



DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY
Wednesday **201901023**

87% of India covered under immunisation programme

87% of India covered under immunisation programme: govt (The Indian Express: 201901023)

<https://indianexpress.com/article/lifestyle/health/87-per-cent-of-india-covered-under-immunisation-programme-govt-6082952/>

Official data on India's immunisation coverage is still 62 per cent, given as the National Family Health Survey-4 (2015-16).

Launched in December 2014, Mission Indradhanush has pulled up India's immunisation coverage significantly to 87 per cent, Joint Secretary (Health) Vandana Gurnani said Tuesday.

"The immunisation coverage right now, as reported in the HMIS (self-reporting by states) is 87 per cent. A survey is on," Gurnani said in reply to a question.

Officials said the data is not verified at any level, which is why a larger survey has been commissioned. For now, the nearest thing to a survey data – though not statistically significant – is the concurrent monitoring data, which stands at 85 per cent.

Concurrent monitoring is a combination of provider reporting and supervisor surveys done within the system to estimate how a programme is working. The concurrent data for 2014 had showed a full immunisation coverage of 67 per cent, when Mission Indradhanush was launched.

Official data on India's immunisation coverage is still 62 per cent, given as the National Family Health Survey-4 (2015-16). The Pulse Polio campaign was integral to the eventual declaration of India as polio-free in 2014 after three years without a single wild polio case.

Lessons from that were incorporated in Mission Indradhanush programme.

Union Health Minister Dr Harsh Vardhan, meanwhile, outlined his ministry's plan to observe 25 years of the Pulse Polio campaign.

Mission Indradhanush is a booster vaccination programme that started in 201 districts with low immunisation coverage. It represents the seven vaccines that were then included in the Universal Immunisation Programme against seven diseases: tuberculosis, poliomyelitis, hepatitis B, diphtheria, pertussis, tetanus and measles. The number has since risen to 12 with the inclusion of vaccines against measles rubella, rotavirus, Haemophilus influenza type-B and polio.

In a select few states and districts, vaccines are also provided against Japanese Encephalitis and pneumococcus.

IIM-Kozhikode to release CAT 2019 admit card @iimcat.ac.in: How to download

Inside Malaika Arora's star-studded birthday party

Lighting up your Diwali: Witness the art of making diyas

In an article in BMJ journal last year, Gurnani wrote: "Owing to low childhood vaccination coverage, India's Ministry of Health and Family Welfare launched Mission Indradhanush in 2014 to target underserved, vulnerable, resistant, and inaccessible populations. The programme ran between April 2015 and July 2017, vaccinating around 25.5 million children and 6.9 million pregnant women. This contributed to an increase of 6.7% in full immunisation coverage... In October 2017, the Prime Minister of India launched Intensified Mission Indradhanush — an ambitious plan to accelerate progress. It aimed to reach 90% full immunisation..."

Meanwhile, the ministry has planned a celebration of the silver jubilee of the Pulse Polio Programme on October 31 at Dr Ambedkar International Centre in Delhi. Harsh Vardhan said India being declared polio-free in 2014 was a long and momentous journey.

Mission Indradhanush

HomeLifestyleHealth87% Of India Covered Under Immunisation Programme: Govt

Pregnancy disorder'

Simple, low cost method predicts deadly pregnancy disorder' (The Tribune: 201901023)

<https://www.tribuneindia.com/news/health/-simple-low-cost-method-predicts-deadly-pregnancy-disorder/850763.html>

Researchers have developed a simple, low cost method to predict the onset of a pregnancy condition called preeclampsia—a disorder that causes premature birth, and brain and liver injury in mothers, killing nearly half a million babies each year, globally.

The study, published in the EPMA Journal, noted that in developing nations, preeclampsia is a leading cause of death for both mothers and babies.

The researchers, including those from the Edith Cowan University (ECU) in Australia, assessed the health status of 593 pregnant Ghanaian women using the Suboptimal Health Questionnaire developed in 2009.

The questionnaire, the researchers said, combines participants' scores for fatigue, heart health, digestion, immunity and mental health, to generate an overall 'suboptimal health score' to predict chronic diseases.

They found that 61 per cent of women who scored high on the questionnaire went on to develop preeclampsia as compared to just 17 per cent of women who scored low.

When the researchers combined the questionnaire scores with blood tests that measured women's calcium and magnesium levels, they could accurately predict the development of preeclampsia in almost 80 per cent of the cases.

The researchers said that preeclampsia was easily treatable once identified, and added that providing an early warning could save thousands of lives.

“In developing nations, preeclampsia is a leading cause of death for both mothers and babies. In Ghana, it's responsible for 18 per cent of maternal deaths,” said co-author of the study Enoch Anto of ECU.

Anto added that both blood tests for magnesium and calcium, and the Suboptimal Health Questionnaire were inexpensive, making the new method ideally suited for developing countries where preeclampsia caused high maternal mortality rates. — PTI

Sleep decoded

How our memories stabilise during sleep decoded (The Tribune: 201901023)

<https://www.tribuneindia.com/news/health/how-our-memories-stabilise-during-sleep-decoded/849826.html>

The small number of neurons that remain active when all the others stay quiet can carry out important calculations while being protected from possible disturbances.

PARIS: Researchers have shown that delta waves—a pattern of high amplitude electrical activity in the brain emitted during sleep—are not silent resting periods for the brain’s cortex, but play an essential role in long-term memory formation.

The study, published in the journal *Science*, noted that when humans sleep, the seahorse shaped brain region called hippocampus reactivated itself spontaneously to a state similar to its activity during wakefulness.

According to the researchers from Centre national de la recherche scientifique (CNRS) in France, during sleep, the hippocampus sends information to the cortex, which reacts in turn.

The study noted that this exchange is often followed by a period of silence called a ‘delta wave,’ then by rhythmic activity called a ‘sleep spindle’.

This is when the cortical circuits reorganise to form stable memories, the researchers said.

However, they added that the role of delta waves in the formation of new memories is still a puzzle.

“Why does a period of silence interrupt the sequence of information exchanges between the hippocampus and the cortex, and the functional reorganisation of the cortex,” the researchers asked.

When the researchers looked more closely at what happens during delta waves, they discovered that the cortex was not entirely silent, but that a few neurons remained active and formed small, coactive sets that coded information.

They suggested that the small number of neurons that remain active when all the others stay quiet can carry out important calculations while being protected from possible disturbances.

According to the study, spontaneous reactivation of the hippocampus determined which neurons in the cortex remained active during the delta waves, and revealed the transmission of information between the two brain regions.

The neuron sets activated during the delta waves are formed of cells that participated in learning a spatial memory task during the day, the researchers said.

Putting these observations together, the researchers suggested that these processes are involved in memory consolidation.

To prove this, the scientists caused artificial delta waves in rats to isolate either neurons associated with reactivation in the hippocampus, or random neurons.

When the right neurons were isolated, the study noted that the rats managed to stabilise their memories and succeeded at the spatial test the next day.

Delta waves, the researchers said, are a means of specifically isolating assemblies of chosen neurons that sent crucial information between the hippocampus and cortical brain regions, and contributed to the reorganisation of brain circuits to form long-term memories. PTI

Vitamin E production

Researchers develop method for enhanced Vitamin E production (The Tribune: 201901023)

<https://www.tribuneindia.com/news/health/researchers-develop-method-for-enhanced-vitamin-e-production/849809.html>

Technology (IIT), Madras, have engineered sunflower plant cells to enhance their production of Vitamin E by ten times, an advance that may pave the way for effective and efficient commercial production of the vitamin with fewer unwanted side products.

The study, published in the Biochemical Engineering Journal, noted that in its most active form known as alpha-tocopherol, vitamin E helped prevent tissue damage from certain toxic chemicals produced in the body known as reactive oxygen species.

However, according to the researchers, the form of alpha-tocopherol synthesised chemically in labs was less active than its natural form found in plants.

The researchers said that an alternative to chemically synthesising the vitamin was to culture the plants under controlled conditions in the lab to create a uniform mass of cells that could sustainably produce alpha-tocopherol.

In the study, the researchers inserted genes involved in vitamin E production from sunflower into a plant called Arabidopsis that is commonly used as a model organism in genetics research.

Using insights from computational simulations on the metabolic processes within the Arabidopsis cells, the researchers tinkered with the genetically engineered cells to make it produce high quantities of alpha-tocopherol.

The combined approach using computer modelling and cellular engineering—also called rational approach—helped the researchers estimate which key enzymes in the engineered Arabidopsis cells when produced in higher quantities, led to the production of more alpha-tocopherol.

When the researchers experimentally increased the expression of one such enzyme in the tinkered cells, it led to a ten-fold higher alpha-tocopherol yield in one of the lab grown cell lines, compared to the normal non-engineered cells.

They noted that the amount of vitamin E produced was also almost 1.3 times greater than that from the seeds of the parent plant procured from Tamil Nadu Agriculture University (TNAU).

While there are existing methods for the production of vitamin E from engineered cells, the researchers mentioned that these were tedious trial and error approaches where different sets of cells were made, and the ones producing large quantities of alpha-tocopherol were selected.

However, in the new rational method, they said that the computational approach helped identify the enzymes that could be targeted to increase the yield of vitamin E in the engineered cells.

“The simulation-driven approach to engineering plant metabolism is advantageous over the conventional ‘hit and trial’ methods as it can save valuable resources, time and money during process optimisation,” Karthik Raman, the principal investigator of the study from IIT, Madras, told PTI.

“This model-based technique can act as a platform technology in which we can produce desired products such as biofuel from any plant once we know the metabolic network within the cells,” Smita Srivastava, co-author of the study from IIT, Madras, told PTI.

The researchers added that the rational method involving both computational and engineering approaches can be applied to produce valuable plant-based compounds of medicinal value such as anti-cancer drugs.

“Such drugs are produced from many endangered plants, which are endangered now because of extensive uprooting. So, if we want to come up with an alternative, sustainable process independent of nature, without a hit and trial approach, the rational method can be applied,” Srivastava said. PTI

Adolescent Drink

Does your adolescent drink more than you would approve? (The Tribune: 201901023)

<https://www.tribuneindia.com/news/health/does-your-adolescent-drink-more-than-you-would-approve/849395.html>

India ranks at 140 out of 150 countries in the world on the happiness index, making it one of the unhappiest countries in the world.

This permeates down to adolescents as well and could lead to unhappy choices of alcoholism and binge drinking to cope with the chaos.

Dr. Paras, Founder, Matrix, a life leadership coach and corporate training firm, believes that the solution for this ginormous issue lies in our minds. According to him, the mind is the greatest tool which affects all the facets of a human, be it his relationships, studies, career or self-esteem.

Dr. Paras helps you understand the importance of focusing on the pragmatic and constructive elements of life. Quite often, the peer pressure drives youngsters to plunge themselves into an endeavour of perfection. However, no one is perfect and you have to help your young adult to see that.

In order to address this question, he states: "Let us first tackle some of the most important questions."

Q) What is it like being an adolescent? What does an adolescent want? How addictions are confused as mechanisms to escape routes?

Being an adolescent is often the inception of what can be regarded as a recognition crisis. They are on the cusp of being adults and therefore, have an understanding of how to emulate an adult, but their mental development is still taking small steps from being that of a child to a grown person.

Having said that it does not mean that teenagers are children who are not meant to be taken seriously. On the contrary, they are bright and agile minds who have the potential to bring in new thoughts.

However, many adolescents are quashed under the sense of building an individuality way too fast that coaxes them towards alcoholism. Their need to prove themselves and a misguided sense of emulating what they think is right pushes them towards taking extreme steps.

The Play of Strokes

As per Dr. Eric Berne, founder of The Transactional Analysis Movement in Psychotherapy, every emotion, encouraging or defeating can be classified into a broad category of 'strokes'. Every human, and not just a teenager, craves for some sort of a stroke or a reaction to feel valued or show their presence.

In the case of teenagers, they are in a psychological and emotional whirlwind in which they resort to activities that earn them attention and validation. These strokes can either be positive or negative, as long as they yield any sort of reaction. Teenagers require heavy attention and if not catered to, they can resort to a plethora of activities leading to addiction.

These activities are divided into withdrawal, rituals, past times, activities, games, and intimacy.

Withdrawal, as the name suggests, resonates with being in a cocoon or a shell that will shield them from the world and disengage them from feeling anything at all. The feeling of detachment with no one to turn to can lead a teenager into finding solace in the numbness of alcohol.

Lack of intimacy or affection, especially from the parents can also account for the teenagers feeling left out or cast aside. Peer pressure or from someone within the family can 'inspire' them to take up alcohol as a coping mechanism. In fact, they do end up mimicking those around them who themselves choose escapism as a solution for all their problems.

They do not regard mental health as an important parameter for self-development which sends out a clear message to the teenager who himself/herself are battling their psychological upheaval. This is a clear cut case of a bad role model.

Last but not the least, is the inner voice. The inner voice of a teenager, or even an adult for that matter plays a huge role in making a person or breaking him. In teenagers, the voice is often an echo of those around him/her.

If nestled amidst a positive environment, the inner voice is encouraging. However, in contrasting situations, the inner voice is the one that brings the child down and as a result, he/she resorts to alcoholism to quieten down that voice.

Q) How to Combat Emotionally Stimulated Alcoholism?

The good news is that there are ways to turn the tables around on binge alcoholism and addiction in adolescents. It is all about building a better lifestyle and awareness with respect to mental health.

Here are some of the ways which may help: 1) Open culture in schools, colleges, and family Communication is the key to all distress. An open and healthy interaction in places like home, school/college, and social circle can help a teenager normalise to the fact that it is okay to feel the mental pressure and emotionally distraught and that help is always available when they need it. Alcoholism is not the way to go.

2) Creating a culture that supports mental health. Charity begins at home and so does the acceptance of mental health. Parents, teachers, and other elders of a social group can create a safe space for teenagers to talk to heart's content and interact with them about anything that is bothering them. It is important that these adults are able to accept it without prejudices and judgments.

3) Parents to stop comparing children on their weaknesses. The culture of encouraging the present qualities must take over the detrimental practice of parents pointing out their children's weakness in the name of self-development.

4) Parents and teachers creating space for positive psychology. Since parents and teachers directly influence the mindset of the children, it is important for them to set a space that promotes positive psychology and mindfulness.

5) Exercise– Yoga, Meditation and Mindfulness techniques One can never discount the importance of recreational activities and exercise. It releases endorphins, also known as happy hormones, which prepare the body to take on physical stress, but also shapes the brain into taking any sort of mental pressures. Therefore, instead of going for that bottle, exercising can help boost greater mental health and keep addiction at bay.

6) Psycho-education textbook from class KG till post-graduation. While the Indian education system is exemplary when it comes to creating credible engineers, doctors, and lawyers, what it really needs is to create a student force which is happy and mentally strong. It is, therefore, important to include psycho-education as a subject right from KG to higher education.

7) Elders taking mental support, children can emulate As discussed, teenagers emulate what they see around them and if they witness an adult take mental health seriously, they too will take that path to self-care and emotional well-being.

Addiction arises from unresolved issues and the unresolved issues emanate from the lack of communication. Integrating communication in daily lives can help keep mental and psychological issues at bay, which will in turn avert the pathway to any sort of addiction. —

Overweight people's lungs

Fat found in overweight people's lungs for first time (The Tribune: 201901023)

<https://www.tribuneindia.com/news/health/fat-found-in-overweight-people-s-lungs-for-first-time/848941.html>

Fat can accumulate in the lungs of people, particularly those who are overweight or obese, researchers have shown for the first time.

Scientists already know that people who are overweight or obese are more likely to suffer with wheezing and asthma, but the reasons for this have not been completely explained.

The new study, published in the European Respiratory Journal, suggests that this fatty tissue alters the structure of people's airways and this could be one reason behind the increased risk of asthma.

“Looking at samples of lung, we spotted fatty tissue that had built up in the airway walls. We wanted to see if this accumulation was correlated with body weight,” said John Elliot, a senior research officer at Sir Charles Gairdner Hospital in Australia.

The researchers examined post-mortem samples of lung that had been donated for research and stored in the Airway Tissue Biobank.

They studied samples from 52 people, including 15 who had no reported asthma, 21 who had asthma but died of other causes and 16 who died of asthma.

Using dyes to help visualise the structures of 1373 airways under a microscope, they identified and quantified any fatty tissue present. They compared this data with each person's body mass index (BMI).

For the first time, the study showed that fatty tissue accumulates in the walls of the airways.

The analysis revealed that the amount of fat present increases in line with increasing BMI.

The research also suggests that this increase in fat alters the normal structure of the airways and leads to inflammation in the lungs.

“Being overweight or obese has already been linked to having asthma or having worse asthma symptoms,” said Peter Noble, an associate professor at the University of Western Australia.

“Researchers have suggested that the link might be explained by the direct pressure of excess weight on the lungs or by a general increase in inflammation created by excess weight,” Noble said.

This study suggests that another mechanism is also at play.

“We’ve found that excess fat accumulates in the airway walls where it takes up space and seems to increase inflammation within the lungs.

“We think this is causing a thickening of the airways that limits the flow of air in and out of the lungs, and that could at least partly explain an increase in asthma symptoms,” Noble said.

The researchers are looking for new ways to study and measure fatty tissue in the lungs.

They want to confirm the relationship with respiratory disease and to find out whether the effect can be reversed by weight loss therapy. PTI

Exercise

Exercising before breakfast burns twice more fat than after: Study (The Tribune: 201901023)

<https://www.tribuneindia.com/news/health/exercising-before-breakfast-burns-twice-more-fat-than-after-study/848903.html>

People can have better control over their blood sugar levels by changing the timing of when they eat and exercise, according to a study which may help plan lifestyle interventions to counter diabetes and reduce body weight.

The researchers, including those from the University of Bath in the UK, said that people who performed exercise before breakfast burned double the amount of fat than those who exercised after the morning meal.

The results of the study, published in the Journal of Clinical Endocrinology & Metabolism, revealed that performing exercise in the overnight-fasted state could increase the health benefits of exercise for individuals, without changing the intensity, duration, or perception of their effort.

The researchers conducted a six-week study involving thirty male participants classified either as obese or overweight, and compared the results from two groups—those who ate breakfast before exercise, and those who ate after.

The study also involved a control group of participants who made no lifestyle changes, the researchers said.

The increased fat use is due to lower insulin levels during exercise when people have fasted overnight, indicating that they can use more of the fat from their fat tissue and the fat within their muscles as a fuel, the researchers said.

While the six-week study did not lead to any significant weight loss in the participants, the researchers added that it did have “profound and positive” effects on their health since their bodies were better able to respond to insulin, keeping blood sugar levels under control, and potentially lowering the risk of diabetes and heart disease.

“Our results suggest that changing the timing of when you eat in relation to when you exercise can bring about profound and positive changes to your overall health,” said co-author of the study Javier Gonzalez of the University of Bath.

Gonzalez said that the group who exercised before breakfast increased their ability to respond to insulin, which he added was more significant as both exercise groups lost similar amount of weight, and gained similar fitness levels.

“The only difference was the timing of the food intake,” he said.

According to the researchers, the muscles from those who exercised before breakfast showed more increase in key proteins, specifically those involved in transporting glucose from the bloodstream to the muscles.

However, the researchers noted that the short-term study involved only men, and they look to explore the longer-term effects of this type of exercise, and whether women benefit in the same way as men. — PTI

Alcoholism

Frequent drinking more harmful than binges: Study (The Tribune: 201901023)

<https://www.tribuneindia.com/news/health/frequent-drinking-more-harmful-than-binges-study/848447.html>

Alcohol lovers, take a note. Drinking small amounts of alcohol frequently is linked with a higher likelihood of atrial fibrillation than binge drinking, says a new study.

Atrial fibrillation is the most common heart rhythm disorder and raises the risk of stroke by five-fold. Symptoms include palpitations, racing or irregular pulse, shortness of breath, tiredness, chest pain and dizziness.

"Our study suggests that drinking less often may also be important to protect against atrial fibrillation," said study author Jong-Il Choi, from Korea University College in South Korea.

For the study, published in the journal EP Europace, researchers examined the relative importance of frequent drinking versus binge drinking for new-onset atrial fibrillation.

The analysis included 9,776,956 individuals without atrial fibrillation who underwent a national health check-up in 2009 which included a questionnaire about alcohol consumption.

Participants were followed-up until 2017 for the occurrence of atrial fibrillation.

The number of drinking sessions per week was the strongest risk factor for new-onset atrial fibrillation.

Compared with drinking twice per week (reference group), drinking every day was the riskiest, with a hazard ratio (HR) of 1.412, while drinking once a week was the least risky (HR 0.933).

Binge drinking did not show any clear link with new-onset atrial fibrillation.

"Our study suggests that frequent drinking is more dangerous than infrequent binge drinking with regard to atrial fibrillation," Choi said.

The number of drinking sessions was related to atrial fibrillation onset regardless of age and sex.

Repeated episodes of atrial fibrillation triggered by alcohol may lead to overt disease, the research notes.

In addition, drinking can provoke sleep disturbance which is a known risk factor for atrial fibrillation.

There was a two per cent increase in the risk of new-onset atrial fibrillation for each gram of alcohol consumed per week.

Compared to mild drinkers, those who drank no alcohol, moderate, or high amounts had 8.6 per cent, 7.7 per cent, and 21.5 per cent elevated risks, respectively, the study said. — IANS

Air quality

Winds improve air quality slightly (The Tribune: 201901023)

<https://www.thehindu.com/news/cities/Delhi/winds-improve-air-quality-slightly/article29772117.ece>

Stubble burning contributed to 14% of pollution on Tuesday'

The air quality in the Capital improved on Tuesday and stayed in the "poor" category, chiefly due to high surface winds.

The Air Quality Index (AQI) is expected to slowly worsen, but will stay in the higher end of “poor” to “very poor” category for the next two days, according to government-run monitoring agency System of Air Quality and Weather Forecasting And Research (SAFAR).

According to SAFAR, further high deterioration in AQI is only expected by the first week of November and repeated western disturbances are expected in the last week of October, which is likely to positively influence air quality.

The contribution of stubble burning by neighbouring States on Delhi’s air pollution is about 14% on Tuesday, said SAFAR.

The AQI on Tuesday was 207, lower than 249 on Monday, according to the Central Pollution Control Board.

Meanwhile, AAP blamed the neighbouring States for “increasing” stubble burning, which is polluting the city’s air, and termed governments of Haryana, Uttar Pradesh, and Punjab as “incompetent”.

“There have been several news that due to stubble burning in neighbouring States, Delhi’s air is becoming poisonous,” AAP national spokesperson Raghav Chadha, said.

Quoting a media report, he said that the incidents of stubble burning has become five fold in the neighbouring States.

National Crime Records Bureau (NCRB)

30% jump in ‘crimes against state’: NCRB ((The Tribune: 201901023)

<https://www.thehindu.com/news/national/30-jump-in-crimes-against-state-ncrb/article29771116.ece>

The 2017 Crime in India report, released by the National Crime Records Bureau (NCRB), saw a 30% jump in cases recorded as “offences against the State.” The total number of cases registered in 2017 stood at 9,013 compared to 6,986 cases registered in 2016. The maximum number of these cases were reported from Haryana (2,576), Uttar Pradesh (2,055) and Tamil Nadu (1,802).

While 51 cases of sedition were reported in 2017, there were 24 cases related to imputation and assertions prejudicial to national integration. Under the Official Secrets Act, 18 cases were reported and 901 cases were registered under the Unlawful Activities (Prevention) Act.

In 2017, the police across India was investigating 16,170 cases of crimes against the State, of this 7,154 were pending since 2016. As many as 105 cases of sedition and 3,550 cases registered under UAPA were pending investigation from the previous years.

The total number of such cases committed by northeast insurgents stood at 421, with the maximum — 317 — reported from Manipur. Those by Left Wing Extremists stood at 652 and that committed by “jihadi terrorists” was 377.

30% jump in ‘crimes against state’: NCRB

More than 21,000 incidents of cyber crimes were reported in 2017, a jump from the 12,317 such cases reported in the previous year.. Of these, cyber crimes reported against women stood at 4,242.

Data for 2017 shows that 188 senior citizens were murdered in the State.

T.N. tops in reporting grave crimes against senior citizens

The NCRB report, published after a delay of two years, included 88 new categories including sexual harassment of women at the workplace/public transport, offences relating to elections, obscene acts at public places, circulation of fake news, chit funds, cases under the Prevention of Corruption Act and Mental Health Act, noise pollution and defacement of public property.

A new category called “anti-national elements” has been added which includes details of “jihadi terrorists, Left Wing Extremism and North East insurgents.”

Cyber stalking

For the first time, “cyber stalking and bullying of women” has been included in the report. A total of 542 cases were reported under this category, with the maximum incidents recorded in Maharashtra (301).

Cyber frauds relating to credit cards stood at 395 cases, for ATMs at 1543 cases, online fraud stood at 804, and 170 cases of posting fake news on social media were also included in the report.

Image used for representational purpose.

Delhi records over 40% of total crimes across Metro cities in 2017

2017 saw 11,601 persons arrested for various cyber crimes and chargesheets was filed against 8,306 suspects. In the same year, 162 persons were convicted and 751 were acquitted for cyber crime offences.

Data on lynching unreliable: MHA

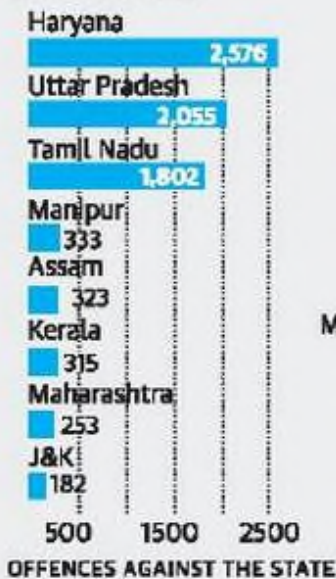
The Union Home Ministry said on Tuesday that data received by the NCRB on certain crimes like lynching and attacks on journalists were “unreliable and their definitions are also prone to misinterpretation” .

“It was observed that data for certain newly created additional parameters and crime heads are unreliable and their definitions are also prone to misinterpretation. Accordingly, data related to the certain parameters and crime heads have not been published,” the Ministry said.

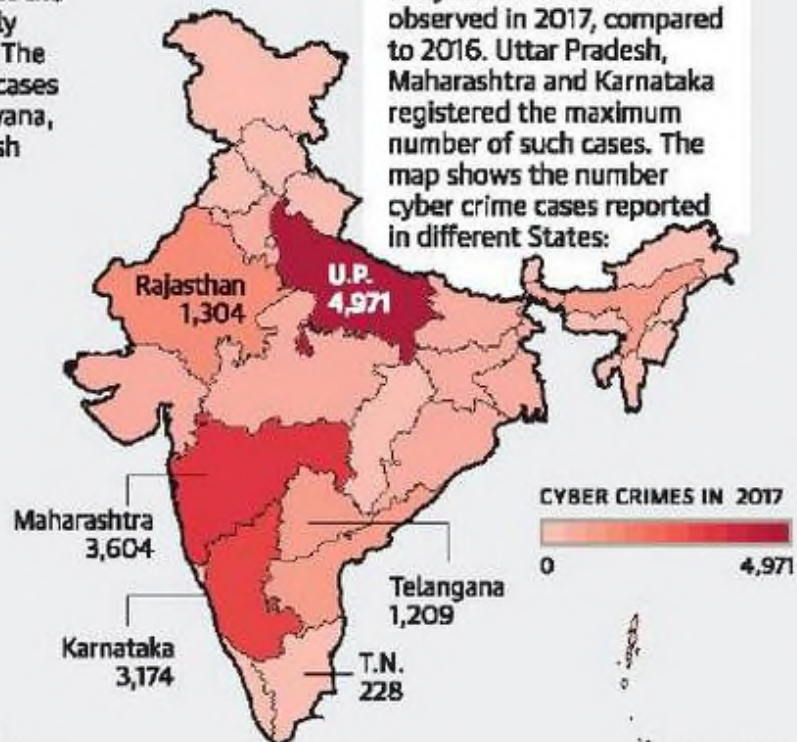


A huge jump

Cases of "offences against the State" increased by nearly 50% in 2017 from 2015. The highest number of such cases were reported from Haryana, followed by Uttar Pradesh and Tamil Nadu



A 77% rise in the number of cyber crime cases was observed in 2017, compared to 2016. Uttar Pradesh, Maharashtra and Karnataka registered the maximum number of such cases. The map shows the number cyber crime cases reported in different States:



Source: NCRB 2017

Crime against children

Steady rise in crime against children (The Tribune: 201901023)

<https://www.tribuneindia.com/news/nation/steady-rise-in-crime-against-children/850878.html>



There has been a steady increase in crime against children in the country, says the National Crime Record Bureau (NCRB) report released yesterday. Even more distressing is the fact that five southern states are prominently placed in this regard, it says.

The data, released after a gap of two years, reveals that the number of crime cases against children under the IPC and special and local laws (SLL) went up across India from 94,172 in 2015 to 1,06,958 in 2016, and 1,29,032 in 2017. The overall rate of crime against children in the country in 2017 was 28.9 per one lakh children, as compared to 24 in 2016.

NCRB officials, however, viewed the rising trend in such cases as an effect of enhanced awareness due to which more number of people have started reporting about such cases.

Though Madhya Pradesh and UP shared the top slot with 14.8 per cent such cases each, among the southern states Karnataka had been reporting a higher number of crimes against children since 2015—a trend that held true in 2017 too. Going up from 3,961 in 2015 to 4,455 in 2016, the state registered 5,890 cases of crime against minors in 2017.

In Andhra Pradesh, from 1,992 cases registered in 2015, the number rose to 2,397 in 2017. For Kerala, with 3,562 cases in 2017, the hike from 2016 was by 683. Telangana and Tamil Nadu reported 3,580 and 3,529 cases of crime against children under various local laws and IPC.

Delhi had the highest number of POCSO cases among Indian metros at 1,521, followed by Mumbai, Pune and Bengaluru, respectively.

In 93.6 per cent cases of aggravated penetrative sexual assault on children, the perpetrator was known to the victim. The most common perpetrators were family members, friends, neighbours and acquaintances.

Delhi India's crime capital: NCRB

Delhi India's crime capital: NCRB (The Tribune: 201901023)

<https://www.tribuneindia.com/news/delhi/delhi-india-s-crime-capital-ncrb/851159.html>

Is Delhi a safe place to live? The unprecedented increase in crime, registered in the capital, suggests that the city is gradually turning into Chicago, with cases of heinous crimes like rape and murder, almost double and triple of Mumbai, Chennai, Kolkata and Bengaluru.

The new data released by the National Crime Record Bureau (NCRB) on Monday, reveals that in terms of overall Sregistration of crime under the Indian Penal Code (IPC) the percentage share of Delhi is over 40 among 19 Metros that also includes Lucknow, Patna and Kanpur.

The NCRB released data is for the year 2017. Usually, it takes more than a year to collect and compile the figures from the remotest of places across all the 36 states and Union Territories of India.

In crimes against women, the situation seems to be worse in Delhi when its latest figures were compared with Mumbai or Kolkata. As per NCRB data, 1,168 cases of rape were registered in Delhi in 2017 where as in Mumbai only 287 cases were reported during the same year. Jaipur (210) takes the third slot while Indore with 206 cases comes at number 4. Kolkata with 15 and Coimbatore with not a single case of rape reported during 2017, seems to be more safer cities for women to live.

The NCRB has added some new categories like stalking and voyeurism. In stalking, Delhi has registered 472 cases followed by Mumbai (383) and Pune (127). Many women in Delhi were subject to being recorded while undressing in the bathroom or change rooms located in shops and malls. Such cases registered under voyeurism, were reported highest in Mumbai (39) while Delhi at 38 was not far behind in such new type of crimes where modesty of a female is outraged by using electronic gadgets like hidden cameras.

In collection of crime data, murder usually remains an important category as incidents related to homicide can hardly be watered down by the police. Delhi has dubious distinction of topping this category too.

The NCRB data on murder discloses that Delhi with 400 cases leads the homicide table. Bengaluru (235) is second and Patna (183) figures third on the list.

With 37,948 vehicles being stolen in Capital, a significant increase in recent years, Delhi tops the list followed by Bengaluru (6,155), Jaipur (4,900), Pune (3,169), Lucknow (3,101) and Mumbai (3,103). Kozhikode(113) and Kochi(121) — both in Kerala, can be seen as Metros where auto-theft is almost insignificant in terms of numbers.

Comparing 2017's total crime figures with 2016 and 2015, Delhi seems to witness the highest increase. In 2015, Delhi registered 173,947 criminal cases under IPC while in 2017, the total number of FIRs registered were

In terms of overall registration of crime under the IPC the percentage share of Delhi is over 40 among 19 Metros

1,168 cases of rape were registered in Delhi in 2017 where as in Mumbai only 287 cases were reported during the same year

Delhi with 400 cases leads the homicide table

Delhi has registered 472 cases of stalking followed by Mumbai (383) and Pune (127)

The data on murder discloses that Delhi with 400 cases leads the homicide table, where Bengaluru (235) is second and Patna (183) figures third

National Crime Records Bureau Report : दंगे, दुष्कर्म और हत्या के मामलों में आई कमी (Dainik Jagran:20191023)

<https://www.jagran.com/news/national-national-crime-records-bureau-report-says-reduction-in-cases-of-riots-rape-and-murder-jagran-special-19692953.html>

Ncrb की report में जमीन-जायदाद जातीय राजनीतिक विभिन्न समूहों और छात्रों के बीच होने वाले दंगे भी शामिल हैं। वहीं दुष्कर्म और हत्या के मामलों में भी कमी देखी गई। NCRB

नई दिल्ली [जागरण स्पेशल]। 2017 के अपराध के आंकड़ों पर राष्ट्रीय अपराध रिकॉर्ड ब्यूरो (एनसीआरबी) द्वारा जारी की गई रिपोर्ट के मुताबिक, 2017 में दंगा पीड़ितों की कुल संख्या में 22 फीसद की वृद्धि के साथ औसतन देश

में हर दिन दंगों से जुड़े 161 मामले देखे गए। हालांकि रिपोर्ट यह भी बताती है कि 2016 की तुलना में 2017 में दंगों की घटनाओं में पांच फीसद की कमी आई। ये आंकड़े सिर्फ सांप्रदायिक दंगों के नहीं हैं। इसमें जमीन-जायदाद, जातीय, राजनीतिक, विभिन्न समूहों और छात्रों के बीच होने वाले दंगे भी शामिल हैं। वहीं दुष्कर्म और हत्या के मामलों में भी कमी देखी गई।

बिहार रहा अक्वल

2017 में बिहार में दंगों के 11,698 मामले दर्ज हुए। इसके बाद उत्तर प्रदेश में दंगों के 8,990 मामले दर्ज हुए। 7,743 मामलों के साथ महाराष्ट्र तीसरे स्थान पर रहा। 2017 में तमिलनाडु में दंगों के 1935 मामले सामने आए। इन दंगों से पीड़ितों की संख्या 18,749 रही। यहां हर दंगे में औसतन 9 लोग पीड़ित हुए। दंगे की कुल घटनाओं में तमिलनाडु की हिस्सेदारी 3.28 फीसद रही। लेकिन पीड़ितों के मामले राज्य की हिस्सेदारी 21 फीसद रही। इस मामले में पंजाब सबसे शांत राज्य रहा।

कम हुए सांप्रदायिक दंगे

रिपोर्ट के मुताबिक, 2016 में सांप्रदायिक दंगों के 869 मामले सामने आए थे, जो 2017 में घटकर 723 रह गए। सांप्रदायिक दंगों के मामले में भी बिहार अक्वल रहा। साल 2017 में बिहार में सबसे ज्यादा सांप्रदायिक दंगों के 163 मामले सामने आए। इसके बाद कर्नाटक और ओडिशा रहे। जहां क्रमशः 92 और 91 मामले सामने आए। वहीं 2016 में हरियाणा में सांप्रदायिक दंगों के 250 मामले दर्ज हुए थे। वहीं 2017 में सांप्रदायिक दंगों के सिर्फ 25 मामले सामने आए।

सबसे ज्यादा जमीन जायदाद को लेकर दंगे

2017 में हुए कुल दंगों में 22 फीसद दंगे जमीन जायदाद से जुड़े थे। वहीं दंगा पीड़ित भी 35 फीसद ऐसे थे, जो जमीन जायदाद के विवाद के शिकार हुए थे। जमीन जायदाद के दंगों में भी बिहार अक्वल रहा। बिहार में कुल 7,030 मामले दर्ज हुए। इसके बाद कर्नाटक, महाराष्ट्र और उत्तर प्रदेश रहे। तमिलनाडु में जमीन जायदाद से जुड़े सबसे कम 587 दंगे हुए।

हत्या के मामले घटे

एनसीआरबी की रिपोर्ट के मुताबिक, 5.9 फीसद की गिरावट के साथ हत्या के मामलों की संख्या 30,450 से घटकर 28,653 रह गई। रिपोर्ट के मुताबिक, विवाद और व्यक्तिगत दुश्मनी 2017 में हत्याओं के दो प्रमुख कारण रहे। उत्तर प्रदेश (4,324) और बिहार (2,803) में हत्या के मामलों की संख्या सबसे ज्यादा रही।

दुष्कर्म के मामले घटे

2017 में दुष्कर्म के मामलों की कुल संख्या 32,599 रही। इनमें से 10,221 बालिका / बाल पीड़िता थीं। यह संख्या 2013 के बाद सबसे कम है, जब मामलों और पीड़ितों की संख्या 33,707 और 33,764 थी। दुष्कर्म के मामलों की अधिकतम संख्या मध्य प्रदेश (5,562) में दर्ज की गई। राजस्थान 3,305 मामलों के साथ दूसरे स्थान पर रहा।

जातीय दंगों में भी आई कमी

2016 की तुलना में 2017 में जातीय दंगों में 65 फीसद की कमी आई। जातीय दंगों के मामले में यूपी अक्वल रहा। 2017 में यूपी में जातीय दंगों के 346 मामले सामने आए। 2016 में यह आंकड़ा 899 था।

Vitamins

सूरजमुखी में विटामिन की मात्रा बढ़ाएंगी कोशिकाएं, अब दस गुना ज्यादा होगा विटामिन ई का उत्पादन (Dainik Jagran: 20191023)

<https://www.jagran.com/news/national-indian-researchers-develop-method-for-enhanced-ten-times-vitamin-e-production-jagran-special-19690569.html>

शोधकर्ताओं ने कहा कि विटामिन ई का उत्पादन बढ़ाने के लिए कंप्यूटर मॉडलिंग और सेलुलर इंजीनियरिंग का उपयोग करना फायदेमंद साबित हुआ।

नई दिल्ली, प्रेट्र। भारतीय प्रौद्योगिकी संस्थान (आइआईटी) मद्रास के वैज्ञानिकों ने सूरजमुखी के पौधे की कोशिकाएं विकसित की हैं, जो सामान्य सूरजमुखी के मुकाबले दस गुना ज्यादा विटामिन ई का उत्पादन कर सकते हैं। नई तकनीक से विटामिन ई का प्रभावी और कुशल व्यावसायिक उत्पादन का मार्ग प्रशस्त हो सकता है। बायोकेमिकल इंजीनियरिंग जर्नल में प्रकाशित अध्ययन में बताया गया है कि विटामिन ई का सबसे सक्रिय रूप 'अल्फा-टोकोफेरॉल' शरीर में उत्पन्न होने वाले कुछ विषैले रसायनों से ऊतकों को बचाने में मदद करता है, जिन्हें रिएक्टिव ऑक्सीजन स्पिशीज के रूप में जाना जाता है।

शोधकर्ताओं के अनुसार, प्रयोगशालाओं में रासायनिक रूप से संश्लेषित 'अल्फाटोकोफेरॉल' पौधों में पाए जाने वाले अपने प्राकृतिक रूप से कम सक्रिय होता है, इसलिए उन्होंने एक ऐसी तकनीक पर काम शुरू किया, जिसमें विटामिन ई का उत्पादन बढ़ाया जा सके। शोधकर्ताओं ने कहा, 'सूरजमुखी के फूल में विटामिन ई प्रचुर मात्रा में पाया जाता है। इसके पौधे की कार्यप्रणाली को ध्यान में रखते हुए हमने प्रयोगशाला में सूरजमुखी के पौधे की कोशिकाओं में बदलाव कर एक नई कोशिका विकसित की, जो तेजी से अल्फा-टोकोफेरॉल का उत्पादन कर सकती है।'

ऐसे तैयार की कोशिका

अध्ययन में बताया गया है कि शोधकर्ताओं ने सूरजमुखी से विटामिन ई का उत्पादन करने वाले जीनों को अरबिडोप्सिस नामक पौधे में डाला। कंप्यूटेशनल सिमुलेशन के दौरान शोधकर्ताओं ने पाया कि दोनों का मेल होने से अल्फा-टोकोफेरॉल का उत्पादन काफी बढ़ गया था।

कारगर है नया दृष्टिकोण

शोधकर्ताओं ने कहा कि विटामिन ई का उत्पादन बढ़ाने के लिए कंप्यूटर मॉडलिंग और सेलुलर इंजीनियरिंग का उपयोग करना फायदेमंद साबित हुआ। विज्ञान की भाषा में इसे तर्कसंगत दृष्टिकोण भी कहा जाता है। इसके जरिये उन्होंने यह अनुमान लगाया कि यदि अरबिडोप्सिस कोशिकाओं में थोड़ा बदलाव किया जाए तो कौन से एंजाइम अधिक अल्फा-टोकोफेरॉल का उत्पादन करते हैं। जब शोधकर्ताओं ने प्रयोगात्मक रूप से कोशिकाओं में एक एंजाइम की मात्रा को बढ़ाया, तो सामान्य कोशिकाओं की तुलना में प्रयोगशाला में विकसित कोशिकाओं ने दस गुना अधिक अल्फाटोकोफेरॉल का उत्पादन किया।

आइआइटी मद्रास के शोधकर्ता और इस अध्ययन के प्रमुख अन्वेषक कार्तिक रमन ने कहा, 'नया तरीका पारंपरिक 'हित एंड ट्रायल' तरीकों के काफी फायदेमंद हो सकता है क्योंकि यह प्रक्रिया मूल्यवान संसाधनों के साथ-साथ समय और धन की बचत कर सकती है।' इस अध्ययन की सह-लेखिका स्मिता श्रीवास्तव ने कहा, 'मॉडल आधारित तकनीक एक प्लेटफॉर्म तकनीक के रूप में काम कर सकती है, जिसमें हम किसी भी पौधे से जैव ईंधन जैसे वांछित उत्पाद तैयार कर सकते हैं।'

Pollution (Navbharat Times: 20191023)

<http://epaper.navbharattimes.com/details/69096-61795-1.html>

'पराली से ज्यादा पड़ोसी राज्यों की फैक्ट्रियों का धुआं फैला रहा प्रदूषण'

■ विशेष संवाददाता, नई दिल्ली

दिल्ली की हवा सिर्फ पराली के धुएं से खराब नहीं हो रही है। बल्कि पड़ोसी राज्यों में जल रहा इंडस्ट्रियल वेस्ट और लापरवाही पराली से कहीं अधिक प्रदूषण फैलाने के लिए दोषी है। यह कहना है ईपीसीए के चेयरमैन भूरे लाल का। उन्होंने अपने हाल के दौरों के बाद एक रिपोर्ट तैयार कर राज्य सरकारों के साथ साझा की है। जिसमें एनसीआर की खराब स्थिति बताई है। मेरठ और भिवाड़ी की स्थिति को काफी खराब बताया है।

ईपीसीए चेयरमैन के अनुसार सफर दावा कर रहा है कि पराली का धुआं अभी 10 से 15 पसेंट तक ही दिल्ली को प्रभावित कर रहा है। ऐसे में हम इस समय दिल्ली एनसीआर में प्रदूषण की वजहों पर काम कर रहे हैं। दिल्ली में सख्ती के बाद काफी इंडस्ट्री दिल्ली से एनसीआर के शहरों में



रुख कर गई हैं। ये वहां पर वह प्रदूषण बढ़ा रही हैं। रिपोर्ट के मुताबिक मेरठ में एनएच-9 पर यूपी गेट से डासना इंटरचेंज रोड पर काम चल रहा है। यहाँ पर न पानी का छिड़काव हो रहा है और न धूल रोकने के इंतजाम किए जा रहे हैं।

गाजियाबाद ने इस लापरवाही के लिए

एनएचआई पर 90.23 लाख का जुर्माना भी लगाया है। लेकिन इसके बाद भी स्थिति में सुधार नहीं हो रहा है। एनएच-9 पर एक पेपर मिल लगातार काला धुआं छोड़ रही है। इस पर भी 26.25 लाख का जुर्माना किया जा चुका है। इसी तरह कुछ शुगर मिल भी प्रदूषण फैला रही हैं। एनएच-9 पर

आरएमसी और हॉट मिक्स प्लांट निर्माण सामग्री को खुले में रखकर प्रदूषण फैलाने का काम कर रही हैं। कई जगहों पर कूड़ा जलाया जा रहा है।

भिवाड़ी में आरआईआईसीओ इंडस्ट्रियल एरिया में खुले में कूड़ा जलाया जा रहा है। यहां पर धुएं का गुबार दूर तक दिखाई देता है। करीब 24 से 38 एकड़ एरिया में कूड़ा डाला जा रहा है। इसके अलावा आरपी इंडस्ट्री के पास 5 एकड़ जमीन में करीब 3 से 5 मीटर गड्ढा खोदकर वहां प्लास्टिक और सिंगल यूज प्लास्टिक के साथ थर्मोफॉम आदि को देबा कर लगातार आग लगाई जा रही है। अधिकारियों को इस जमीन के लैंडयूज की जानकारी तक नहीं है। भूरे लाल ने साफ कहा कि खेती और जंगल की जमीन पर कूड़ा डालना मंजूर नहीं किया जा सकता। यह कूड़ा यहां जिसकी परमिशन से डला गया है, इसकी रिपोर्ट एक हफ्ते में मांगी गई है।

Pollution (Navbharat Times: 20191023)

<http://epaper.navbharattimes.com/details/69096-61796-1.html>

अगले दो दिन बढ़ेगा प्रदूषण, 25 को मिल सकती है राहत

■ विस, नई दिल्ली : आनेवाले दो दिनों के दौरान प्रदूषण खराब से बेहद खराब स्थिति के बीच रह सकता है। इस दौरान इस सीजन में पराली सबसे अधिक करीब 19 पसेंट तक दिल्ली को प्रदूषित कर सकती है। इसके बाद 25 अक्टूबर को प्रदूषण से कुछ राहत मिल



सकती है, लेकिन उसके बाद फिर दिल्ली प्रदूषित हो जाएगी। सफर के पूर्वानुमान के मुताबिक, इस समय दिल्ली में 35 किलोमीटर प्रति घंटे की रफ्तार से हवाएं चल रही हैं। जिसकी वजह से प्रदूषक तत्व बह रहे हैं और प्रदूषण कुछ कंट्रोल में है। सीपीसीबी के एयर बुलेटिन के

मुताबिक, दिल्ली का एयर इंडेक्स मंगलवार को 207 रहा। इसके अलावा फरीदाबाद में यह 161, गाजियाबाद में 236, ग्रेटर नोएडा में 228, गुरुग्राम में 174 और नोएडा में 210 रहा। वहीं दूसरी तरफ पिछले दो दिनों के दौरान न्यूनतम तापमान में काफी गिरावट आ चुकी है।

मंगलवार को अधिकतम तापमान 31.6 डिग्री रहा। वहीं न्यूनतम तापमान अब 17.5 डिग्री पर पहुंच चुका है। यह सामान्य से एक डिग्री कम रहा। हवाओं में नमी का स्तर 38 से 84 पसेंट तक बना हुआ है। बुधवार को न्यूनतम तापमान 16 डिग्री तक पहुंचने की संभावना है।

Mohallia Clinic

मोहल्ला क्लीनिक में सेवा दे सकेंगे डॉक्टर (Amar Ujala: 20191023)

<https://www.amarujala.com/delhi/doctors-can-give-service-in-mohalla-clinic-ashram-news-noi468907195>

नई दिल्ली। मोहल्ला क्लीनिक को बढ़ावा देने के लिए दिल्ली सरकार ने राजधानी के अन्य डॉक्टरों को भी मौका दिया है। सरकार पंजीकृत डॉक्टरों को क्लीनिक से जोड़ना चाहती है। इसीलिए स्वास्थ्य विभाग ने विभिन्न इलाकों के लिए पैनल में जुड़ने के लिए डॉक्टरों को बाकायदा न्यौता भी दिया है। विभागीय आदेश के अनुसार, दिल्ली में पंजीकृत कोई भी एमबीबीएस डॉक्टर इसके लिए आवेदन दे सकता है। उन्हें डिग्री के साथ मेडिकल फिटनेस प्रमाण पत्र उपलब्ध कराना होगा।

स्वास्थ्य विभाग के एक अधिकारी ने बताया कि सरकार के निर्देश पर विभाग ने मोहल्ला क्लीनिक के पैनल पर डॉक्टरों को लेने का फैसला लिया है। हफ्ते में एक दिन बुधवार को ये डॉक्टर दोपहर 2:30 से शाम 5 बजे तक सेवाएं

दे सकते हैं। इन डॉक्टरों को प्रति मरीज 40 रुपये के हिसाब से भुगतान किया जाएगा। एक दिन में कम से कम 75 मरीज देखने अनिवार्य होंगे। उन्होंने बताया कि दिल्ली के अलग-अलग 11 जोन के लिए सूची जारी की गई है। इनके सीएमओ ऑफिस में जाकर आवेदन दिया जा सकता है। हालांकि इसके लिए एमबीबीएस के साथ डॉक्टर का दिल्ली मेडिकल काउंसिल से पंजीयन अनिवार्य है।

दिल्ली में फिलहाल 302 मोहल्ला क्लीनिक चल रहे हैं। सरकार डेढ़ से दो महीने के भीतर इनकी संख्या 500 करने में जुट गई है। विभागीय आंकड़ों की मानें तो अब तक करीब 16 लाख मरीजों का उपचार मोहल्ला क्लीनिकों में हुआ है। एक करोड़ से ज्यादा मरीजों की जांच निशुल्क हो चुकी है। दावा किया जा रहा है कि देश के अन्य राज्य भी ऐसी पहल अपने यहां करने जा रहे हैं। इनमें हरियाणा और मध्य प्रदेश में काम लगभग शुरू हो चुका है। दिल्ली में मोहल्ला क्लीनिकों की संख्या बढ़ाने के लिए सरकार लोगों से भूमि किराए पर भी ले रही है। 40 वर्गफुट भूमि पर मोहल्ला क्लीनिक संचालित किए जा सकते हैं। अब तक करीब एक दर्जन जमीनें मिल चुकी हैं। बताया जा रहा है कि कुछ लोगों ने मोहल्ला क्लीनिक संचालित करने के लिए सरकार को अपनी भूमि निशुल्क उपलब्ध कराई है।

Diabetic Medicine

रिसर्च में दावा: डायबिटीज की शुरुआती दवा से ही बाँड़ी के पावर हाउस में भी होता है सुधार (Dainik Bhaskar: 20191023)

<https://www.bhaskar.com/himachal-chandigarh/chandigarh/news/research-claims-with-the-initial-diabetes-drug-there-is-improvement-in-the-power-house-01671255.html>

जानकारी एनल्स अॉफ दि न्यूयॉर्क एकेडमी अॉफ साइंसेज के जरनल में प्रकाशित हुई रिसर्च

चंडीगढ़ (मनोज अपरेजा). टाइप-2 डायबिटीज में अधिक ब्लड ग्लूकोज अधिक होने के कारण अॉक्सिडेटिव स्ट्रेस बढ़ जाता है। इस वजह से बाँड़ी के पावर हाउस यानी माइटाे काेन्ड्रिया की कार्यक्षमता पर बुरा असर पड़ता है। परिणामस्वरूप शरीर की काेशिकाआेे काे पावर नहीं मिल पाती है। यह दुष्प्रभाव शरीर की हर सेल काे प्रभावित करता है, जिसमें बीटा सेल जाे बाँड़ी में इंसुलिन काे बनाती है व मांसपेशियों के सेल जहां इंसुलिन काम करती है, भी प्रभावित हाेते हैं। इसकी जांच उपरोक्त दाेनाेे काेशिकाआेे, पैक्रियाज अॉर मसल्स से लेना संभव नहीं है।

इसलिए डॉ. शिप्रा भंसाली ने ब्लड सेल काे लेकर उनके माइटाे काेन्ड्रिया में हाई ब्लड ग्लूकोज के दुष्प्रभाव की जांच की अॉर निष्कर्ष निकाला कि अन्य काेशिकाआेे की तरह ब्लड सेल के माइटाे काेन्ड्रिया भी हाई ब्लड ग्लूकोज से प्रभावित हाेते हैं। जिससे शरीर में ग्लूकोज की मात्रा अॉर अधिक बढ़ जाती है। डॉ. शिप्रा भंसाली की यह रिसर्च यूएस के एनल्स अॉफ दि न्यूयॉर्क अकादमी अॉफ साइंसेज में के जरनल में इस साल प्रकाशित हुई है। इसी स्टडी काे आगे बढ़ाते हुए उन्होंने यह सिद्ध किया कि मेटफॉर्मिन, जाे डायबिटीज में

आमतौर पर इस्तेमाल की सबसे अहम दवा है। यह दवा न केवल शुगर के लेवल का सामान्य करती है बल्कि सेल के पावर हाउस की कार्यक्षमता (माइटोफेजी) में भी महत्वपूर्ण सुधार करती है।

डॉ. शिप्रा भंसाली ने बताया कि मेटफॉर्मिन के ट्रांसपोर्टर प्रोटीन ब्लड सेल में भी उपस्थित हैं। पावर हाउस की कार्यक्षमता में सुधार ब्लड ग्लूकोज कम होने की वजह से नहीं बल्कि यह दवा का अपना प्रभाव है। इसमें उन्होंने मेटफॉर्मिन के डोज का 1 से 2 ग्राम तक प्रयोग किया। जिसके नतीजे सकारात्मक आए। इस रिसर्च से यह साबित होता है कि डायबिटीज में इंसुलिन का कम होना और उसकी कम कार्यक्षमता सेल के पावर हाउस के खराब होने की वजह से होती है। इस दावे का मेटफॉर्मिन से ठीक किया जा सकता है। भविष्य में यह रिसर्च उन मरीजों में भी की जा सकती है जो अन्य माइटोकाण्ड्रियल राइगों से पीड़ित हैं और मेटफॉर्मिन उनमें क्या सुधार करती है?