



# DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY  
Friday 20221104

## Air pollution

### Air pollution raises risk of childhood stunting: Study (Hindustan Times:20221104)

<https://epaper.hindustantimes.com/Home/ShareArticle?OrgId=411271a1905&imageview=0>

Children in parts of India with high air pollution are more likely to be stunted or severely stunted, according to a study that for the first time looks at how dirty air affects the development of children.

According to the researchers, when children were exposed to significantly higher levels of PM2.5 particles than the average exposure across the country, they were almost 5 and 2.4 percentage points more likely to suffer from stunting or severe stunting. “Back-of-the-envelope estimates suggest that, if average pollution levels in India were brought down to WHO recommended standards, i.e., an eightfold reduction from current levels, the shares of stunted and severe stunted children would decrease by 10.4 and 5.17 percentage points, respectively,” said the study, published in the Journal of Environmental Economics and Management over the summer and only recently made freely available via the HAL open archive.

“This would correspond to approximately 14.3 million less stunted children in India,” the paper added. The researchers are affiliated to Heidelberg University in Germany, the Center for Economic Research ETH, Zurich and the University of Rennes, France.

A US-based environment research organisation, the Health Effects Institute (HEI), found that in 2019, Indians overall had an average PM2.5 exposure of roughly 82 micrograms per cubic metre of air (ug/m<sup>3</sup>). But this figure varies widely depending on where in India someone lives. In Delhi, instance, according to the same HEI study, people in Delhi were exposed to an average of 118ug/m<sup>3</sup> of PM2.5 levels.

PM2.5 particles are easily inhaled and absorbed by the lungs into the bloodstream, leading to a host of ill effects that manifest in cardiovascular illnesses, leading to a higher mortality and disease burden.

The authors of the new study looking at child development now flag a previously unrecognised socio-economic burden caused by growth stunting.

In the short term, they note citing the past studies, stunting is linked to weakened immune system lower cognitive development, poorer educational performance and higher mortality rate.

In the longer term, stunted children are more likely to experience short stature as adults, reduced cognitive skills and work capacity, higher risk of obesity and chronic illness, lower income and wealth and worse reproductive outcomes.

In conclusion, the authors say the “results indicate that the negative impacts of pollution on child development are substantial, underlying once again the urgency to reduce air pollution in India.” They cite recent insights from other studies that suggest the willingness to pay for clean air was extremely low in India and therefore, the solutions “will not be led, at least in the short term, by citizen-led initiatives, but needs to be mediated by policy makers”.

## **Monkeypox**

### **Scientists find evidence of ‘substantial’ transmission of monkeypox even before symptoms appear (The Tribune:20221104)**

53 per cent of the transmission of monkeypox occurred in pre-symptomatic phase

<https://www.tribuneindia.com/news/health/scientists-find-evidence-of-substantial-transmission-of-monkeypox-even-before-symptoms-appear-447287>

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

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

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

While previous research on pox viruses did not rule out transmission prior to symptoms, this work represents the first evidence to support this. To explore this further, researchers at the United Kingdom Health Security Agency set out to analyse the transmission dynamics of the monkeypox outbreak in the country, the study said.

The two main measures of interest to the researchers were serial interval – the time from symptom onset in the primary case patient to symptom onset in the secondary contact – and incubation period – the time from exposure to onset of symptoms.

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

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

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

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

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

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

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

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

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

These findings have important implications for isolation and contact-tracing policies, the researchers said, adding that backward contact-tracing strategies (tracing from whom disease spreads) should account for a pre-symptomatic infectious period when trying to find the contacts of confirmed cases.

In a linked editorial, researchers based in the US, UK, and Nigeria argued that pre-exposure vaccination and vaccine equity are urgently needed worldwide.

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

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

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

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

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

## **Autism**

### **Brain changes in autism more comprehensive than affecting specific areas: Study (The Tribune:20221104)**

<https://www.tribuneindia.com/news/health/brain-changes-in-autism-more-comprehensive-than-affecting-specific-areas-study-447286>

Researchers also find strong evidence that the genetic risk for autism is enriched in a specific neuronal module that has lower expression across the brain

Brain changes in autism more comprehensive than affecting specific areas: Study

Photo for representational purpose only. iStock

Brain changes in autism are comprehensive throughout the cerebral cortex rather than specific areas thought to impact social behaviour and language, a new study has found.

According to the study, it represents a comprehensive effort to characterise autism spectrum disorder (ASD) at the molecular level.

While neurological disorders like Alzheimer’s disease or Parkinson’s disease have well-defined pathologies or pathways, autism and other psychiatric disorders have had a lack of defining pathology, making it difficult to develop more effective treatments, it said.

The study, led by University of California, Los Angeles, finds brain-wide changes in virtually all of the 11 cortical regions analyzed, regardless of whether they are associated with higher functions such as reasoning, language, social cognition and mental flexibility or primary sensory regions.

The findings are published in Nature.

“This work represents the culmination of more than a decade of work of many lab members, which was necessary to perform such a comprehensive analysis of the autistic brain,” said study author Daniel Geschwind.

“We now finally are beginning to get a picture of the state of the brain, at the molecular level, of the brain in individuals who had a diagnosis of autism.

“This provides us with a molecular pathology, which similar to other brain disorders such as Parkinson’s, Alzheimer’s and stroke, provides a key starting point for understanding the disorder’s mechanisms, which will inform and accelerate development of disease-altering therapies,” he said.

For this new study, researchers examined gene expression in 11 cortical regions by sequencing RNA from each of the four main cortical lobes. They compared brain tissue samples obtained after death from 112 people with ASD against healthy brain tissue, the study said.

While each profiled cortical region showed changes, the largest fall in gene levels were in the visual cortex and the parietal cortex, which processes information like touch, pain and temperature. The researchers said this may reflect the sensory hypersensitivity that is frequently reported in people with ASD, the study said.

Researchers also found strong evidence that the genetic risk for autism is enriched in a specific neuronal module that has lower expression across the brain, indicating that RNA changes in the brain are likely the cause of ASD rather than a result of the disorder.

Geschwind led the first effort, over a decade ago, to identify autism’s molecular pathology by focusing on two brain regions, the temporal lobe and the frontal lobe. Those regions were chosen because they are higher order association regions involved in higher cognition – especially social cognition, which is disrupted in ASD.

One of the next steps is to determine whether researchers can use computational approaches to develop therapies based on reversing gene expression changes the researchers found in ASD, Geschwind said, adding that researchers can use organoids to model the changes in order to better understand their mechanisms.

The new variants of Omicron, XXB and BQ.1, have not led to any significant rise in coronavirus infections and hospitalisations in Maharashtra, experts have said.

The symptoms caused by these strains of the virus are mild, they noted.

Dr Anita Mathew, Infectious Disease Specialist at Fortis Hospital, Mulund, said many of the new patients are asymptomatic.

"Many people have incidental covid. In other words, they are visiting the hospital for other health conditions and test positive for the coronavirus infection," she told PTI.

Symptoms such as the loss of smell and taste, observed prominently in earlier infections, have not been noticed in many patients. Many of them report cold and cough, which is why there isn't a lot of testing or self-isolation, Dr Mathew added.

She, however, stressed that vaccination against coronavirus was still important.

"One should be careful so that the risk of infecting others decreases," she said.

As per the state health department, 17 per cent more covid cases were recorded during October 10 to 16 against the preceding week (October 3-9). The rise was noticed mainly in Thane, Raigad and Mumbai, all densely-populated districts.

The department had also cautioned that coronavirus cases could rise during winter and the festive season, citing new variants which have greater immune evasive ability.

Dr Vasanthapuram Ravi, Virologist, Head, R&D, TATA Medical and Diagnostics (and Chairman of Karnataka Genomic Surveillance Committee) said the new strain of virus and the disease genotype were no different from Omicron in terms of severity and asymptomatic status.

"It is a hybrid of two Omicron variants, 3.75 and BJ1, due to which it has a novel mutation in the spike proteins which makes it escape the antibodies generated by vaccines. This is why it is causing infections even in vaccinated people," he said.

But there is not much to worry due to its lessened severity though testing is still important, he added.

If a patient tests positive for Omicron, he or she can get treatment for Omicron infection, Dr Ravi said.

But if the test is negative for Omicron (despite symptoms) then one needs to immediately consult a physician in case there is a presence of a new variant or another virus like flu virus or RSV (respiratory syncytial virus), he added.

The Indian SARS-CoV-2 Genomics Consortium (INSACOG), in a statement, said it was keeping a close watch on the emergence and evolution of XBB and XBB.1 and any new sub-lineages.

But Indian patients infected with Omicron sub-lineage XBB of covid have mild disease, it went on to add.

Dr Laxman Jessani, Consultant, Infectious Diseases at Apollo hospitals in Navi Mumbai, said the chances of hospitalisation and ICU admissions are low as the infections are mostly mild.

## **Sleeping**

### **What if I cannot sleep more than 5 hours despite my best efforts? How to trick yourself into letting go? (Indian Express:20221104)**

<https://indianexpress.com/article/lifestyle/health-specials/what-if-i-cant-sleep-for-more-than-5-hours-8248041/>

If you are still tossing and turning, try a little stroll in the room. Change positions on the bed. The best method is to lie down on your bed, stretch your muscles and limbs in the sleeping position and concentrate on your breathing rather than focussing on your problems. Empty your mind out and just focus on breathing in and out. This almost always works, says Dr Sharad Joshi, Associate Director, Pulmonology, and Head, Sleep Clinic at Max Super Speciality

Since the study proves that duration of sleep is an essential component for our wellbeing, one can promote a better night's sleep by inculcating a few good habits in a daily routine. (Representational image)

If you thought that four to five hours of sleep are enough to manage your life productively, think again. For if this becomes a habit in your mid-to-late life, you could have an increased

risk of developing chronic diseases like cancer, heart disease and diabetes, according to a new study by UCL researchers.

Published in PLOS Medicine, the research analysed the impact of sleep duration on the health of more than 7,000 men and women in the ages of 50, 60 and 70. Researchers examined the relationship between how long each participant slept for, mortality and whether they had been diagnosed with two or more chronic diseases (multi-morbidity) — such as heart disease, cancer or diabetes — over the course of 25 years. People who reported getting five hours of sleep or less at age 50 were 20 per cent more likely to be diagnosed with a chronic disease and 40 per cent more likely to be diagnosed with two or more chronic diseases over 25 years, compared to people who slept for up to seven hours. The study also found that sleeping for five hours or less at the age of 50, 60 and 70 meant a 40 per cent increased risk of multi-morbidity when compared with those who slept for up to seven hours. Researchers further found that a sleep duration of five hours or less at age 50 was associated with a 25 per cent increased risk of mortality over the 25 years of follow-up.

Also Read |Why the elderly should give up the 7 am walk amid Delhi pollution and wait for sunshine

“What this study does is establish sleep as a critical pillar of health management. Now that researchers have verified the relationship between reduced sleep and death, with 25 per cent increased risk of mortality among those subject with less than five hours of sleep, it is time to reprogramme our lifestyle map as we know it,” says Dr Atul Mathur, Executive Director, Interventional Cardiology, Fortis Escorts Heart Institute.

“Across the globe, sleep is the most primitive and primal aspect that all humans share. Sleep, however, even at this stage of evolution is not adequately understood. Its patterns of quality as well as quantity are influenced by a variety of social, cultural, behavioural and environmental aspects. In modern society, with increasing amount of work hours and work shifts along with easy access to 24X7 digital content consumption, many factors have led to curtailing the duration of sleep, especially among the younger and middle generation. On the other hand, as people get older, their sleep habits and structure changes. This has been noticed as an increase in fatigue, tiredness and excessive daytime sleepiness. Over the last few decades, there has been growing evidence suggesting reduced sleep adversely affects our health, including its contribution to hypertension, diabetes, obesity, cardiac illness and death. With the recent study highlighting importance of sleep and its duration, it should now be considered as an additional behavioural risk factor. The focus of supportive therapies now should be to avoid habitual and sustained sleep deprivation,” says he.

## UNDERSTANDING THE NEED FOR A GOOD SLEEP REGIME

Since the study proves that duration of sleep is an essential component for our wellbeing, one can promote a better night’s sleep by inculcating a few good habits in a daily routine. “By switching off all electronic devices 30 minutes prior to sleep, avoiding larger dinner meals and having a quiet, dark, and ambient temperature in the bedroom ensure one can have a sound

sleep. Adequate physical activity as well as exposure to sun during the day also help promote a good sleep,” suggests Dr Mathur.

Of course, Dr Sharad Joshi, Associate Director, Pulmonology, and Head, Sleep Clinic at Max Super Speciality Hospital, Vaishali, is working on an easily adaptable regime considering that sleep is often seen as an afterthought by Indians unless we are really troubled and restless in the middle of the night. “Even then, the easiest thing to do is look for a sleep aid of some sort or reach out for the sleep pill,” says he. Increasingly he is seeing sleep apnea cases rising. “That’s because those suffering from the condition ignored it for far too long till it impacted their everyday rhythms. The stress of life is high among Indians with overcrowding concerns, performance pressure at work, and the taut expectation of delivering at all times. That’s why they cannot get sound sleep and wake up with nightmares. Sleep is meant to be regenerative,” says Dr Joshi.

## TIPS TO BUILD A SLEEP REGIME

(1) During the day, make sure to devote 45 minutes to an hour to moderate physical exercise and breathe in enough oxygen. Sometimes if there is anxiety about not being able to keep to the recommended activity level, fret not. Sometimes you need to do just simple things that do not demand much from you like trimming plants, rearranging your rooms and books and organising your cupboards. This may seem like “non-work” but keeps you all perked up and focussed. Naturally, your body and mind would be suitably tired and want to settle down by nightfall.

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(2) Enough has been said about having a well-balanced and nutrient-rich meal, so it doesn’t need repetition. But avoid eating anything which interrupts your brain activity after sunset. Reduce drinking tea, coffee and all caffeinated beverages after sunset. Even if you have coffee by late afternoon, you’ll still have caffeine in your system by bedtime.

Though dinner should ideally be had between 7 and 8 pm, most of us are not so privileged to get out of the office by that time. Worry not, there are workarounds. So focus on breakfast as the main meal of the day, drawing 50 per cent of your daily calories from it, get 30 per cent from your lunch and allocate 20 per cent to your dinner. Have an early dinner at office if possible. Late dinners should be light. Give a gap of two-and-a-half hours before falling asleep. Allow the food to be broken down completely. A food pile-up in the stomach means you will regurgitate half-digested food in the middle of the night that can affect your sleep patterns.



(3) Impose limits on your viewing time, be it on devices and the laptop. This way you are re-training the body to not prime its alertness levels but wind down naturally. The leftover presentation will be better with a fresh mind early morning. Our hypothalamus, which is responsible for emotions, temperature and sleep, is controlled by daylight and has diurnal rhythms. Follow it and sleeplessness will be a thing of the past.

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(4) Also do not binge-watch shows. Choose a show that has a finite time limit. Try watching shows that comfort you, an old comedy show for example. You can then sleep with happy thoughts.

(5) Learn to shed the burden of worries. Disconnect from your usual rhythms two hours after dinner. Devote it to interacting with family members or pursuing a hobby like completing a part of a painting, strumming the guitar or reading a book. These are all brain soothers and help you fall asleep. Often when we place our head on the pillow, we tend to review our day and prepare for the next. So there's usually a rush of negative emotions, of work undone, of goals not achieved, anxieties about not meeting standards we have set for ourselves. Try journaling as a way of letting your emotions out. As people lead more individualised lives, this self-talk can help you develop fresher perspectives. Do not think of a solution, that gets you into strategic thinking. Just write down your issues.

(6) Definitely do not stalk others on social media. Rather than looking at other people on social media, much of which is posed anyway, prioritise your life and activities that make you feel good.

#### WHAT IF YOU STILL CANNOT SLEEP

When you can't fall asleep, don't reach out for the OTT app or the phone. First take a warm water shower that relaxes the muscles, kills the fatigue and induces sleep. Listen to pleasant ambient music, limit light, pull the curtains and ensure the ambient temperature is comfortable to you.

If you are still tossing and turning, try a little stroll in the room. Change positions on the bed. The best method is to lie down on your bed, stretch your muscles and limbs in the sleeping position and concentrate on your breathing rather than focussing on your problems. Lie down on a comfortable pillow and focus on your breathing. Empty your mind out and just focus on breathing in and out. This almost always works.

If you do have respiratory ailments or issues, sleep on a raised pillow. Ensure your breathing is just right. Sleep on one side of the body to ensure that airways are n

## **Aging**

### **Why the elderly should give up the 7 am walk amid Delhi pollution and wait for sunshine (Indian Express:20221104)**

<https://indianexpress.com/article/lifestyle/health-specials/why-the-elderly-should-give-up-the-7-am-walk-amid-delhi-pollution-and-wait-for-sunshine-8247799/>

As we age, our body reserves decrease. The lung function of a 70-year-old person will always be weaker than that of a 40-year-old. The elderly have weak lungs, heart and develop COPD easily with higher levels of PM 2.5 and PM 10. Pollution also raises the risk of heart failure and dementia, say experts

With the rising pollution in the Delhi NCR region, the vulnerability of children, senior citizens and those spending more time outdoors for work has doubled. (Express/Prem Nath Pandey)

Seventy-five-year-old Vijay Chawla never ever missed his 6.30 am walk. But after four seasons of wading through the smoky haze of Delhi winter mornings, he collapsed and was diagnosed with Chronic Obstructive Pulmonary Disease (COPD), a chronic inflammatory lung disease that obstructs airflow in the lungs. What he didn't realise is that for four years, he had been breathing a deadly cocktail of polluted air, one that was layered with diesel from overnight trucks, the smoke from small fires lit by people for warmth, the chokehold of burnt stubble and the heavy particles that clogged his airways. Low temperatures and little or no wind in the bowl-shaped city means that the pollutants settle down deep and thick. This is one of the reasons that Chawla's grandchildren routinely sneeze through the season and wheeze with asthma-like symptoms.

With the rising pollution in the Delhi NCR region, the vulnerability of children, senior citizens and those spending more time outdoors for work has doubled. Doctors say that the children and senior citizens should be prevented from stepping outdoors and should not play or go for a walk in the morning and evening hours when pollution levels are extreme.

Also Read |Is an air purifier enough to beat indoor air pollution? Which kind is best for the home?

#### **WHY CHILDREN ARE THE MOST VULNERABLE?**

According to Dr Manish Mannan, Head of the Paediatrics and Neonatology department at Paras Hospital in Gurugram, children under the age of five breathe air faster than adults and as a result take in more contaminants. "Children are more susceptible than adults to the impacts of pollution as they breathe air that is 93 per cent polluted on a daily basis. This can seriously

endanger their health and development. Asthma and childhood cancer can be brought on by air pollution, which also has an effect on neurodevelopment and cognitive function. High levels of air pollution may put children at a higher risk of developing chronic conditions like cardiovascular disease later in life,” he says.

He is seeing a large number of children this year complaining of migraine and headaches. “Lead, carbon monoxide, nitrogen dioxide, sulphur dioxide and particulate matter (PM10 and PM2.5) are among the air pollutants that have been linked positively to migraine intensity, frequency and duration as well as the frequency of medical visits as a result of migraine attacks,” says Dr Mannan.

Dr Krishan Chugh, Director and Head of the Paediatric Department, Fortis Memorial Research Institute, says that asthma in children had increased significantly over the last week. “Until last month, asthmatic children formed only 10-20 per cent of my patients. This number has increased to almost 80 per cent of my patients. A few have had serious symptoms and required hospitalisation,” he adds.

Dr GC Khilnani, Chairman, PSRI Institute of Pulmonary, Critical Care and Sleep Medicine, says that those involved in outdoor activities are prone to developing serious cough, headache and burning sensation in the eyes apart from chronic respiratory and heart issues which they will eventually develop.

Also Read |Delhi air pollution: Biggest culprit this year, and possible solutions

## WHEN SHOULD THE ELDERLY TAKE THEIR MORNING WALK? INDOOR AND OUTDOOR RISKS

Pollution is the worst trigger for senior citizens as it ends up aggravating their pre-existing conditions. So no way should they be walking at 7 am. In fact, they should postpone it to later in the day when the pollutants are suitably dispersed or devise some indoor routines.

Dr Khilnani says senior citizens, for whom walking is compulsory, should walk only when sunshine arrives.

“When there is sunshine, the pollutant load lessens at the surface level. There is a phenomenon called inversion when pollutants disappear in the air as the sunshine arrives. Those who want to walk can venture out then but going for a walk before that can be fatal and create severe health issues,” says he

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Says Prashun Chatterjee, Associate Professor, Department of Geriatric Medicine at the All India Institute of Medical Sciences (AIIMS), “As we age, our body reserves decrease. The lung function of a 70-year-old person will always be weaker than that of a 40-year-old person. The elderly have weak lungs, heart and develop COPD easily. Most of them complain of spasm-related symptoms.” Pollution also raises the risk of heart failure and dementia, he adds. An adult breathes approximately six litres air per minute while resting and 20 litres while exercising or engaging in some physical activity. So imagine the volume of toxins that an adult will inhale during any kind of physical activity outdoors.

Also Read |Respiratory issues, headaches, eye irritation show uptick as pollution rises in Delhi

“Winter is a double-edged sword. Because of pollution, the senior citizens are asked not to step out. Restricted mobility means they can develop sarcopenia and complain of lower muscle mass,” he adds. In such a situation, an indoor exercise routine has to be worked out for them. Dr Khilnani suggests a steady regime of pranayama.

#### ARE PARKS SAFE?

Green spaces tend to have a higher saturation of moisture in the form of early morning dew and humidity. This forms a smoky veil that traps pollutants close to the ground and contributes to higher PM 2.5 concentrations. Open areas, by contrast, see the dispersal of pollutants due to some movement of air and the passage of vehicles and human activity.

#### TIME TO WEAR THE N 95 MASK AGAIN

All doctors were unanimous about the mandatory usage of N95 masks by the elderly and young while stepping outdoors. Surgical or cloth masks do not work in high levels of PM 2.5 and PM 10 which need to be filtered out. In fact, they should be worn with the same rigour as we did during the pandemic. If you have vulnerable family members, then experts recommend using air purifiers to counter indoor air pollution which gets aggravated by poor ventilation.

### **Omega-3,**

#### **Why fish oil, which is rich in Omega-3, is a magic dietary supplement to burn calories & shed extra weight? (Indian Express:20221104)**

<https://indianexpress.com/article/lifestyle/health-specials/fish-oil-omega-3-dietary-supplement-calories-weight-loss-8247173/>

The body’s requirement for Omega-3 fatty acids can also be met through supplements available in the market. But there are some myths around them which increase people’s dilemma. Dr Suranjit Chatterjee, Senior Consultant, Internal Medicine, Indraprastha Apollo Hospitals, New Delhi, busts them

The body’s requirement for Omega-3 fatty acids can also be met through supplements available in the market.

For a nation that is facing a serious cardio-vascular health concern, the importance of Omega-3 fatty acids in our daily diet needs to be emphasised time and again. Fish oil, which can be obtained from several types of fishes, is a rich source of two vital Omega-3 fatty acids — Eicosapentaenoic Acid (EPA) and Docosahexaenoic Acid (DHA). These acid contents are critical for us to maintain our health and fight against complications, including inflammation, liver fat, depression and so on. The most important fact is that our body cannot produce Omega-3 fatty acids. This is the reason why the World Health Organisation (WHO) recommends the intake of fish every week.

However, the body’s requirement for Omega-3 fatty acids can also be met through supplements available in the market. But there are some myths around them which increase people’s dilemma. Let’s take a deep dive into myths and reality.

Myth 1: All Omega-3 fatty acid sources are equally important

Reality: Only fatty fish contain all the Omega-3 acids including Eicosapentaenoic Acid (EPA) and Docosahexaenoic acid (DHA). Other sources don't provide the same value. Alpha-linolenic acid (ALA), another type of Omega-3, can be obtained through plant sources such as flaxseeds, chia seeds, walnuts and soybean. ALA is also converted into EPA and DHA by the body but the conversion rate is slow. For this reason, consuming fatty fish or taking a high-quality fish oil supplement is considerably superior to ingesting Omega-3 supplements.

Reality: The fact is that Omega-3 acids help improve your metabolism, which will help you burn more calories and shed extra pounds. Also, they help in fighting inflammation created by obesity and associated cardiovascular issues. So, due to its anti-inflammatory qualities, Omega-3 can also aid in managing problems brought on by obesity.

Myth 3: Eating fish is the best way to get Omega-3 fatty acids

Reality: Definitely, fish is the best source of Omega-3 acids but not all varieties can provide the required amounts of acids to meet daily requirements. Also, fish is vulnerable to water pollution. Harmful substances like mercury can enter its system, which, when ingested, enter the human body and affect overall health. Hence, Omega-3 supplements can be used to meet daily requirements.

Reality: Omega-3 fatty acids may not be able to carry out their intended tasks if the dose is below the necessary level. According to several research papers, anxiety patients who ingested Omega-3 supplements with more than 2000 mg of EPA/DHA daily saw considerable therapeutic benefits. Similar correlations between Omega-3 dosage and the advantages of its anti-inflammatory characteristics have also emerged.

Myth 5: Fish oil supplements are effective in heart issues only

Reality: This is not true. Fish oil supplements can help you maintain a good condition of joints, eyes, skin and cerebral functions. DHA plays a crucial role in the brain's growth during infancy. Additionally, it can aid in the prevention of dementia and other cognitive problems like Alzheimer's disease. Apart from that, Omega-3 helps in reducing inflammation and joint-related issues such as rheumatoid arthritis.

However, when it comes to lowering low-density lipoprotein (LDL), which is also known as 'bad' cholesterol, there is no evidence that Omega-3 acids reduce it. In fact, a 2013 literature review found that fish oil can actually increase LDL levels in some people.

## **Dental Health**

**Should I brush my teeth before or after breakfast? (Indian Express:20221104)**

<https://indianexpress.com/article/lifestyle/health-specials/should-i-brush-my-teeth-before-or-after-breakfast-8247000/>

Brushing before breakfast clears out plaque-forming bacteria, preventing them from feeding on food remnants from the night before and multiplying themselves in the process. In their absence, breakfast foods can't be as degenerative, says Dr Neeraj Verma, Senior Consultant Orthodontist, Indraprastha Apollo Hospitals, New Delhi

According to the World Health Organisation, you should be brushing your teeth twice a day after 12-hour gaps, or once in the morning and once in the evening. (Image source: Getty Images/Thinkstock)

If you are a late riser or have an early dash to work, you may tend to brush your teeth after a quick cup of bed tea, a bite of breakfast and add some time in the shower before hurrying out. But is that the right start to the day? Should you be brushing your teeth before or after breakfast for dental hygiene?

This question of this versus that arises when there is no clarity about the science, according to Dr Neeraj Verma, Senior Consultant Orthodontist, Indraprastha Apollo Hospitals, New Delhi. "There is no room for dualism once you are aware of the real purpose of brushing your teeth," says he.

#### UNDERSTANDING THE IMPACT OF BRUSHING TEETH

We need to regularly clean the plaque from our mouth. "This sticky transparent film is formed on the surface of our teeth because of the bacteria which get stuck in the gaps and gumlines with food particles. And after our gut, our mouth cavity is the biggest repository of microbes. Now food residue in the mouth can cause pathogenic bacteria, gum disease, decay, cavities and bleeding gums. Our tongue, dentures and fillings are also full of plaque. This layer can form and accumulate in 12 hours. If it is not cleaned in 12 hours manually, it becomes more sticky, congeals and crusts up. Over time, if we do not maintain the brushing cycle within 12 hours, the plaque calcifies into tartar, especially in the deeper areas of the mouth, where we may not be able to manipulate and twist our toothbrush as effectively," says Dr Verma.

According to the World Health Organisation, you should be brushing your teeth twice a day after 12-hour gaps, or once in the morning and once in the evening. "There is no clinical recommendation but brushing before breakfast is accepted as a healthy routine as it clears out plaque-forming bacteria, preventing them from feeding on food remnants from the night before and multiplying themselves in the process. In the absence of bacteria, the breakfast foods can't be as degenerative," says Dr Verma.

Their numbers are also the reason why your mouth cavity may be odorous, leading to bad breath. "And once your mouth is clean, it is ready to receive fresh food and resume production of saliva, which is a protective screen. Besides, talking through the day accelerates self-cleansing of the mouth compared to the resting period at night. Hence the argument for a fresh breath energy before breakfast," explains Dr Verma.

Also read | [What's the link between kidneys and heart health in diabetes?](#)

The after-breakfast routine, he feels, is born out of a time crunch. "People might just think that the remnants of breakfast food could be swirling around in the mouth all day and the best way

to get rid of them is to brush after breakfast since frequent brushing in the breakfast hour could also eat into the teeth enamel,” he adds.

However, he has a caveat. “Perhaps brushing after breakfast can be considered in cases where you have brushed your teeth at night after meals and before sleeping. Then your mouth is expected to be reasonably clean in the morning and can be cleansed after breakfast. But if you are brushing once a day, which most of us do, then you must brush before breakfast,” says Dr Verma.

#### MINIMISING THE EFFECT OF FOOD BREAKDOWN

Many researchers argue that cleaning teeth before breakfast means that the corrosive effects of citric acid, which is found in fruits like oranges, can be avoided. Besides, juices and citric acid soften the enamel and post-breakfast brushing may just damage your enamel faster, wear it out if done over time and take away the white sparkle. “It is a good idea to just rinse your mouth with water twice or thrice after breakfast to clean up any stuck food residue, juice or milk. Then just drink a glass of water,” says Dr Verma.

Study finds role of iron in chronic heart failure in 50% of heart attack survivors(Indian Express:20221104)

A research study has shed light on the occurrence of chronic heart failure in the majority of heart attack survivors. The study which has recently been published in the journal Nature Communications talks about how iron drives formation of fatty tissue in the heart and leads to chronic heart failure.

The researchers followed animal models for over six months and found that reduction of iron consequently reduced the amount of fat in the heart muscle and concluded that iron is the driving force behind the formation of fatty tissue in the heart.

“Using noninvasive imaging, histology and molecular biology techniques, and various other technologies, we have shown that iron from red blood cells is what drives this process,” explained Dr Dharmakumar. “When we removed the iron, we reduced the amount of fat in the heart muscle,” he added.

“For the first time, we have identified a root cause of chronic heart failure following a heart attack,” says Dharmakumar and adds that the finding establishes a pathway for clinical investigations to remedy or mitigate the effects associated with iron in hemorrhagic myocardial infarction patients.

Dharmakumar’s team is currently testing iron chelation therapy to do just that in a just-launched clinical trial.

04/618 million lives are lost every year due to heart complications

Cardiovascular diseases account for close to 18 million deaths every year worldwide.

Lack of awareness around the disease, sudden onset of the complication and unhealthy lifestyle are few of the major risk factors that trigger heart complications in young adults these days.

In view of this, research studies on various causes of fatal heart complications are crucial. On Dr Dharmakumar's research, the Indiana University School of Medicine says, "the discovery paves the way for treatments that have the potential to prevent heart failure in nearly half a million people a year in the United States, and many millions more worldwide."

Heart failure occurs when the heart muscle stops pumping the amount of blood it should.

The study says around 50% of the people suffering from myocardial infarction or heart attacks develop chronic heart failure. These people, who have survived the heart attack after reperfusion or reopening of arteries, succumb to chronic heart failure within a 5 year period.

It highlights that the incidence of heart failure following a heart attack has increased in recent decades with more than 300,000 deaths every year in the US.

"While advances across populations have made survival after a heart attack possible for most, too many survivors suffer long-term complications like heart failure," said Subha Raman, MD, who is physician director of the Cardiovascular Institute. "Dr. Dharmakumar's breakthrough science illuminates who is at risk and why and points to an effective way to prevent these complications."

Apart from the medical factors, there are lifestyle related factors which can remedy the heart complication situation. Factors like healthy eating habits, proper sleep pattern, reduction of tobacco and alcohol consumption and inclusion of more physical activity are certain modifiable factors that promote good health for the heart.

A good heart is the key to a healthy body and mind, undoubtedly. In view of the pandemic and other infections the onus is on us to lead a lifestyle that can ensure a good ambience for the heart.

## **Illness**

**Men! Beware of THIS rare illness that can make your penis curve (The Times of India:20221104)**

<https://timesofindia.indiatimes.com/life-style/health-fitness/health-news/men-beware-of-this-rare-illness-that-can-make-your-penis-curve/photostory/95277266.cms?picid=95277279>

When it comes to talking about our sexual health, it takes a lot of effort to break the ice. What we don't realize in the process is that the more we delay having a conversation around it, the greater is the risk of developing an illness that can affect our sex life and more.



One such rare illness that men need to be vigilant about is Peyronie's disease, a condition that not only affects a person's physical health, but also takes a toll on their mental well-being.

Here's what you need to know about it...

Also read: Men, here's how city pollution can make you infertile![READMORE](#)

02/7What is Peyronie's disease?

What is Peyronie's disease?

According to the Mayo Clinic, Peyronie's disease is a noncancerous condition resulting from fibrous scar tissue that develops on the penis and causes curved, painful erections.

It is so rare that it affects up to 0.5 percent of adult men and 8 to 10 percent of men around the age of 40 in the United States. However, that does not mean you're not at risk.

Why this rare condition is concerning is because it is known to significantly affect a person's mental health. A 2013 study in the American Journal of Managed Care found that roughly half of all Peyronie's patients struggle with depression.

This is because the disease can prevent one from having sex or might make it difficult to get or maintain an erection (erectile dysfunction), leading to stress.

Also read: Coronavirus: Study finds similar brain activity in COVID-19 and Parkinson's disease patients

[READMORE](#)

03/7The sign to watch out for that can affect your sex life

The sign to watch out for that can affect your sex life

Men who suffer with Peyronie's disease often have a penis that is subject to an irregular curvature i.e. it might curve upward or downward or bend to one side, says the Mayo Clinic.

04/7Other symptoms to note

Other symptoms to note

Besides causing the penis to curve, Peyronie's disease can cause other symptoms which include:

- Formation of scar tissues under the skin of the penis

- Erectile dysfunction

- Shortening of the penis

- Penile pain

- Other deformities of the penis

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05/7What is the cause of this rare illness?

What is the cause of this rare illness?

There is no specific cause behind Peyronie's disease, however, the formation of plaque build up in the penis is what leads to the condition, according to experts.

"It's thought Peyronie's disease generally results from repeated injury to the penis. For example, the penis might be damaged during sex, athletic activity or as the result of an accident. However, most often, no specific trauma to the penis is recalled," explains the Mayo Clinic.

"During the healing process after injury to the penis, scar tissue forms in a disorganized manner. This can lead to a nodule you can feel or development of curvature," the health body further adds.

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06/7Who is at risk?

Injury alone does not cause Peyronie's, rather how you let the injury heal and prevent the scar tissues to form is what keeps the disease at bay. Furthermore, there are some risk factors to consider:

- Heredity, which means if one of your family members has the disease, you can also be at risk.

- Those who suffer from connective tissue disorder

- Age is also one of the risk factors.

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07/7When to visit a doctor?

If your symptoms look similar to the symptoms associated with Peyronie's disease, then it is best to contact your doctor. In addition if you experience complications such as inability to have sex, difficulty in achieving or maintaining an erection, anxiety and stress about your sexual performance, fertility issues, penile pain, then you must seek immediate medical help.

## **Coronavirus**

**Coronavirus: Indians infected with Omicron XBB have mild disease, no severity; INSACOG says(The Times of India:20221104)**

<https://timesofindia.indiatimes.com/life-style/health-fitness/health-news/coronavirus-indians-infected-with-omicron-xbb-have-mild-disease-no-severity-insacog-says/photostory/95276064.cms>

Cases of people infected with Omicron sub-lineage XBB of COVID-19 are rising in India. However, the situation is not one to panic as Indian patients infected with XBB have mild disease and no increase in severity is noted, the Indian SARS-CoV-2 Genomics Consortium (INSACOG) said, according to PTI.

INSACOG is a forum set up under the Ministry of Health and Family Welfare by the Government of India to study and monitor genome sequencing and virus variation of circulating strains of COVID-19 in India.

02/6Transmission of XBB and XBB.1

Transmission of XBB and XBB.1

"XBB, a BJ.1/BM.1.1.1 recombinant lineage with breakpoint in the spike protein, is presently appearing in multiple countries. This recombinant lineage was first detected in Singapore and the US, and has also been identified in multiple states in India," INSACOG panel said. XBB.1 – a sub-lineage of XBB with an additional mutation is also detected.

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

03/6SARS-CoV-2 virus continuously mutating

SARS-CoV-2 virus continuously mutating

The INSACOG expert panel noted that in the current phase of the pandemic, the SARS-CoV-2 virus is continuously accumulating mutations – some of which might contribute to increased transmissibility and immune evasion.

The World Health Organisation notes that there has been a broad increase in prevalence of XBB\* in regional genomic surveillance, however, it has not yet been consistently associated with an increase in new infections.

Read more: High cholesterol: Is long COVID a risk?READMORE

04/6Data suggests XBB could be the predominant lineage

Data suggests XBB could be the predominant lineage

Quoting data from INSACOG dashboard, Vinod Scaria, scientist at the Institute of Genomics and Integrative Biology (IGIB), tweeted: “Data suggests XBB\* has emerged as the predominant lineage of #SARSCoV2 in #India in the recent weeks. XBB\* now accounts for ~48% of all isolates in epiweek. No abnormal spike in infections or clinical outcomes have been noted yet...”

Scaria also mentioned that asymptomatic infection and transmission cannot be discounted, given the background immunity in the population.

05/6Keep following coronavirus appropriate behaviour

INSACOG said it is keeping a close watch and monitoring the emergence and evolution of XBB and XBB.1 and any new sub-lineages.

"The community need not panic and adherence to coronavirus appropriate behaviour is recommended in the light of ongoing festivities," PTI quoted.

Read more: Sanitary pads, pantyliners, menstrual cups, or period panties: What's the best pick for you

## **Monkeypox**

**Scientists find evidence of 'substantial' transmission of monkeypox before symptoms appear (The Hindu:20221104)**

<https://www.thehindu.com/sci-tech/health/scientists-find-evidence-of-substantial-transmission-of-monkeypox-before-symptoms-appear/article66090803.ece>

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

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

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

## Pollution

**बढ़ता वायु प्रदूषण बन रहा है फेफड़ों के लिए समस्या, सेहतमंद बने रहने के लिए अपनाएं ये उपाय (Hindustan 20221104)**

<https://www.livehindustan.com/lifestyle/health/story-side-effects-of-air-pollution-know-how-increasing-air-pollution-is-becoming-a-problem-for-the-lungs-follow-these-measures-to-stay-healthy-7304877.html>

दो दशक पहले तक फेफड़ों के कैंसर और सीओपीडी को धूम्रपान करने वालों की बीमारी माना जाता था, क्योंकि 90 प्रतिशत मामले धूम्रपान करने वालों के ही होते थे। पर, अब यह समस्याएं ज्यादातर सभी लोगों को अपना शिका

बढ़ता वायु प्रदूषण बन रहा है फेफड़ों के लिए समस्या, सेहतमंद बने रहने के लिए अपनाएं ये उपाय

फेफड़े शरीर के सबसे सक्रिय, महत्वपूर्ण और नाजुक अंगों में से एक हैं। पर, दिल की तरह उन्हें सेलिब्रिटी का दर्जा प्राप्त नहीं है। जबकि, दिल से ज्यादा मौतें फेफड़ों से जुड़ी बीमारियों की वजह से होती हैं। भारत में मृत्यु के दस प्रमुख कारणों में चार कारण फेफड़े व श्वसन रोगों से जुड़े हैं। क्रॉनिक ऑब्सट्रक्टिव पल्मोनरी डिजीज (सीओपीडी) लोवर रेस्पिरटरी इन्फेक्शन, कैंसर (फेफड़ों का कैंसर दूसरे स्थान पर है) और ट्यूबरकुलोसिस। बढ़ता वायु प्रदूषण इस समस्या की गंभीरता को और बढ़ा देता है।

दो दशक पहले तक फेफड़ों के कैंसर और सीओपीडी को धूम्रपान करने वालों की बीमारी माना जाता था, क्योंकि 90 प्रतिशत मामले धूम्रपान करने वालों के ही होते थे। पर, अब यह समस्याएं ज्यादातर सभी लोगों को अपना शिकार बना रही है। इंडियन काउंसिल ऑफ मेडिकल रिसर्च की एक रिपोर्ट के मुताबिक 2019 में वायु प्रदूषण की वजह से भारत में 16.7 लाख लोगों की मौत हुई। यह आंकड़ा 2020 में देश में कोरोना महामारी से हुई कुल मौतों से करीब 12 गुना ज्यादा है। रिपोर्ट में यह भी कहा गया है कि वायु प्रदूषण फेफड़ों से जुड़ी 40 प्रतिशत बीमारियों के लिए जिम्मेदार है।

नेचर जेनेटिक्स में प्रकाशित शोध के अनुसार, वायु प्रदूषण से सभी तरह की नॉन कम्युनिकेबल डिजीजेज जैसे कार्डियो वॉस्कुलर, ऑटो इम्यून डिजीजेज, डायबिटीज, अर्थराइटिस आदि का खतरा कई गुना बढ़ जाता है।

हम दिन भर में करीब 25,000 बार सांस लेते और छोड़ते हैं। प्रदूषित हवा के बीच लगातार रहना कई तरह से सेहत पर असर डालता है। खासकर, ठंड में वायु प्रदूषण का बढ़ना फेफड़ों की समस्या से जूझ रहे लोगों की दिक्कत बढ़ा देता है। फेफड़े कैसे रहेंगे स्वस्थ, बता रही हैं शमीम खान

कैसे डालते हैं प्रदूषक सेहत पर असर-

सेहत पर सबसे अधिक बुरा असर पार्टिकुलेट मैटर (पीएम), ओजोन, नाइट्रोजन डाय ऑक्साइड और सल्फर डाईऑक्साइड का पड़ता है। ईंधन के जलने, बिजली के उपकरण व औद्योगिक प्रक्रियाओं से सल्फर डाई ऑक्साइड निकलती है। जिसके कारण सांस फूलना, लगातार नाक से पानी निकलने लगता है। 10 और 2.5 माइक्रॉन से कम व्यास वाले पीएम सेहत के लिए बहुत हानिकारक होते हैं। ये सांस से फेफड़ों में प्रवेश करते हैं और रक्त के प्रवाह में मिल जाते हैं।

वायु प्रदूषण का असर-

अल्पकालिक प्रभाव

-सिरदर्द

- नाक, गला और आंखों में दर्द, सूजन और जलन

-खांसी और सांस लेने में दर्द

- निमोनिया, ब्रोंकाइटिस

- स्किन इरिटेशन

-दीर्घकालिक असर

- सेंटर नर्वस सिस्टम पर असर (सिरदर्द, बेचैनी)

- कार्डियोवैस्कुलर रोग

- श्वसन तंत्र से जुड़े रोग

- (अस्थमा, कैंसर )

वायु प्रदूषण का खतरा किन लोगों को है ज्यादा-

-फेफड़े, हृदय व मधुमेह से जूझ रहे लोग

-बच्चे व बुजुर्ग

- गर्भवती महिलाएं

-बहुत अधिक समय प्रदूषित वातावरण में बिताने वाले लोग

ऐसे रहेंगे फेफड़े स्वस्थ और मजबूत

-नीम प्रदूषकों को अवशोषित करके शरीर से वायु प्रदूषण के असर को कम करने में मदद करता है। इसके लिए त्वचा व बालों को नीम की पत्तियों के उबले हुए पानी से धोने से त्वचा व म्युकोसल मैम्ब्रेन में फंसे पोषक तत्व बाहर निकलते हैं। सप्ताह में दो बार नीम की 3-4 पत्तियां चबाने से भी लाभ मिलता है।

-तुलसी प्रदूषक तत्वों को सोखती है। इसका काढ़ा श्वसन रोगों में राहत देता है।

-हल्दी एक एंटीऑक्सीडेंट है। इसे घी के साथ मिलाकर लेना कफ में आराम देता है और अस्थमा अटैक में सहायता करता है।

-रोज 2-3 चम्मच देसी घी खाएं, ये लेड व पारे जैसे हानिकारक तत्वों को शरीर में जमा नहीं होने देता।

-त्रिफला पाउडर वात, पित्त और कफ दोषों के असंतुलन को संतुलित करके इम्यूनिटी बढ़ाता है। रात में एक चम्मच शहद के साथ लें।

-श्वसन क्रियाएं प्राणायाम, कपालभाति व जलनेति करें।

-यूनिवर्सिटी ऑफ मेरीलैंड मेडिकल सेंटर के अनुसार, पोषक तत्वों जैसे विटामिन ए, सी, ई और मिनरल्स जैसे जिंक, पोटेशियम, सेलेनियम और मैग्नीशियम की कमी फेफड़ों के रोगों का खतरा बढ़ाती है। रंग-बिरंगी सब्जियां, साबुत अनाज खाएं।

फेफड़ों के कैंसर का प्रमुख कारण वायु प्रदूषण-

प्रदूषित वायु में सांस लेने से फेफड़ों की क्षमता और कार्यप्रणाली प्रभावित होती है और वो समय से पहले बूढ़े होने लगते हैं। लगातार टॉक्सिन्स और प्रदूषकों के संपर्क में रहने से फेफड़े क्षतिग्रस्त हो सकते हैं। डब्ल्यूएचओ की इंटरनेशनल एजेंसी फॉर रिसर्च ऑन कैंसर (आईएआरसी) के अनुसार, वायु प्रदूषण फेफड़ों के कैंसर के प्रमुख कारणों में से एक है।

वायु प्रदूषण का असर बड़ों की तुलना में बच्चों पर अधिक होता है। बच्चों की श्वसन दर वयस्कों से अधिक होती है, इस कारण बच्चे सांस के जरिए अधिक मात्रा में प्रदूषक भी अंदर ले लेते हैं। बच्चों की लंबाई और आदतों के कारण वो उन प्रदूषकों के अधिक संपर्क में रहते हैं जो वायु से भारी होते हैं और उनके ब्रीदिंग जोन में केंद्रित हो जाते हैं। बच्चों का एअरवेज भी संकरा होता है और उनके फेफड़े अभी भी विकसित हो रहे हैं इसलिए थोड़ा सा भी प्रदूषण बच्चों पर नकारात्मक प्रभाव डालता है। जिन लोगों को धूल, मिट्टी की एलर्जी से अचानक ही दौरा पड़ने की स्थिति आती है, उन्हें इमरजेंसी दवाएं घर में रखनी चाहिए।

ठंड में रहें सावधान-

सर्दियों में श्वसन तंत्र से जुड़ी समस्याओं के बढ़ने के तीन प्रमुख कारण हैं; पहला, जब तापमान में तेज गिरावट आती है तब श्वास नलिकाएं थोड़ी सिकुड़ जाती हैं जिससे सांस लेने में परेशानी होती है। दूसरा, ठंडी और सूखी हवा बीमार फेफड़ों को ही नहीं स्वस्थ फेफड़ों को भी नुकसान पहुंचाती है। तीसरा सर्दियों में स्मॉग (स्मोक+फॉग) के कारण प्रदूषण का स्तर अधिक होता है। प्रदूषित वायु श्वास नलिकाओं और फेफड़ों के साधे संपर्क में आने से ऊतकों की कोशिकाओं के डीएनए को नुकसान पहुंचता है जिससे वो क्षतिग्रस्त हो जाते हैं। ऐसे में चेहरे व नाक को ढक कर रखें, जब तापमान बहुत कम हो तो खुले में व्यायाम न करें, मुंह के बजाय नाक से सांस लें, ताकि फेफड़े ठंडी हवा के सीधे संपर्क में न आए। दमा या सांस के रोगी एन 95 मास्क पहनकर ही बाहर निकलें। गहरी सांस लें डीप ब्रीदिंग से फेफड़े साफ होते हैं। अधिक मात्रा में ऑक्सीजन अंदर जाती है और कार्बन डाईऑक्साइड बाहर निकल जाती है। डीप ब्रीदिंग का सही तरीका है, नाक से सांस अंदर लो और मन ही मन 1-2-3-4 तक गिनो, फिर मुंह से सांस छोड़ो और 1-2-3-4-5-6-7-8 तक गिनो। गहरी सांस छाती से नहीं पेट से लेनी चाहिए।

इनडोर प्रदूषण से भी बचें-

-घरों और ऑफिसों के भीतर की हवा भी शुद्ध रखें। एअर फ्रेशनर का उपयोग न करें, बल्कि एयर प्यूरीफिकेशन सिस्टम लगावाएं। हमेशा खिड़कियां और दरवाजे बंद करके न रहें, दिन में कुछ समय ताजी हवा अंदर आने दें। -घर के अंदर धूपपान न करें।

-ठहाके लगाएं ठहाका लगाकर हंसते समय बासी हवा बाहर निकल जाती है और फेफड़े ताजी हवा से भर जाते हैं।

-मसूड़े रखें स्वस्थ स्टेट यूनिवर्सिटी ऑफ न्यूयार्क में हुए शोध के अनुसार बीमार मसूड़ों की वजह से व्यक्ति के फेफड़े ठीक से कार्य नहीं कर पाते हैं।

-व्यायाम के समय फेफड़ों की क्षमता बढ़ जाती है। अध्ययनों के अनुसार सामान्य स्थिति में स्वस्थ व्यक्ति एक मिनट में 15 बार सांस लेता है, पर व्यायाम के दौरान यह बढ़कर 40-50 प्रति मिनट हो जाता है।

-पानी और दूसरे तरल पदार्थ अधिक लें। इससे फेफड़ों की म्यूकोसल लाइनिंग पतली रहती है, जिससे फेफड़े बेहतर काम कर पाते हैं।

-संक्रमित होने से बचें। बार-बार संक्रमण फेफड़ों को नुकसान पहुंचाता है। जब जरूरी हो हाथों को साबुन और पानी से धोएं। सर्दियों में गुनगुना पानी पिएं। बार-बार चेहरे को छूने से बचें।

-रीढ़ को सीधा करके बैठें, ताकि फेफड़ों को पर्याप्त स्थान मिल सके। जो लोग दिनभर ऑफिस में कुर्सी पर बैठे-बैठे काम करते हैं, उन्हें चाहिए कि हर दो घंटे में पांच मिनट के लिये कुर्सी पर थोड़ा पीछे की ओर झुक जाएं, छाती को थोड़ा-सा ऊपर उठा दें और गहरी सांस लें।