calf-only mode, thigh-only mode etc. Combinations of these modes can also be set. Also, alarms can be set to alert the doctor if the pressure exceeds optimum.

Cost-effective solution

The imported device costs around ₹1-2 lakh. “We wanted to enter the market with a low-cost product that would have all the sophistication and clinical viability of an imported device,” Mr. Krishnan says. “We wanted to come up with a device that every hospital can afford.”

The product will be manufactured by Enproducts in Kochi.

Masks

Can universal masking be a crude ‘vaccine’? (The Hindu: 20200914)

<https://www.thehindu.com/sci-tech/science/can-universal-masking-be-a-crude-vaccine/article32588813.ece?homepage=true>

Known principle: It has been known that that lower inoculums of other viruses, including flu, lead to milder illnesses.

Masks decrease risk of infection and if infected decrease the amount of viral particles, leading to only asymptomatic infection or mild disease

The idea of allowing people to get naturally infected with novel coronavirus in order to achieve herd immunity even before safe and effective vaccines become available has now been dismissed. Now, a few researchers are putting forth a hypothesis that supports universal mask wearing. According to this hypothesis, universal mask wearing decreases chances of infection, and, if infected, decreases the amount of virus particles (inoculum) a mask-wearer is exposed to thus causing only asymptomatic infection or mild COVID-19 disease.

Dr. Monica Gandhi and Dr. Eric Goosby from the University of California, San Francisco, and Dr. Chris Beyrer from the Johns Hopkins Bloomberg School of Public Health, Baltimore, argue that exposure to the virus “without the unacceptable consequences of severe illness” through universal masking can lead to greater spread of immunity in the community thus slowing down the spread of the virus eventually, even as the world awaits an effective vaccine.

Depending on the type and fit of masks common people use, the amount of virus particles a person is exposed to may be reduced even if infected. According to Dr. Beyrer, cloth masks can screen out between 65% and 85% of viral particles.

Effects of exposure

While much attention has been on the role of masks in reducing or preventing the spread of virus from an infected person to others, the possibility of a healthy mask-wearer getting exposed to only smaller amounts of virus and the possible effects of such exposure has not received equal attention, the researchers write in an article published in the Journal of General Internal Medicine. Dr. Gandhi and Dr. George W. Rutherford from the University of California, San Francisco advance the same idea in a recently published perspective piece in The New England Journal of Medicine.

A growing body of virological, epidemiological, and ecological evidence suggests that universal masking can reduce the severity of disease among people who do become infected, they write. “We have known for more than 50 years that lower inoculums of other viruses,

including flu, lead to milder illnesses. Since this is a basic principle in virology, it likely holds true for COVID-19,” Dr. Beyrer told Johns Hopkins.

Learning from studies

In a study of healthy participants exposed to wild-type influenza A virus, more severe symptoms were seen in those exposed to higher amounts of the virus.

A study involving hamsters helped understand the connection between novel coronavirus dose and disease severity. In the study, a surgical mask partition helped reduce the risk of infection in healthy hamsters that were separated from infected ones. And those healthy animals that did get infected had only milder manifestations of infection.

The best epidemiological evidence comes from Diamond Princess cruise ship and a ship in Argentina. While only 18% of passengers in the Diamond Princess cruise ship were asymptomatic, universal masking in the Argentina ship resulted in 81% (128 of 217 passengers and staff) of the infected remaining asymptomatic.

In a seafood processing plant in Oregon, U.S. universal masking could not completely prevent infection, but among the 124 who were infected, 95% were asymptomatic. Similarly, in a Tyson chicken plant in Arkansas, masking resulted in 95% asymptomatic rate of infection. Ecological evidence comes from many Southeast Asian countries that had adopted universal masking from the beginning of the pandemic, reporting fewer cases and deaths.

“If this theory bears out, population-wide masking, might contribute to increasing the proportion of SARS-CoV-2 infections that are asymptomatic,” they write in *The New England Journal of Medicine*. Since universal masking decreases viral inoculum leading to increase in asymptomatic infection that induces strong T cell immunity for some duration, “could masking be a crude vaccine until we get to a real vaccine?” Dr. Gandhi asks in a tweet.

While a few studies have shown that immune responses are seen in asymptotically infected individuals, the differences in the duration of protection between asymptomatic and symptomatic infection are not known yet.

Not to misinterpret

It is important that people do not misinterpret the hypothesis to think that one can intentionally inoculate oneself with the virus by wearing a mask. Since studies have not been conducted with the sole purpose of studying the effects of universal masking on COVID-19 severity through reduced virus inoculum, people who wear masks should not become complacent nor should people think that masks are useless as they cannot completely prevent infection in some individuals.

“I am not suggesting pox parties. Just saying masking could be good on multiple levels — decrease transmission, decrease disease severity, help drive up immunity,” Dr. Gandhi tweeted.

Malnutrition

How we need to build sustainable systems for a malnutrition-free India (The Indian Express: 20200914)

<https://indianexpress.com/article/fortifying-india/how-we-need-to-build-sustainable-systems-for-a-malnutrition-free-india-6595601/>

It is imperative to tailor policy implementation at the district level to local needs and eating habits which is important to bring the change at the grassroots level.

The COVID-19 pandemic has exposed the weaknesses not only of the fragile health and food systems but also exposed the faultiness amongst the first world countries. It has also reminded us that human survival is dependent on the health of our planet and that future pandemics and environmental and climate disasters can only be avoided by embracing systems that respect planetary boundaries.

The link between environment (agriculture), nutrition and health has been recognised as a part of United Nations' Sustainable Development Goals (SDGs). Three of the targets under SDG2 (end hunger, achieve food security and improve nutrition and promote sustainable agriculture practices) pertain to the leveraging of agriculture policy and strategy for improved nutrition outcomes to ensure the ultimate goal of ending hunger and malnutrition in all its forms.

Good nutrition is an essential part of an individual's defence against infections like Covid-19

Dietary patterns and food environments are changing fast, particularly in low- and middle-income countries including in India. The recent Comprehensive National Nutrition Survey (CNNS, 2019) notes that despite substantial economic growth in India over most recent decades, half of India's adolescents are, short, thin, overweight or obese and that over 80% suffer from 'hidden hunger' – the deficiency of one or more micronutrients like iron, folate, zinc, vitamin A, vitamin B12 and vitamin D. This can have both short/long-term and even multigenerational impacts thereby threatening the vision of a new India that we aspire for.

COVID-19 has exacerbated this problem further. Malnutrition weakens our immune systems, thereby increasing the chances of getting ill. At the same time, poor metabolic health (example: obesity and diabetes) is strongly linked with worse COVID-19 outcomes. The current pandemic has disrupted health and nutrition services and local food supply chains, leading to issues of food insecurity. It threatens to set back the gains that India has made in improving its nutrition outcomes.

Redesigning our food and agriculture systems

Environmentalists have been repeatedly drawing attention to the erosion of our agrobiodiversity, the overexploitation of natural resources, changes in climate and their consequent impact on human health (Seminar: Justice on our plates June 2020). The relevance of these interlinkages becomes even more important in the current context of Covid-19 and its impact on lives and livelihoods of people across the country.

While the government acknowledges this relationship, it has not completely translated into action.

Firstly, it is important to bring together these three elements: agriculture, nutrition and health as a part of our development planning. Experts have for long underscored the benefits of a moving towards a 'food systems' approach in policy making. This is a multi-sectoral approach premised on the interactions, relationships and inter-dependencies between different elements within a food value chain and the overarching social, economic, political and environmental context. This thinking has in fact been embedded for long in our culture; indigenous tribal communities and their food habits and their harmonious co-existence with local environments has many lessons to offer.

Secondly, integration of agriculture with health and nutrition is important to further ensure that people have access to affordable foods around them. Development of the Bhartiya Poshan Krishi Kosh by Ministry of Women and Child Development (MoWCD) is a step in the right direction to understand the nutrient content in the foods we consume, and their source. There are several indigenous crop varieties that are nutrient rich and suited to different agro-climatic regions. It is important to bring them back into the production system and build local value chains to ensure their availability for consumption.

With programmes like Swachh Bharat, Mission Indradhanush and Poshan Abhiyaan, the government is working to address the underlying issues affecting nutrition as well as to bring focus on behaviour change. However, it is imperative to tailor policy implementation at the district level to local needs and eating habits which is important to bring the change at the grassroots level. But within the current context, there is little scope to do that as programmes and departments continue to work in silos. The Nutrition Mission needs to take this into account and address it.

It is important to move beyond looking at the gains of blue skies and understand the deeper relationship between health and environment and its impact on nutrition. Environment and ecology are going to dictate health outcomes to a great extent, and we must accept this. The current pandemic is an opportune time for us to reflect on these issues, shift gears and take measures to nurture, healthy agriculture and food systems, and nutrition sensitive agri-food value chains, to ensure that the food we eat is not only safe and nutritious but available to all. Nature can be our biggest saviour in these difficult times.

Public Health

Vitamin D levels may predict future health risks, death in older men (Medical News Today: 20200914)

<https://www.medicalnewstoday.com/articles/vitamin-d-levels-may-predict-future-health-risks-death-in-older-men>

Advances in science are helping researchers find new ways to identify diseases earlier. A new breakthrough indicates that free, circulating vitamin D levels in the bloodstream may be a good predictor of future health and disease risk in aging men.

Low levels of vitamin D correlate with age-related health problems, including osteoporosis.

Dr. Leen Antonio from University Hospitals Leuven in Belgium and a team of European researchers conducted the study. They presented their findings at the 22nd European Congress of Endocrinology (e-ECE 2020) conference in early September.

Vitamin D is important for maintaining healthy bones, as well as protecting against infections and diseases. Vitamin D deficiency is a major global health problem, with estimates suggesting that about 1 billion people have low levels of vitamin D in their blood.

Health risks of vitamin D deficiency

Vitamin D deficiency is particularly common in older people. Also, studies are increasingly showing the importance of vitamin D in protecting against a range of health conditions associated with aging.

Researchers have linked low blood levels of vitamin D with major age-related health problems, including:

osteoporosis

increased risk of death from cardiovascular disease

cancer

type 2 diabetes

cognitive decline

Forms of vitamin D

There are several forms, or metabolites, of vitamin D in the body. However, the medical community typically uses the total amount of these metabolites to determine people's vitamin D status.

The body converts the prohormone form, 25-dihydroxyvitamin D, to 1,25-dihydroxyvitamin D, which scientists consider the active form of vitamin D in the body.

However, more than 99% of all metabolites of vitamin D in the blood are bound to proteins, so only a tiny portion of it can be biologically active. This explains why the free, active forms of the vitamin may be a better predictor of current and future health than the total levels.

Free 25-hydroxyvitamin D levels

Dr. Antonio and her team used data from the European Male Aging Study, which researchers collected between 2003 and 2005 from 1,970 men aged 40–79 years.

To investigate whether the free metabolites of vitamin D can better forecast health concerns, the team compared the levels of free and total vitamin D in the men's bodies with their current health status, considering their age, body mass index (BMI), and lifestyle.

The findings demonstrated that even though both free and bound vitamin D metabolites were linked to a higher risk of death, only free 25-hydroxyvitamin D was predictive of future health problems and not free 1,25-dihydroxyvitamin D.

“These data further confirm that vitamin D deficiency is associated with a negative impact on general health and can be predictive of a higher risk of death,” explains Dr. Antonio.

While these findings are promising, the study was observational in nature, so the researchers could not determine the underlying mechanisms. Additionally, it was not possible to gather specific information about the causes of death of the participants.

“Most studies focus on the association between total 25-hydroxyvitamin D levels and age-related disease and mortality. As 1,25-dihydroxyvitamin D is the active form of vitamin D in our body, it was possible it could have been a stronger predictor for disease and mortality. It has also been debated if the total or free vitamin D levels should be measured,” explains Dr. Antonio.

“Our data now suggest that both total and free 25-hydroxyvitamin D levels are the better measure of future health risk in men,” she concludes.

Dr. Antonio and her colleagues are currently finalizing the statistical analysis and paper on their work.

Further investigation into vitamin D levels and their relationship with poor health may be a promising area for future studies.

Diabetes

New risk factors for type 2 diabetes uncovered (Medical News Today: 20200914)

<https://www.medicalnewstoday.com/articles/new-risk-factors-for-type-2-diabetes-uncovered#Risk-factors-outlined>

A new ‘global atlas’ study characterizes insomnia as a novel risk factor for developing type 2 diabetes. In total, the researchers identified 19 risk factors and dismissed 21 suggestive risk factors based on insufficient scientific evidence.

New research indicates insomnia is a possible risk factor for type 2 diabetes.

Globally, around 463 million adults lived with diabetes in 2019, according to the International Diabetes Federation (IDF). In 2015, approximately 9% of all adults had the condition.

Diabetes is a condition where sugar or glucose builds up in the bloodstream instead of being absorbed into cells. This occurs when cells either lose their ability to produce the hormone insulin or, in type 2 diabetes, they develop insulin resistance and are unable to use it productively.

Over the years, researchers discovered certain factors increase the risk of developing type 2 diabetes. These potential risk factors include alcohol consumption, skipping breakfast, daytime napping, anxiety disorders, urinary sodium, certain amino acids and inflammatory factors, and lack of sleep.

A new study that appears in the journal *Diabetologia* identifies 19 risk factors for type 2 diabetes. The Sweden-based researchers further evaluated 21 risk factors that have scarce evidence, and another 15 that reduce the risk of the condition.

Mendelian randomization

The team used a method called ‘Mendelian randomization’ (MR) to obtain their findings. This technique blends genetic information and conventional epidemiological methods. It also addresses questions related to causality without biases that could compromise the validity of epidemiological approaches.

Associate professor Susanna Larsson and Shuai Yuan of the Karolinska Institutet in Stockholm, Sweden, used data from the Diabetes Genetics Replication And Meta-analysis consortium. The duo evaluated 74,124 cases of type 2 diabetes and 824,006 control participants with European ancestry for the study population. The participants’ mean age was around 55 years, and 51.8% of them were male.

The researchers then screened 238 studies before including 40 individual papers in their MR investigation. Among the 97 factors they looked at, only 19 increased diabetes risk.

Insomnia was identified as a novel risk factor — people living with the condition are 17% more likely to develop type 2 diabetes than those without it.

Risk factors outlined

Speaking with Medical News Today, Larsson says, “Daytime napping also appears to be a risk factor for type 2 diabetes. However, because it is strongly related to insomnia, it’s unclear whether daytime napping is an independent risk factor for type 2 diabetes.”

The other risk factors include:

depression

smoking

high blood pressure

caffeine consumption

childhood and adult obesity

body fat percentage

internal fat mass

blood plasma levels of four saturated and polyunsaturated fatty acids

blood plasma levels of three amino acids —valine, leucine, and isoleucine

blood plasma levels of alanine aminotransferase, an enzyme that facilitates liver function

“It is important to highlight that obesity is still the predominant risk factor for type 2 diabetes. The observed association with insomnia was partially, but not fully mediated by obesity (higher body mass index),” adds Larsson. “The association between depression and type 2 diabetes might, in part, be mediated by insomnia.”

The exposures associated with a decreased risk of type 2 diabetes include:

the amino acid, alanine

high-density lipoproteins, or good cholesterol

total cholesterol

the age when females start menstruating

testosterone levels

birth weight

adulthood height

lean body mass for females

four plasma fatty acids

vitamin D

education level

In their study, the authors further explain:

“Findings should inform public health policies for the primary prevention of type 2 diabetes. Prevention strategies should be constructed from multiple perspectives, such as lowering obesity and smoking rates and levels, and improving mental health, sleep quality, educational level, and birth weight.”

While the study’s findings offer important information that might be useful in drafting public health policies, its major limitation is the study population’s homogenous nature.

According to the IDF, 79% of adults with diabetes live in low- and middle-income countries. Studies have also found that the chance of developing diabetes is significantly higher for Black people — around 66 more cases of diabetes per 1,000 people — compared with white adults.

Larsson admits that major risk factors for type 2 diabetes might partly differ by ancestry. “Unfortunately, we were unable to [...] perform similar analyses in populations of non-European ancestry,” she says.