



DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY
Wednesday 20190403

Acute hunger' in 2018

113 m people suffered 'acute hunger' in 2018: UN ((The Tribune: 20190403)

<https://www.tribuneindia.com/news/world/113-m-people-suffered-acute-hunger-in-2018-un/752585.html>

Yemen, the Democratic Republic of Congo, Afghanistan and Syria were among the eight nations accounting for two-thirds of the total number of people worldwide exposed to the risk of famine, the Food and Agriculture Organisation (FAO) said in its 2019 global report on food crises.

72 million were hit in African states

African states were “disproportionally” affected as close to 72 million people on the continent suffered acute hunger

Conflict and insecurity remained key factors, along with economic turbulence and climate-related shocks like drought and floods, the report found.

More than 113 million people across 53 countries experienced “acute hunger” last year because of wars and climate disasters, with Africa the worst-hit region, the UN said on Tuesday.

Yemen, the Democratic Republic of Congo, Afghanistan and Syria were among the eight nations accounting for two-thirds of the total number of people worldwide exposed to the risk of famine, the Food and Agriculture Organisation (FAO) said in its 2019 global report on food crises.

Launched three years ago, the annual study takes stock of the countries facing the greatest difficulties.

African states were “disproportionally” affected as close to 72 million people on the continent suffered acute hunger, FAO’s emergencies director Dominique Bourgeon told the media.

Conflict and insecurity remained key factors, along with economic turbulence and climate-related shocks like drought and floods, the report found.

In countries on the verge of famine, “up to 80 per cent of the population depend on agriculture. They need both emergency humanitarian aid for food and measures to help boost agriculture,” Bourgeon said.

The report highlighted the strain put on countries hosting large numbers of refugees, including neighbouring nations of war-torn Syria as well as Bangladesh, which has received more than a million Rohingya Muslims from Myanmar.

The FAO said it also expected the number of displaced people to increase “if the political and economic crisis persists in Venezuela” which is likely to declare a food emergency this year.

Bourgeon said he was concerned by the “important and significant rise” in poverty in Venezuela, as it grappled with dire economic and living conditions worsened by an ongoing political crisis.

Globally, the study noted that the overall situation slightly improved in 2018 compared to 2017 when 124 million people suffered from acute hunger.

The drop can partially be attributed to the fact that some countries in Latin America and the Asia Pacific region for instance were less affected by weather disasters that had struck in previous years.

However, the FAO warned that the year-on-year trend of more than 100 million people facing famine was unlikely to change in the face of continued crises.

Afghanistan, Iraq and Syria all suffered bad droughts in 2018, which severely impacted agricultural output.

The FAO also stressed that “high levels of acute and chronic malnutrition in children living in emergency conditions remained of grave concern”. — AFP

Enzyme

Enzyme to arrest bacteria cell growth discovered (The Hindu: 20190403)

<https://www.thehindu.com/sci-tech/science/enzyme-to-arrest-bacteria-cell-growth-discovered/article26715075.ece>

CCMB director Rakesh Mishra, left, Manjula Reddy and research scholar Ch. Pavan Kumar in Hyderabad.

CCMB director Rakesh Mishra, left, Manjula Reddy and research scholar Ch. Pavan Kumar in Hyderabad. | Photo Credit: K.V.S. Giri

It opens up fresh ways to target microbes, leading to a new wave of antibiotic drugs

Scientists at the Centre for Cellular & Molecular Biology (CCMB) have discovered a new enzyme which helps in breaking cell walls of bacteria and hence, offers a potential for a new drug delivery route to arrest the anti-bacterial resistance through existing antibiotic drugs.

At a press conference here on Tuesday, CCMB director Rakesh Mishra and senior scientist Manjula Reddy explained that it is crucial to know how cells grow in bacteria to understand the anti-bacterial resistance to currently available antibiotics.

Scientists all over the world are trying to understand this phenomenon and the lab of Dr. Reddy has been working on how e. coli bacteria cells function, divide and grow to understand diseases like cholera, leprosy, tuberculosis and so on for the past decade.

Principal players

Dr. Reddy and her research scholar Ch. Pavan Kumar have been working on how the cell governs the synthetic machinery to build the cell wall in the first place, identified the principal players behind the process and discovered the new mechanism or enzyme through which the cell regulates growth of its wall.

Blocking function

Other bacteria, too, have the same enzyme working on cell division as the cell wall is fundamental for bacterial growth and division. Therefore, by blocking this 'scissors enzyme' from functioning, new ways to target microbes could be found, leading to a new wave of antibiotic drugs.

In contrast, the classical antibiotic drugs target the last stage of cell synthesis to prevent cell growth like penicillin that hits the machinery that creates the cell wall — a mesh-like structure of cross-linked sugars and peptides.

New combination

“What has been found is very novel. Now the next step is to find out the molecule of the enzyme endo-pepcidine and it has to be followed by the drug trials to unravel a new combination of drugs to replace existing antibiotics though it is difficult to forecast a time frame,” said Dr. Mishra and Dr. Reddy.

The findings have been published in the latest issue of Proceedings of National Academy of Sciences, USA.



Early brain function

Early brain function affected in poor kids' (The Hindu: 20190403)

<https://www.thehindu.com/sci-tech/health/early-brain-function-affected-in-poor-kids/article26714388.ece>

Factors like parental education, income, caste, children in the family were taken into account for the study.

Factors like parental education, income, caste, children in the family were taken into account for the study. | Photo Credit: A.M. Faruqui

Study says children from lower income background had weaker brain activity

Children born into poverty show key differences in early brain function, according to new research from the University of East Anglia (UEA).

Researchers studied the brain function of children aged between four months and four years in rural India and found that children from lower income backgrounds, where mothers also had a low level of education, had weaker brain activity and were more likely to be distracted.

Study in U.P.

The team carried out the study in Uttar Pradesh, the highly populated region in India.

Lead researcher John Spencer from UEA's School of Psychology said: "Each year, 250 million children in low and middle income countries fail to reach their developmental potential. Therefore, there is a growing need to understand the global impact of poverty on early brain and behavioural development."

He explained that previous work has shown that poverty and early adversities significantly impact brain development, contributing to a vicious cycle of poverty. But few studies have looked at brain function early in development.

"We wanted to find out more about the functional brain development of children born into poorer backgrounds to see why many do not reach their full potential," he said.

Using a portable 'functional near infrared spectroscopy' (fNIRS) device, they measured the brain activity of 42 children aged between four months and four years in rural settings.

They investigated the children's 'visual working memory' — or how well they are able to store visual information and detect changes in the visual environment when they occur.

The results of the study were compared with children from families in Midwest America.

The research team found that the children in India from families with low maternal education and income showed weaker brain activity and poorer distractor suppression in the left frontal cortex area of the brain that is involved in working memory.



Pre-eclampsia

Blood test can help diagnose pre-eclampsia: Study (The Tribune: 20190403)

<https://www.tribuneindia.com/news/health/blood-test-can-help-diagnose-pre-eclampsia-study/752216.html>

Blood test can help diagnose pre-eclampsia: Study

A simple blood test can help diagnose a common but potentially fatal pregnancy complication.

A simple blood test can help diagnose a common but potentially fatal pregnancy complication—pre-eclampsia, finds a study published in The Lancet journal.

During the study, by measuring the concentration of placental growth factor (PIGF) in a woman's blood, doctors were able to diagnose pre-eclampsia two days sooner on average.

"We knew monitoring PIGF was an accurate way to help detect the condition but were unsure whether making this tool available to clinicians would lead to better care for women. Now we know that it does," said lead author Lucy Chappell from King's College London.

Pre-eclampsia, a condition in pregnancy characterised by high blood pressure, sometimes with fluid retention and proteinuria, can cause damage to vital organs, fits and can be fatal for the woman and baby, if left untreated. Globally, 100 women die due to pre-eclampsia every day.

"For the last hundred years, we have diagnosed pre-eclampsia by measuring blood pressure and checking for protein in a woman's urine. These are relatively imprecise and often quite subjective," Chappell noted.

For the study, the research team studied 1,035 women with suspected pre-eclampsia from 11 maternity units across the UK. They were randomly assigned to two groups—one had their PIGF test results made available to their clinical team, the other did not.

The PIGF testing was shown to reduce the average time to diagnose pre-eclampsia from four to two days and serious complications before birth (such as eclampsia, stroke, and maternal death) to four per cent from five per cent.

There was no change in the likelihood of complications for the baby, the age at which babies were delivered prematurely or whether they were admitted to a neonatal unit, the researchers said. — IANS

Food and Nutrition

Adding egg or milk can reduce stunting in young children: study (The Hindu: 20190403)

<https://www.thehindu.com/sci-tech/health/adding-egg-or-milk-can-reduce-stunting-in-young-children-study/article26714568.ece>

Bengaluru researchers say that animal product protein is better digested

About 38% of children in India below the age of five years are stunted. Research suggests that the reason for this is that young children consume mainly cereal-based food, which lacks quality protein that can be well digested and is limited in the content of certain essential amino acids such as lysine.

Researchers at St. John's Medical College, Bengaluru measured the digestibility and quality of commonly used complementary foods in young children. They found that mung bean, which is a legume and is considered to be a high-quality protein source, is not as well digested and absorbed as other high-quality food proteins such as egg.

The team found that the risk of stunting in children aged 1 - 3 years (in the National Family Health-4 survey) was reduced by 10% when high quality proteins such as egg and milk were consumed along with a combination of cereals and pulses. This food-based reduction of risk can be achieved by adding 200 ml of milk or milk products (including curd), an egg or 45 grams of legume (dal) to the daily diet of a child.

If these foods are added to the diet of children aged less than two years, the risk of protein inadequacy reduces to 7% for egg, 8% for milk and 11% for legumes (dal).

“Stunting happens early before children turn three. While consuming quality protein that contains adequate amounts of digestible essential amino acids does help in reducing the risk of stunting, it cannot completely prevent it. Several other factors including genetics, poverty and sanitation play a role,” says Anura V. Kurpad from the institute's Department of Physiology and senior author of a paper published in the American Journal of Clinical Nutrition.

Ideal diet

“Young children's diet between the age of 1-3 years should contain a minimum of 100 grams of cereal (rice or wheat) and 45 grams of legume per day. Unfortunately, this is not followed in a consistent way anywhere in India,” he says. “The equivalent will be the addition of an egg or 200 ml of milk or milk products to the diet every day, which makes it expensive for many people.”

The researchers measured the essential amino acid digestion of four foods — rice, finger millet, mung dal and egg — commonly consumed complementary food by children below two. While the digestibility of essential amino acids was least for mung dal (65%), it was highest for egg (87%).

It was 78.5% and 68% for rice and finger millet, respectively.

“We choose these four food items as they are the most common complementary food given to babies after six months of exclusive breast feeding. Ragi (finger millet) is the main complementary food after six months, and legume (mung dal) and rice are given when the baby is aged nine-twelve months,” says Nirupama Shivakumar from St. John’s Medical College and first author of the paper.

Diabetes

Diabetes deaths due to air pollution highest in India (Hindustan Times: 20190403)

<http://paper.hindustantimes.com/epaper/viewer.aspx>

The burden of Type 2 diabetes contributed by exposure to fine particulate pollution is the highest in India, according to the State of Global Air 2019 report released on Wednesday. Air pollution lowers insulin sensitivity, contributing to diabetes.

In 2017, exposure to PM 2.5 pollution was found to be the third leading risk factor globally for Type 2 diabetes-related deaths and disability after high blood sugar and excessive body weight.

Globally, such exposure contributed to about 2.76 lakh deaths and 15.2 million life years lost to disability in 2017. This burden was highest in India, where it accounted for 55,000 deaths and 2.7 million life years lost, according to the report by Health Effects Institute (HEI) and Institute of Health Metrics and Evaluation’s Global Burden of Disease project. India was followed by China, Indonesia, Mexico and Brazil.

“PM 2.5 particles are endocrine disruptors. They can affect insulin secretion and insulin sensitivity. They can also damage the beta cells in the pancreas that produces insulin... the exact pathways are not known yet. But increasingly, research is showing these connections. So apart from poor diet, obesity etc., air pollution definitely plays a role in diabetes,” said Dr Vishwanathan Mohan, diabetologist and chairman of Dr Mohan’s Diabetes Specialties Centre

Diabetes affected at least 65 million people in India in 2017, according to The Lancet Global Health study released last year.

In 2017, diabetes accounted for more than one million deaths and 57 million life years lost globally — an increase of 175% and 141%, respectively, since 1990.

India also tops a list of 13 countries, with populations over 50 million, in which more than 10% of the population was exposed to household air pollution by use of solid fuels. About 60% of India's population was exposed to household pollution, followed by China with 32%. However, the report recognises that the proportion of households cooking with solid fuels in India has dipped from 76% in 2005 to 60% (846 million) in 2017, “due in part to a major government program to shift households from solid fuels to liquefied petroleum gas.”

“India has initiated major steps to address pollution sources: the Pradhan Mantri Ujjwala Yojana Household LPG program, accelerated Bharat Stage VI vehicle standards, and the new National Clean Air Programme. These and future initiatives have the potential, if fully implemented as part of a sustained commitment to air quality, to result in significant health benefits in coming years,” said Robert O’Keefe, vice president, Health Effects Institute, Boston, US.

Exposure to outdoor and indoor air pollution together contributed to over 1.2 million deaths in India and China in 2017, the report said. Globally, air pollution (PM 2.5, household and ozone emissions) is estimated to have contributed to about 4.9 million deaths — 8.7% of all deaths globally and 5.9% of all life years lost to disability. India and China have the highest health burden from air pollution, followed by Pakistan, Indonesia, Bangladesh and Nigeria.

Since 1990, there has been a 68% jump in the number of deaths attributed to PM 2.5 exposure, with the largest spike between 1990 and 2010.

Pregnancy (The Aasian Age: 20190403)

<http://onlinepaper.asianage.com/articledetailpage.aspx?id=12742978>

Indian body leaks data of pregnant women online

■ Records removed from leaky server after more than 3 weeks

AGE CORRESPONDENT
HYDERABAD, APRIL 2

CYBERSECURITY LAPSE

In a major data breach, an unsecured server, which was managed by an Indian government healthcare agency, exposed more than 12.5 million records of pregnant women, according to a report.

According to the tech website *Zdnet*, which reported the breach, said that the records go as far back as five years, to 2014, and include detailed medical information for women who underwent an ultrasound scan, amniocentesis, or other genetic testing of their child.

While refraining from naming the state, the report said that the database belonged to the department of medical, health and family welfare of a state in north India.

It also stated that the database, which is still available online without a password, no longer con-



The exposed medical information is connected to the Pre-Conception and Pre-Natal Diagnostic Techniques Act, a law passed in 1994 that banned prenatal sex determination.

Besides 7.5 million digitised versions of Form F, the database also contained five million digitized versions of other PCPNDT-related forms, such as Form A, Form D, Form E, and Form G, containing similar medical data.

In addition, the server also contained complaints made against doctors and medical centers, and whistleblowing reports about doctors and medical centers performing sex determination tests.

tains the records as they have been taken down.

The database was discovered by Bob Diachenko, a security researcher with cyber-security consulting firm Security Discovery, in early March 2019.

Since then, both the researcher and ZDNet, whom the researcher con-

tacted for help, were unable to contact the owner of the database.

Eventually, the database, with the help of Cert-In, was secured but the entire process took three weeks, during which time the server and the medical records remained exposed for anyone to download.

While the leaky server was secured on March 29, the tech website *Zdnet* decided to refrain from naming the state as the server, which is still exposed online, reveals other agency operations leaving it vulnerable to further abuse from cyber criminals.

Sensors Mimic (The Aasian Age: 20190403)

<http://onlinepaper.asianage.com/articledetailpage.aspx?id=12742980>

Sensors mimic skin to help healing

■ Researchers hope to create a new mode of sensor that will meld seamlessly

New York, April 2: Scientists have developed sensors that can mimic the skin and monitor wounds in real-time, helping them heal faster.

Biosensors are analytical devices that combine a biological component with a physiochemical detector to observe and analyse a chemical substance and its reaction in the body.

Conventional biosensor technology, while a great advancement in the medical field, still has limitations to overcome and improvements to be made to enhance their functionality. Researchers at

■ **THE SENSOR** is capable of monitoring lactate and oxygen on the skin.

■ **RESEARCHERS HOPE** that future research will utilise this sensor design to incorporate more biomarkers and create even more multifunctional sensors to help with wound healing.

Binghamton University in the US have developed a skin-inspired, open-mesh electromechanical sensor that is capable of monitoring lactate and oxygen on the skin.

"We eventually hope that these sensors and engineering accomplishments can help advance health-

care applications and provide a better quantitative understanding in disease progression, wound care, general health, fitness monitoring and more," said Matthew Brown, a PhD student at Binghamton University.

Researchers designed a sensor that is structured

similarly to that of the skin's micro architecture. This wearable sensor is equipped with gold sensor cables capable of exhibiting similar mechanics to that of skin elasticity.

They hope to create a new mode of sensor that will meld seamlessly with the wearer's body to maximise body analysis to help understand chemical and physiological information. "This topic was interesting to us because we were very interested in real-time, on-site evaluation of wound healing progress in a near future," said Brown.

"Both lactate and oxygen are critical biomarkers to access wound-healing progression," he added.

They hope that future research will utilise this skin-inspired sensor design to incorporate more biomarkers and create even more multifunctional sensors to help with wound healing.

They hope to see these sensors being developed incorporated into internal organs to gain an increased understanding about the diseases that affect these organs and the human body.

— PTI

Pollution (The Aasian Age: 20190403)

<http://onlinepaper.asianage.com/articledetailpage.aspx?id=12744040>

Scientists sail on boat to map Yamuna pollution hotspots

SANJAY KAW
NEW DELHI, APRIL 2

Scientists sailed down a section of the Yamuna last week on a boat equipped with cutting edge sensors to map pollution hotspots and monitor water quality in real time instead of relying on time-intensive and expensive laboratory measurements.

At Nigambodh Ghat, scientists were able to find the exact locations where effluents entered the Yamuna along with a map which indicated the level of acidity, dissolved oxygen and organic matter among other factors that make the river water unfit for not just humans but also aquatic life.

This experiment was a part of Water-to-Cloud project developed by researchers at the Tata Centre for Development (TCD), University of Chicago, and the Indian Institute of Technology (IIT) Varanasi, in collaboration with International Innovation Corps.

According to a senior scientist, the main aim of the project was to provide a holistic water quality monitoring platform and pinpoint the hotspots of pollution in major Indian water bodies, including the Ganga and Yamuna and other important lakes, using sensors that send real-time data to a handheld device in the form of easily readable maps.



Water-to-Cloud programme manager Priyank Hirani said that the project explores the benefits of continuous, real-time, and in-situ water quality monitoring system that would act as an early warning system. Mr Hirani also explained that the system uses powerful data visualisations in the form of heat

maps that can be used to dynamically monitor, predict, and regulate water quality.

The team, which has been working on the Yamuna in Delhi for about 18 months, has collected close to 300,000 data points after conducting over 225 experiments across 11 locations. The researchers

said while mapping the river chemistry, it emerged that the level of dissolved oxygen in two stretches of Ganga is often below the standards, and alarmingly low in the Yamuna.

When it comes to turbidity, which is a direct result of effluents from urbanised zones, large water bodies monitored in the study, do not perform well. For the Yamuna, the heat map suggests that dissolved oxygen level is below 2, way less than the normal levels.

Mr Hirani said that the current methods of river water quality monitoring in India rely heavily on lab measurement, which is time-intensive and expen-

sive and is done on a per sample basis. Moreover, he said that lab analyses from point measurements may not always give a holistic picture of the health of rivers as they are dynamic ecosystems and require continuous monitoring.

Mr Hirani said, "The project leverages the benefit of sensor technology, which is becoming more affordable. The sensors, which have a wide range in terms of values they can record, are attached to a boat that goes on a pre-defined route."

After the data is recorded real-time, it is downloaded from sensors, cleansed and uploaded to a user-friendly and open-access platform.

Dengue (The Aasian Age: 20190403)

<http://onlinepaper.asianage.com/articledetailpage.aspx?id=12739556>

In the wake of the realisation of sporadic cases of dengue during summers and winters, we got in touch with Dr Farhan Shaikh for his expert opinion on the disease



KANIZA GARARI

THE ASIAN AGE

Dengue now a year round phenomenon

✓ Dengue is no longer confined only to the monsoon season and sporadic cases of the disease have been noted during summer as well. Delhi has so far recorded 650 cases of dengue already this year and experts claim that at least 50 cases have been recorded in every city. Dengue caused in the summer is attributed to the storage of water in water coolers and also to keeping water in containers for birds and other animals to drink during the summer. "Travelling to foreign regions with high humidity and rain showers is also found to cause the transfer of virus from foreign regions to our country," explained Dr Farhan Shaikh, an expert on the management of dengue and pediatric critical care.



Dr Farhan Shaikh, expert on management of dengue and pediatric critical care

Q Are the sporadic cases of dengue as virulent as those in the endemic season?

Mutation causes the nature of the virus to change every year. So while the virus might affect the brain in majority cases through one particular year, it can affect the liver in majority cases through another cycle or cause more hemorrhages through another cycle. Hence, it depends on the virus and the ability of the practicing physician to identify the trend and accordingly administer treatment. Diagnosis of the other organs of the body also becomes

No scientific evidence has been found or produced to favour the use of the aforesaid alternative medications. In fact, we've seen critically ill patients who have tried to cure dengue using such medicines but have had to check in to the hospital eventually.

Q While people are aware of the occurrence of endemic cases during monsoons, is there enough awareness about the possibility of dengue during summer and winter months?

The awareness of especially summer cases is very minimal among people. However, because rising temperatures are driving people to use coolers during the day, the likelihood of the presence of still water inside homes is now very high.

Q What are the reasons for the outbreak of dengue in the summer?

Dengue outbreak during the summer is sporadic in nature and not endemic as is seen during the monsoon season. The major cause of dengue during summers is found to be the storage of water in water coolers, which provides a conducive environment for the Aedes mosquitoes, which carry the virus, to breed. This increases the likelihood of the occurrence of the disease.

Q Can climate change also be a reason for the spread of dengue?

Even though majority cases are noted during monsoons, dengue has pretty much become a year-round phenomenon. Climate change does not play a major role in this. Storing water and then leaving it unattended is what allows mosquitoes the environment to breed. Water in urban tanks, pot trays, drinking water bowls for animals and birds, etc. make for perfect breeding opportunities for mosquitoes. It is essential to practice the weekly dry day and ensure that all containers and trays are properly dried. That is the best method of prevention.

important to ensure that there is not much damage.

Q Do a maximum number of dengue cases require hospitalisation?

No. 95 per cent of dengue cases can be managed at home, however only if the patient visits the physician at the right time and follows their advice in terms of medication and rest. Dengue management is symptomatic and requires proper treatment, sufficient fluid intake, and a fair amount of rest. However, if signs like persistent fever, drowsiness, and bleeding are noticed, then hospitalization becomes critical to ensure complete care primarily because the virus is found to affect other organs as well and that requires experts to come together to manage the disease.

Q Many patients are found to depend on alternative medicines like papaya leaf extract and homeopathic medication for the management of the disease. Does that really help?

CLIMATE CHANGE DOES NOT PLAY A MAJOR ROLE IN THIS. STORING WATER AND THEN LEAVING IT UNATTENDED IS WHAT ALLOWS MOSQUITOES THE ENVIRONMENT TO BREED

Hence, it is becoming increasingly critical to spread awareness and to encourage observing dry days throughout the year. Additionally, those who travel to cooler foreign regions to escape the Indian summer are found to catch the disease there, which increases the possibility of its transmission to others after they return.

Q How must one protect themselves?

One needs to prevent mosquitoes from biting them to prevent the disease. Wearing long sleeves and long pants, using EPA registered mosquito repellants, using a mosquito net, and avoiding areas with standing water during mornings and evenings can greatly reduce the likelihood of occurrence of the disease.

Plastic Hell (The Aasian Age: 20190403)

<http://onlinepaper.asianage.com/article/detailpage.aspx?id=12739565>

PLASTIC HELL IS NEAR

Should India impose a complete ban on plastic?

 Plastic pollution is one of the greatest hazards faced by our environment. As per studies, we are dumping away sufficient plastic which can circle the globe four times. The worst thing is that almost 50 per cent of the plastic is thrown after the first use. Though many countries and cities have imposed ban on plastic, statistics clearly indicate that the ban has never been effective. The major use of plastics happens in restaurants and in the form of bottles. Recently, Hawaii State in the US decided to ban plastic at restaurants, which in turn will cut down on waste that pollutes the ocean.

Similarly, San Francisco became the first city to ban the sale of plastic water bottles. This will urge the people



to buy a reusable glass bottle and the most exciting part is that violating this ban can gift you a fine up to \$1,000. Now, the European Union parliament has voted to ban single-use plastics such as straws, forks and knives by 2021.

Maharashtra, Telangana, Himachal Pradesh and Tamil Nadu were the first four states in India to impose ban on single-use plastics. Uttar

Pradesh and Karnataka have also banned products which qualify as single-use plastics, but haven't used the term in their notifications. Sikkim banned the use of plastic bags in 1998. In Tamil Nadu, 86 tonnes of banned plastics were seized from 25,000 shops in January, which lowered to 24 tonnes in February and further lowered to seven tonnes in March.

However, reports suggest that in spite of the ban in the state, manufacturers and traders are getting back to the old ways. Plastic is still being used widely in city markets.

Isn't it high time that India imposed a complete ban on plastic? Latest studies propose that the consumption of water and food in plastic bottles and packages is extremely harmful to health, as plastic contains various harmful chemicals. Shouldn't we start using paper containers, glass bottles or even steel straws instead of plastic materials? There are even bamboo bottles in market which can be used instead of plastic bottles. Why are we not exploring such alternative and safe options? Is it to help the plastic manufacturers? Should we promote the use of biodegradable plastics more? Though biodegradable plastics are said to be less harmful, won't it attribute to climate change? As implemented in San Francisco city, will imposing a fine on those who use plastic cut down its usage?

IVF children

IVF children may be at increased cancer risk: Study (The Times of India: 20190403)

<https://timesofindia.indiatimes.com/home/science/ivf-children-may-be-at-increased-cancer-risk-study/articleshow/68698145.cms>

Children conceived through in-vitro fertilisation (IVF) may be at an increased risk of cancer, according to the largest study of its kind.

In the past three decades, IVF has gone from an experimental procedure to being more common. Pregnancies enabled by IVF frequently have more difficulties, with children born earlier and smaller even among singleton births.

Scientists from the University of Minnesota in the US used data of 275,686 IVF children and 2,266,847 naturally conceived children.

The study, published in the journal JAMA Pediatrics, found that the overall cancer rate per 1,000,000 children of IVF children was about 17 per cent higher than for non-IVF children.

However, the rates of other specific cancers did not differ between the two groups, and no associations of childhood cancer with specific IVF treatment techniques.

"The most important takeaway from our research is that most childhood cancers are not more frequent in children conceived by IVF," said Logan Spector, a professor at University of Minnesota.

"There may be an increased risk of one class of cancers in children; however, due to the nature of our study, we could not distinguish between IVF itself versus the parents' underlying infertility," Spector said.

Alcoholism

Heavy alcohol use may slow brain growth (New Kerala: 20190403)

<https://www.newkerala.com/news/read/121688/heavy-alcohol-use-may-slow-brain-growth.html>

A new study has revealed that heavy use of alcohol among adolescents and young adults can actually slow the rate of growth in developing brains.

The research, carried out in nonhuman primates, has been published in the journal eNeuro.

The study shows that heavy alcohol use reduced the rate of brain growth by 0.25 millilitres per year for every gram of alcohol consumed per kilogram of body weight.

In human terms, it is equivalent to four beers per day. The research involved rhesus macaque monkeys at the Oregon National Primate Research Center.

"Chronic alcohol self-intoxication reduced the growth rate of the brain, cerebral white matter, and subcortical thalamus," the researchers wrote.

Researchers measured brain growth through magnetic resonance imaging of 71 rhesus macaques that voluntarily consumed ethanol or beverage alcohol.

Scientists precisely measured intake, diet, daily schedules, and health care, thus ruling out other factors that tend to confound results in observational studies involving people.

The findings of the study help validate previous research examining the effect of alcohol use on brain development in people.

"Human studies are based on self-reporting of underage drinkers," said co-author Christopher Kroenke. "Our measures pinpoint alcohol drinking with the impaired brain growth."

The new study is the first to characterise normal brain growth of one millilitre per 1.87 years in rhesus macaques in late adolescence and early adulthood.

And it further reveals a decrease in the volume of distinct brain areas due to voluntary consumption of ethanol.

Lead author Tatiana Shnitko said that previous research has shown the brain has a capacity to recover at least in part following the cessation of alcohol intake.

However, it's not clear whether there would be long-term effects on mental functions as the adolescent and young adult brain ends its growth phase. The next stage of research will explore that question.

"This is the age range when the brain is being fine-tuned to fit adult responsibilities," Shnitko said. "The question is--Does alcohol exposure during this age range alter the lifetime learning ability of individuals?"

Autism awareness

Autism awareness walk organised (New Kerala: 20190403)

<https://www.newkerala.com/news/read/121635/autism-awareness-walk-organised.html>

A walk was organised here on Tuesday in the city-state's Janakpuri area to create awareness about autism, a neurodevelopment disorder that includes impairments in social interaction and communication skills combined with rigid, repetitive behaviours.

The walk, which coincided with the World Autism Awareness Day, was organised by UDAI Working Together Works, a school for differently-abled children, in which over 300 students of Shankara School Noida, Amarjyoti, and Ashtavakra volunteered and others participated.

The World Health Organisation (WHO) estimates that worldwide one in 160 children has an autism spectrum disorder (ASD). This estimate represents an average figure, and reported

prevalence varies substantially across studies. The prevalence of ASD in many low and middle-income countries is so far unknown.

ASD is a lifelong developmental condition that can affect how a person communicates and interacts with the world around them. ASDs begin in childhood and tend to persist into adolescence and adulthood. In most cases, the conditions are apparent during the first five years of life.

Individuals with ASD often present other co-occurring conditions, including epilepsy, depression, anxiety, and attention deficit hyperactivity disorder (ADHD). The level of intellectual functioning in individuals with ASDs is extremely variable, extending from profound impairment to superior levels.

According to the WHO, Intervention during early childhood is important to promote the optimal development and well-being of people with an ASD. Monitoring of child development as part of routine maternal and child health care is recommended.

Coming out in the support of kids with autism just for a day would not change the situation. We need to really work on it every day to make them live like other kids. This would make them enable achieve various success in their lives.

Iodised salt

Iodised salt not necessarily be good for health (New Kerala: 20190403)

<https://www.newkerala.com/news/read/121627/iodised-salt-not-necessarily-be-good-for-health.html>

While universal iodisation of salt helped control iodine deficiency disorders, it could be increasing the risk of high blood pressure -- a leading cause of heart ailments -- especially in the elderly, says retired Col Rajesh Chauhan, in his latest book.

The book, titled "Could universal iodisation of salt be the chief cause of hypertension assuming epidemic proportion?", has been published by Lap Lambert Berlin, Germany.

The book is based on a recent study on nearly 100 elderly patients in Agra, UP.

The study included patients who were consuming iodised salt regularly, and were compared with another group who were not using iodised salt but pebble salt, which is also iodised but the iodine content gets washed off, thereby minimising or avoiding iodine in the salt.

"The results indicated the people consuming iodised salt were more at risk of suffering high blood pressure than the ones who were using pebble salt, washed before use," Chauhan told IANS.

Excess consumption of iodine can also cause various forms of rhythm disturbances in heart, and lead to precipitating angina and heart failure.

To control iodine deficiency disorders around the world, the World Health Organisation (WHO) in a statement in August 1994 stressed universal salt iodisation as the principal public health measure for eliminating Iodine Deficient Disorders.

Since 1992, India has been using iodised salt, irrespective of the fact whether the region is actually deficient of iodine or not.

While iodine deficiency in children can raise a condition called cretinism, usually characterised with laziness, crying, pot belly, and low intellect; excess iodine intake as a result of universal salt iodisation could be causing attention deficit hyperactivity disorder in children, the findings showed.

Though the WHO stated "monitoring of sodium (salt) intake and iodine intake at country level is needed to adjust salt iodisation over time", India failed to monitor it, Chauhan said.

"In my book, and from the references that I have used therein taken from the domain of the British Medical Journal, we have raised the possibility of a global rise in the incidence and prevalence of hypertension, possibly due to regular consumption of iodised salt," he noted.

He stressed the need for more research, which must include the overarching necessity of continuing with enforcing consumption of iodised salt even in regions that are not deficient in iodine.

Immediate corrective steps are needed at national and global levels, and supplemental iodine is to be used only in areas that are deficient in iodine.

More importantly, non-iodised salt must also be made available in the market, which has been missing from the shelves for past two decades and more, Chauhan suggested.

(Brij Khandelwal can be contacted at brij.k@ians.in)

Smoking, drinking

Follow this wellness guide to quit smoking, drinking (New Kerala: 20190403)

<https://www.newkerala.com/news/read/121552/follow-this-wellness-guide-to-quit-smoking-drinking.html>

Most lifestyle advice tells you to give that glass of wine or cigarette a miss. Serving as a reminder, a new book on healthy living reiterates the advice we know too well, topped off with practical tips that finally help you say 'No.

"Live Well To 101", a wellness guide by doctor and television presenter Dawn Harper, lists useful tips to quit smoking:

- * Cigarettes don't contain just nicotine but a range of toxic, carcinogenic chemicals you wouldn't want near your body. Next time you reach for a cigarette that looks quite appealing, imagine yourself licking tarmac, chewing on rubber cement or drinking a cocktail of battery acid, lighter fuel and nail varnish remover.

- * If you get the opportunity to talk to a smoker who has developed diseases as a result of smoking, knowing their stories might help put off your habit.

- * To quit, go public! Telling everyone will keep you motivated. Also put aside cigarette money for something special, like a personal reward or charity.

- * It's easier never to start than it is to quit. Spread the message.

For alcohol, Dr Harper says:

- * Don't wait for warning signs. They may not come. Be honest with yourself about your consumption and start putting in dry days in your diary.

- * Recognise your triggers and work on them. For instance, if you reach for the bottle when your kids are asleep, find ways to keep yourself occupied and not be tempted.

- * Offer to drive when you go out -- it gives you the perfect excuse to not drink.

- * Understand your alcohol intake. Beers and wines have become stronger over the years so you may be taking in more units than you should, as well as more calories.

The 280-page book is published by Hachette India and is priced at Rs 399.

Gut microbes

Gut microbes can spur immune system to attack cancer (Medical News Today: 20190403)

<https://www.medicalnewstoday.com/articles/324865.php>

A worldwide study has identified gut bacteria that can boost the immune system's ability to fight tumors. The finding should help improve and personalize immunotherapy treatments for cancer.

scientist looking through a microscope

Scientists find which gut bacteria help the immune system fight cancer.

Immunotherapy is a general term for treatments that increase the body's own ability to tackle disease.

One such treatment uses drugs called immune checkpoint inhibitors.

These block proteins that cancer cells produce and that protect them from attack by immune cells.

However, not all cases of cancer respond to treatment with immune checkpoint inhibitors, and the drugs can also cause severe side effects.

The new Nature Communications study reveals information that should help identify which people are most likely to benefit from treatment with immune checkpoint inhibitors.

The information concerns the molecular mechanisms through which gut bacteria interact with the immune system to influence its ability to fight cancer.

Sanford Burnham Prebys Medical Discovery Institute in La Jolla, CA, led the large international team that worked on the study, which also involved collaboration with three hospitals.

Gut bacteria, immune system, and melanoma

Thomas Gajewski is a professor of cancer immunotherapy at the University of Chicago, IL, and was not involved in the investigation. He describes it as "an important step" toward expanding "the number of people who benefit from immunotherapy."

The investigators identified 11 strains of gut bacteria whose interaction with the immune system helped slow the growth of melanoma tumors in mice.

How do oral bacteria make colorectal cancer more aggressive?

How do oral bacteria make colorectal cancer more aggressive?

A common oral bacterium with links to tooth decay promotes growth of colorectal cells that are already cancerous.

In addition, they highlighted a signaling pathway called unfolded protein response (UPR) as a major link between the gut bacteria and the antitumor fighting ability of the immune system.

UPR is a cellular process that helps keep protein populations stable and healthy by clearing away those that cell stress has caused to fold incorrectly.

The investigators found that UPR activity was lower in people with melanoma whose cancer responds to immune checkpoint inhibitors.

They suggest that this highlights UPR activity as a potential marker for selecting people with melanoma who are more likely to benefit from immune checkpoint therapy.

"These results," says senior study author Ze'ev Ronai, a professor at Sanford Burnham Prebys, "[...] identify a collection of bacterial strains that could turn on antitumor immunity and biomarkers that could be used to stratify people with melanoma for treatment with select checkpoint inhibitors."

Need to improve checkpoint inhibitor therapy

Although much rarer than most types of skin cancer, melanoma is the most likely to invade nearby tissue and spread to other places in the body. Its tendency to spread makes melanoma a serious and potentially life-threatening cancer.

According to the American Cancer Society (ACS), melanoma is responsible for around 1 percent of all skin cancers but accounts for the most deaths to skin cancer in the United States.

The ACS estimate that during 2019, around 96,480 people will find out that they have melanoma and 7,230 people will die of the skin cancer in the U.S.

Treatment with immune checkpoint inhibitors has had a dramatic effect on improving survival rates for people with melanoma, but the cancer still has a high risk of causing death once it spreads.

Even when doctors combine immune checkpoint therapy with other treatments, they only work for around half of all cases. Also, people with responsive cancer may still experience autoimmune reactions, limited response duration, and even resistance to the therapy.

The recent study adds to growing evidence that gut microbes can influence the effectiveness of immunotherapy. Past research has shown, for example, that some strains of gut bacteria can increase treatment effectiveness, while certain antibiotics and probiotics can reduce it.

Useful mouse model

For their investigation, Prof. Ronai and his colleagues used mice that lack the RING finger protein 5 (RNF5), which helps cells remove incorrectly folded proteins.

They found that these mice could stop melanoma tumor growth as long as their immune systems and gut microbe populations were healthy and intact.

However, if they housed the RNF5-lacking mice with mice that did not lack the protein, or if they treated them with antibiotics, the animals lost their ability to fight melanoma tumors. This demonstrated that gut microbes played a key role in antitumor immune defenses.

Further investigation revealed the involvement of several components of the immune system in the gut and the reduction in UPR in immune and gut cells was enough to activate immune cells.

Using advanced techniques, the team saw that the RNF5-silenced mice had bigger populations of 11 strains of bacteria. When they transplanted these strains to germ-free mice that had no gut bacteria, they triggered an antitumor response and reduced melanoma tumor growth.

In a final set of tests, the team confirmed the results in tissue samples from three separate groups of people with melanoma who then received treatment with checkpoint inhibitors.

These tests revealed that response to treatment correlated with levels of UPR components, which suggests that these could serve as potential biomarkers to predict who would be most likely to benefit from the immunotherapy.

The researchers now plan to identify the antitumor molecules that gut bacteria produce. They then intend to test the antitumor powers of the molecules and find out which probiotics might increase their effectiveness in people with melanoma.

Prof. Ronai says that there is also another angle that they wish to explore. During the study, they noticed how RNF5-lacking mice were more susceptible to gut inflammation. This is also a side effect in some checkpoint therapies.

Perhaps the team could use "this powerful model," he adds, to find out how to fix the "balance between autoimmunity and antitumor immunity" to help more people benefit from immunotherapies.

"Our study establishes a formal link between the microbiome and antitumor immunity and points to the role of the UPR in this process, answering a long-sought question for the field."

Mental health

Mental health can impact memory decades later(Medical News Today: 20190403)

New research from the United Kingdom has found that people who experience recurrent episodes of depression throughout adulthood are more at risk of developing memory problems later in life.

sad looking man

Accumulated depression and anxiety can predict a person's likelihood of developing memory problems.

Scientists have already shown that depression and other mental health problems can affect a person's memory in the short term.

For instance, a study that the journal *Cognition and Emotion* published in 2016 found that individuals with dysphoria — a persistent sense of unhappiness or dissatisfaction that is often a symptom of depression — had poorer working memory than people without any mental health problems.

Now, however, researchers from the University of Sussex in Brighton, U.K. have found evidence that links experiencing mental health problems throughout adulthood to memory problems at the age of 50 years.

The implications, says study author Darya Gaysina, are that "the more episodes of depression people experience in their adulthood, the higher risk of cognitive impairment they have later in life."

"This finding highlights the importance of effective management of depression to prevent the development of recurrent mental health problems with long-term negative outcomes."

Darya Gaysina

In the new longitudinal study, the findings of which appear in the *British Journal of Psychiatry*, researchers analyzed the data of 9,385 people born in the U.K. in 1958, which the National Child Development Study (NCDS) has been collecting.

This new study is the first to look at the long-term relationship between mental and cognitive health.

Mental health problems and memory

To date, the NCDS has followed this cohort for more than 60 years, collecting information about each participant's health at the ages of 7, 11, 16, 23, 33, 42, 44, 46, 50, and 55 years.

In addition, these participants reported their affective symptoms at the ages of 23, 33, 42, and 50 years and agreed to take memory and other cognitive function tests when they reached 50 years of age.

Gaysina and colleagues looked at how often the participants experienced mental health symptoms throughout the study period and assessed their performance in terms of memory function at age 50.

Can these new compounds treat memory loss in depression?

Can these new compounds treat memory loss in depression?

Researchers are trying to find new ways of treating depression-related memory loss.

The researchers used a word-recall test to assess the participants' memory, and they also evaluated each person's verbal memory, verbal fluency, information-processing speed, and information-processing accuracy.

The investigators report their findings in the study paper, writing that the "accumulation of affective symptoms across three decades of adulthood (from age 23 to age 50) was associated with poorer cognitive function in midlife," and, specifically, with poorer memory.

Although experiencing a single episode of depression or another mood disorder did not seem to affect a person's memory in midlife, the researchers explain that going through depression and anxiety repeatedly throughout adulthood was a good predictor of poorer cognitive function at age 50.

"We knew from previous research that depressive symptoms experienced in mid-adulthood to late-adulthood can predict a decline in brain function in later life, but we were surprised to see just how clearly persistent depressive symptoms across three decades of adulthood are an important predictor of poorer memory function in midlife," says the study's first author Amber John.

Calling for an 'investment in mental health'

In the study paper, the researchers emphasize that the main strength of the current research lies in its numbers, noting that it involved "a large nationally representative sample with a long follow-up period."

At the same time, they caution that the data did have its limitations, the main one being that the participants undertook cognitive function assessments only once, at age 50. As a result, the investigators were unable to trace potential changes in cognitive function over time.

Moreover, they explain that at the point when the participants undertook the tests assessing their memory and other cognitive functions, these exams were limited and checked for fewer factors than more recent assessments.

However, the University of Sussex research team also believes that the current findings should be a wake-up call, particularly for governmental policy-makers and healthcare providers but also for individuals who may have a tendency to put mental health self-care on the back burner.

"With the publication of this research, we're calling for the government to invest in mental health provision to help stem the risk of repeated episodes of depression and anxiety," says John.

"From an individual's perspective," she adds, "this research should be a wake-up call to do what you can to protect your mental health, such as maintaining strong relationships with friends

and family, taking up physical exercise, or practicing mindfulness meditation — all of which have been shown to boost mental health."

Finally, she advises "seeing your [doctor] for advice if you feel you need help with depression or anxiety" rather than allowing the problem to develop.

Children App Health (Hindustan: 20190403)

http://epaper.livehindustan.com/imageview_18845_71038808_4_1_03-04-2019_i_5.pagezoomsinwindows.php

बच्चों की बीमारी का एप से पता चलेगा

अच्छी खबर

नई दिल्ली | वरिष्ठ संवाददाता

सोचिए मोबाइल फोन में मौजूद एप के जरिए ही बच्चों में ऑटिज्म या मिर्गी जैसी न्यूरो की बीमारियों का पता लगाया जा सके तो कितना बेहतर हो। एम्स के डॉक्टरों ने ऐसी ही एप बनाई है, जिसमें पूछे जाने वाले 37 सवालों के जबाब देने से बच्चों में मिर्गी और ऑटिज्म जैसी बीमारियों का पता लगाया जा सकता है। यह एप देशभर के डॉक्टरों और मरीजों के लिए मददगार साबित होगी।

एम्स के विशेषज्ञों ने नई तकनीकों के सहारे दो खंड में सवाल तैयार किए हैं। इनके जबाब देने से ही बच्चों में न्यूरो रोग का सही आंकलन हो सकेगा। खास बात यह है कि फिजिशियन से लेकर अन्य कोई भी विशेषज्ञता रखने वाला डॉक्टर इसका इस्तेमाल कर सकता है। एम्स की नई पहल इन रोगों से लड़ रहे बच्चों की कम समय में ही पहचान करने में मददगार होगी। यह

01 फ्रीसदी बच्चे ऑटिज्म से पीड़ित होते हैं एक सा 18 साल के बीच की उम्र के

4.7 रेटिंग बीमारी पहचानने वाले इस एप को गूगल प्ले स्टोर पर मिली है

एप 1 से 14 साल तक के बच्चों में ऑटिज्म का पता लगा सकती है।

ऐसे काम करेगा एप : एम्स की डॉक्टर शैफाली गुलाटी ने बताया कि बच्चों में मनोरोगों का जल्द पता लगाना जरूरी है। उनकी टीम ने पेडन्यूरोएम्स डायग्नोस्टिक्स नाम से मोबाइल एप तैयार किया है। यह गूगल प्ले स्टोर और आईट्यून्स स्टोर पर उपलब्ध है।

एप डाउनलोड करने के बाद ईमेल और पासवर्ड के जरिए सबसे पहले एकाउंट बनाना पड़ता है। इसके बाद मरीज से जुड़ी कुछ जानकारी देनी होगी। इसमें मिर्गी, ऑटिज्म, एडीएचडी और एनएमआई जैसे रोगों के

इस तरह के सवाल पूछे जाते हैं

- क्या बच्चा अपनी उपलब्धियों के बारे में बात करता है?
- क्या वह वह बिना कहे अपनी भावनाएं व्यक्त करता है?
- क्या वह अकेले खेलना पसंद करता है या समूह में खेलना पसंद है?

विकल्प मौजूद होंगे। दो खंडों में सवाल हैं। पहले खंड में 28 और दूसरे में 9 सवाल के जबाब भरने के बाद बच्चे की तकलीफ का संबंध इन रोगों से है अथवा नहीं, इसका पता चल सकेगा।

उन्होंने बताया कि मोबाइल एप लाने से पहले 225 बच्चों पर इसका अध्ययन किया गया, जिसमें 128 बच्चों में इस तकनीक के जरिए एएसडी रोगों की पहचान हुई थी। एएसडी मानसिक विकास से संबंधित विकार है, जिसमें व्यक्ति को सामाजिक संवाद स्थापित करने में समस्या आती है और वह आत्मकेंद्रित बन जाता है।

Blood

कहीं रक्त चढ़ाना जीवन के लिए खतरा न बन जाए (Hindustan: 20190403)

http://epaper.livehindustan.com/imageview_18850_71152232_4_1_03-04-2019_i_10.pagezoomsinwindows.php

रक्तदान के पहले डोनर और एकत्रित रक्त की सभी संबंधित जांच गहराई से होनी चाहिए।

अवधेश कुमार
वरिष्ठ पत्रकार



तमिलनाडु के सरकारी अस्पतालों में पिछले चार महीने में दूषित, मृत या निर्धारित समयावधि पार कर चुके खून चढ़ाने से 15 महिलाओं की दुखद मृत्यु की खबर सुर्खियों में है। डॉक्टरों और अधिकारियों की एक टीम द्वारा कई ब्लड बैंकों की जांच करने पर पाया गया कि रक्तदान संबंधी जांच और उनको सुरक्षित रखने के निर्धारित मानकों का उल्लंघन हो रहा है। डॉक्टरों और अधिकारियों ने बिना जांच रिपोर्ट देखे ही रक्त के सुरक्षित होने का प्रमाण पत्र दे दिया था।

किन्हीं कारणों से खराब हो चुके या दूषित-संक्रमित रक्त चढ़ाने से मरीजों की मृत्यु या रोगग्रस्त हो जाने की खबरें अक्सर आती रहती हैं। कुछ मामलों में जांच के बाद दोषी अधिकारियों-कर्मचारियों के खिलाफ कार्रवाई होती है, सरकारी ब्लड बैंकों की कमियों को दूर करने के कदम उठाए जाने तथा प्राइवेट को बंद करने तक की सूचनाएं आती हैं, लेकिन फिर कुछ अंतराल पर ऐसी ही घटना अन्यत्र घटित हो जाती है। इस समय तमिलनाडु की स्वास्थ्य सचिव ने तीन ब्लड बैंकों के संबंधित अधिकारियों के खिलाफ विभागीय कार्रवाई तथा आपराधिक मामला दर्ज करने के आदेश दिए हैं। जाहिर है, इसका असर कुछ समय के लिए होगा, किंतु गारंटी नहीं कि आगे इस तरह की जानलेवा लापरवाही न हो। आखिर पिछले वर्ष मदुरै के अस्पताल में एक गर्भवती महिला रक्त चढ़ाने के बाद एचआईवी संक्रमित पाई गई, जबकि पहले की जांच में वह एचआईवी निगेटिव थी। जांच में पाया गया कि एक 19 वर्षीय युवक ने रक्तदान किया था। जब रक्त देने वाले युवक को इसका पता चला, तो उसने चूहे की दवा खाकर जान दे दी। उस समय भी खूब हंगामा हुआ था। उसके बाद स्वास्थ्य विभाग ने नए सिरे से ब्लड बैंकों के लिए दिशा-निर्देश जारी किए।

यह स्थिति केवल तमिलनाडु की नहीं, पूरे देश की है। रक्तदान से संबंधित नियमों तथा रक्त को बैंकों में सुरक्षित रखने के नियमों के पालन में लापरवाही बरती जाती है। हमारे यहां इसका प्रामाणिक आंकड़ा उपलब्ध नहीं है कि कितने लोगों को रक्त चढ़ाने से कौन-सी बीमारी हुई या कितने मौत के शिकार हो गए। 2017 में एक आरटीआई से यह जानकारी सामने आई थी कि 2014 से 2016 के बीच राष्ट्रीय एड्स नियंत्रण संगठन

जो नाको के संज्ञान में आए, अन्यथा मामले तो बहुत होंगे।

एक अध्ययन रिपोर्ट को देखें, तो कुल रक्त भंडार में से करीब चार प्रतिशत ही संक्रमित होता है। यह मात्रा बड़ी नहीं है, पर इसका पकड़ में न आना खतरनाक है। नाको ने बताया है कि कोई रक्त एचआईवी संक्रमित है या नहीं, इसकी जांच की नेट टेस्ट सुविधा हर जगह उपलब्ध नहीं है। रक्तदान से पूर्व रक्तदाता के ब्लड ग्रुप, शुगर, एचआईवी, हेपेटाइटिस बी और सी, मलेरिया और वीडिआरएल की जांच बहुत जरूरी है। रक्तदाताओं के लिए कुछ अर्हताएं निर्धारित हैं। शराब का नियमित सेवन करने वाले, हृदय रोगी, दमा रोगी, टीवी और कुष्ठरोगी, कैंसर रोगी आदि रक्तदान नहीं कर सकते। वही व्यक्ति रक्तदान कर सकेगा, जिसका हिमोग्लोबिन 12.5 से ज्यादा है। ट्रांसजेन्डर, समलैंगिक, फीमेल सेक्स वर्कर्स बिना डॉक्टरी जांच के रक्तदान नहीं कर सकते। जिसके घर हेपेटाइटिस का मरीज हो, वह 12 माह तक रक्तदान

हमारे यहां ऐसा कोई प्रामाणिक आंकड़ा उपलब्ध नहीं है कि कितने लोगों को रक्त चढ़ाने से कौन-सी बीमारी हुई।

नहीं कर सकता। मलेरिया ठीक होने के तीन माह, डेंगू-चिकनगुनिया के छह माह और जीका वायरस से ठीक होने के चार माह बाद ही रक्तदान किया जा सकता है। हम स्वयं समझ सकते हैं कि इनमें से कई का पालन संभव नहीं। कोई न बताए, तो उसकी कमी के बारे में जानना असंभव है। डोनर (रक्तदाता) फॉर्म में भी तमाम कॉलम हैं, जिन्हें दाता भरता है। फॉर्म में कोई सच ही लिखे, जरूरी नहीं। पेशेवर रक्तदाताओं में ज्यादा संक्रमण पाया गया है। ये लोग तीन महीने के अंतराल का पालन नहीं करते।

इन सबका निष्कर्ष यही कि रक्तदान के पूर्व डोनर की और रक्तदान के बाद रक्त की सभी संबंधित जांच सख्ती से हो। ब्लड बैंकों में सारी जांच और रख-रखाव के मानकों का पालन हो रहा है या नहीं, इसकी निगरानी की पुख्ता व्यवस्था भी आवश्यक है। रक्त को ठीक तापमान पर इस तरह संरक्षित किया जाए कि संक्रमण की

प्रदूषित हवा में लगातार सांस लेने से ढाई साल तक घट सकती है मनुष्य की आयु

आबोहवा सुधरे तो एक साल बढ़ जाएगी जिंदगी

रिपोर्ट

नई दिल्ली | मदन जैड़ा

हाल ही में आई एक रिपोर्ट में कहा गया है कि प्रदूषित हवा मनुष्य की ढाई साल तक उम्र घटा सकती है। वहीं अगर हवा डब्ल्यूएचओ के मानकों के अनुरूप स्वच्छ हो तो भारतीयों की उम्र एक साल तक लंबी हो जाएगी।

'हेल्थ इफेक्ट इंस्टीट्यूट' (एचईआई) और 'हेल्थ मैट्रिक्स एंड एवल्यूशन' (आईएचएमई) बोस्टन की बुधवार को जारी होने वाली रिपोर्ट में ये बातें कहीं गई हैं। रिपोर्ट में प्रदूषण के उम्र पर पड़ने वाले अच्छे-बुरे प्रभावों को लेकर अध्ययन किया गया है।

रिपोर्ट के अनुसार, भारत समेत तमाम एशियाई देशों में हवा में घुलनशील प्रदूषणकारी तत्वों पीएम 2.5 की मात्रा बढ़ रही है। डब्ल्यूएचओ के मानकों के अनुसार, पीएम 2.5 की मात्रा प्रति क्यूबिक मीटर 10 माइक्रोग्राम से ज्यादा नहीं होनी चाहिए, लेकिन इस मानक पर



देश के कुछ ही हिस्से आते हैं। ज्यादातर हिस्सों में यह समस्या काफी बढ़ चुकी है।

आयु बढ़ सकती है : यदि हवा में पीएम 2.5 की मात्रा नियंत्रण में रहे, तो एशियाई देशों में भारत, पाकिस्तान तथा नाइजीरिया के लोगों की औसत आयु एक साल बढ़ जाएगी। जबकि बांग्लादेश में यह बढ़ोत्तरी सबसे ज्यादा 1.3 साल की होगी। पूरी दुनिया में इससे औसत आयु में सात महीने का इजाफा होगा।

रिपोर्ट के अनुसार, प्रदूषण के कारण जीवन प्रत्याशा में आने वाली कमी दुनिया के हर क्षेत्र में अलग-अलग है। विकसित देशों में इससे साढ़े चार महीने की आयु क्षति हो रही है, तो अफ्रीकी देशों में 1.7 साल की।

वहीं उत्तरी अमेरिका और मध्य पूर्व में यह क्षति 1.3 साल की है। इसके अलावा जहां घरों में चूल्हा जलाकर भोजन पकाया जाता है, वहां 1.3 साल की अतिरिक्त क्षति का आकलन किया गया है।

प्रदूषण पांचवीं बड़ी स्वास्थ्य समस्या

- खानपान
- उच्च रक्तचाप
- तंबाकू सेवन
- मधुमेह
- वायु प्रदूषण
- मोटापा
- कोलस्ट्रॉल
- कुपोषण
- शराब सेवन
- गुर्दे के रोग

भारत में हवा का हाल सबसे बुरा

भारत के संदर्भ में कहा गया है कि सभी तरह के प्रदूषण के कारण करीब ढाई साल की क्षति हो रही है। कुछ समय पूर्व जारी आईसीएमआर की रिपोर्ट में कहा गया था कि वायु प्रदूषण के कारण भारत में औसत आयु 1.7 फीसदी घट रही है। कुछ राज्यों में यह आंकड़ा ज्यादा था। भारत में पीएम 2.5 का लोगों पर औसत प्रकोप 90 माइक्रोग्राम प्रति क्यूबिक मीटर है, जो दुनिया में सबसे ज्यादा है।

कई देशों में नियंत्रण

अमेरिका, जापान, यूरोपीय यूनियन, ब्राजील तथा इंडोनेशिया में ही पीएम 2.5 का स्तर डब्ल्यूएचओ के मानकों के अनुरूप है। जबकि भारत, पाकिस्तान बांग्लादेश समेत तमाम अफ्रीकी देशों में इसकी सीमा बहुत ज्यादा है।

कृत्रिम नसें

कृत्रिम नसें दिल और गुर्दे को दुरुस्त करेंगी (Hindustan: 20190403)

http://epaper.livehindustan.com/textview_18858_71463212_4_18_03-04-2019_1_0.html



42 सेंटीमीटर लंबी और 6 मिलीमीटर चौड़ी नसों को प्रत्यारोपित किया वैज्ञानिकों ने

60 किडनी के रोगियों की ऊपरी बांह में प्रत्यारोपित की गई कृत्रिम रक्त की नसें

भविष्य के लिए बड़ी उम्मीदें

उपचार के कई मामलों में रोगी की नसों को बदलने की जरूरत पड़ती है। जैसे कि बाईपास सर्जरी में। वर्तमान में व्यक्ति की खुद की नस और धमनियों का इस्तेमाल किया जाता है। लेकिन, कई बार यह संभव नहीं होता। ऐसे में सिंथेटिक ट्यूब प्रत्यारोपित की जाती हैं। फिलहाल शोधकर्ताओं की टीम इस प्रक्रिया को बढ़ाने में जुटी है। वह सालाना दस हजार नसों को प्रयोगशाला में विकसित कर पाने की उम्मीद में हैं।

Infertility

गर्भावस्था में धूम्रपान से बेटियों में बांझपन Hindustan: 20190403)

http://epaper.livehindustan.com/textview_18858_70558934_4_18_03-04-2019_1_0.html

न्यूयॉर्क। हफ्ते में एक घंटा टहलने से बुजुर्गों को कई तरह की दर्द संबंधी परेशानियों से राहत मिल सकती है। एक हालिया शोध में दावा किया गया है कि गठिया, दर्द, घुटने का अकड़ना, कूल्हे, एड्रियों या अन्य तरह के दर्द से परेशान बुजुर्गों के लिए छोटे वॉक काफी कारगर साबित हो सकते हैं।

अमेरिका की यूनिवर्सिटी फिनबर्ग स्कूल ऑफ मेडिसिन में किए गए शोध के अनुसार हफ्ते में एक घंटा टहलने से बुजुर्गों की दर्द संबंधी बीमारियों को कम हो सकती है। शोधकर्ता डीरेथी ने कहा, हफ्ते में एक घंटा टहलने के लिए रोज 10 मिनट तक टहलना काफी है।

नई दिल्ली | हिंदी

गर्भावस्था में धूम्रपान करने को लेकर महिलाओं को कई बार चेताया गया है। गर्भवती महिला के धूम्रपान करने से बच्चों में दिल की बीमारी और अन्य कई तरह की परेशानियां होने का खतरा रहता है। एक हालिया अध्ययन में पता चला है कि गर्भावस्था के दौरान धूम्रपान करने से जन्म लेने वाली बेटियों में आगे चलकर बांझपन की समस्या हो सकती है।

बढ़ सकती है बेटियों की परेशानी : यूनिवर्सिटी ऑफ कैम्ब्रिज में किए गए इस शोध में कहा गया है कि गर्भावस्था के दौरान धूम्रपान करने का खतरा कहीं

शोध

- ओवरियन फॉलिकल की मात्रा में आती है कमी
- बेटियों में जल्द रजोनिवृत्ति का खतरा बढ़ सकता है



ज्यादा घातक है। यह एक महिला के नानी-दादी बनने के सपने को खत्म कर सकता है। इंग्लैंड में दस में से एक महिला यानी लगभग 65 हजार महिलाएं गर्भावस्था के दौरान धूम्रपान करती हैं। साइंस जर्नल में प्रकाशित इस शोध के अनुसार गर्भावस्था के दौरान जो महिलाएं धूम्रपान करती हैं उनसे

होने वाली बेटियों को भविष्य में बांझपन का सामना करना पड़ सकता है, जिससे उनका मां बनने का सपना टूट सकता है।

ऐसे किया परीक्षण : शोधकर्ताओं ने चूहों पर प्रयोग किया। गर्भवती चूहों को कम ऑक्सीजन वाली हवा में सांस लेने दिया गया। इसे हैपोकिसिया कहा जाता है,

जैसे धूम्रपान करने वाली महिलाओं के भ्रूण को ऑक्सीजन कम मिलती है। जब इन चूहों से मादा चूहों का जन्म हुआ तो उनमें ओवरियन फॉलिकल कम पाए गए। शोधकर्ताओं ने कहा कि चूहों के गर्भ की बनावट इंसानों से काफी मेल खाती है।

जल्द रजोनिवृत्ति का खतरा : वैज्ञानिकों के अनुसार धूम्रपान करने वाली महिलाओं की बेटियां को बांझपन के साथ जल्दी रजोनिवृत्ति होने का भी खतरा होता है। शोधकर्ताओं ने देखा कि कम ऑक्सीजन लेने वाले चूहों से जन्में मादा चूहों के ओवरियन फॉलिकल में चार महीने बाद 30 फोसदी की कमी आ गई।

घूमने और भोजन चखने के लिए 38 लाख वेतन

गजब

नई दिल्ली | हिंदी

अगर आप भी दुनिया घूमने और तरह-तरह के पकवान खाने के शौकीन हैं तो जल्दी ही आपकी यह इच्छा पूरी हो सकती है। यूके स्थित एक कंपनी विभिन्न जगहों पर घूमने और शाकाहारी खाना खाने के लिए 50 हजार यूरो (38 लाख 72 हजार रुपए) तक वेतन देगी।

वाइब्रेट वेगन कंपनी ने एक नौकरी के लिए विज्ञापन दिया है जिसमें डायरेक्टर ऑफ टेस्ट के पद के लिए आवेदन मांगे गए हैं। इस पद पर नियुक्त होने वाले व्यक्ति को कई देशों में घूम-घूम कर शाकाहारी खाने का स्वाद चखना पड़ेगा। कंपनी आपको भारत, चीन, तुर्की, चिली, मेक्सिको और जापान जैसे देशों में भोजन चखने के लिए भेजेगी। यहां भोजन खाने के बाद आपको कंपनी को फीडबैक भेजना पड़ेगा। वाइब्रेट वेगन एक सोशल इंटरप्राइज कंपनी है जो शाकाहारी खाद्य उत्पादों पर काम करती है। यह कंपनी युद्धग्रस्त इलाकों में बच्चों के लिए खाना भेजने का काम करती है।

कितना लगेगा समय : विभिन्न देशों के इस टूर को पूरा करने में चार माह का समय लगेगा। इस दौरान आने-जाने, रहने, खाने और घूमने का सारा खर्च

04 माह तक करना होगा विभिन्न देशों को दौरा

28 दिन की छुट्टियां भी मिलेंगी इस नौकरी के दौरान

उम्मीदवारों का इंटरव्यू

इस पद के लिए उम्मीदवार का इंटरव्यू लिया जाएगा और तरह-तरह के वॉजनिंग खिलाकर उनके स्वाद के ज्ञान को भी परखा जाएगा। कंपनी के संस्थापक इएन बुक हेमिल्टन ने कहा, हमने पहले कभी ऐसे पद पर किसी को नहीं रखा। हम इस पद पर नियुक्ति को लेकर काफी उत्साहित हैं।

कंपनी द्वारा वहन किया जाएगा। इस दौरान आप जितनी मर्जी उतना शाकाहारी खाना खा सकेंगे। इस नौकरी के लिए 50 हजार यूरो वेतन मिलेगा। इसके अलावा बीमार रहने के दौरान वेतन और 28 छुट्टियां भी मिलेंगी।

ये होनी चाहिए योग्यताएं : इस पद पर नियुक्त होने वाले उम्मीदवार कंपनी को नए शाकाहारी खाद्य उत्पाद बनाने में मदद करेंगे और साथ ही अन्य देशों में नए ब्रांच खोलने में मदद करेंगे। उम्मीदवार को फूड इंडस्ट्री में तीन साल का अनुभव होना चाहिए। इस पद पर हफ्ते में 35 घंटे या उससे ज्यादा समय तक भी काम करना पड़ सकता है।

बच्चों के दांतों से कैंसर का इलाज

नई दिल्ली | हिंदी

बचपन में गिरेने वाले दूध के दांत को संजो कर रखना भविष्य में बहुत लाभदायक हो सकता है। अमेरिका में नेशनल रिसर्च सेन्टर फॉर बायोटेक्नोलॉजी के एक शोध में दावा किया गया है कि बचपन में गिरेने वाले दूध दांतों में मौजूद स्टेम सेल से कैंसर और हृदय संबंधी बीमारियों का इलाज किया जा सकता है।

शोधकर्ताओं के अनुसार बच्चों के दांत पर्यावरण के साथ ज्यादा समय तक संपर्क में नहीं रहते इसलिए ज्यादा

अध्ययन

- दांतों में मौजूद स्टेम सेल से उगाई जा सकेगी नई कोशिकाएं
- शरीर के दूसरे हिस्सों से बोन मैरो निकालने की जरूरत नहीं पड़ेगी

खराब नहीं होते। जबकि, बड़े लोगों के दांत बहुत खराब हो जाते हैं। शोध के अनुसार बच्चों के दांतों में मौजूद स्टेम सेल की मदद से शरीर में आसानी से नई कोशिकाओं को उगाया जा सकता है। बच्चों के दांतों से मिलने वाला स्टेम सेल इलाज में इतना कारगर

साबित हो सकता है कि अब शरीर के दूसरे हिस्से से बोन मैरो निकालने की जरूरत नहीं पड़ेगी।

कई समस्याओं का होगा समाधान : दांतों में मौजूद स्टेम सेल की खोज और उसपर शोध की प्रक्रिया अभी शुरुआती चरण में है, लेकिन भविष्य में इसकी मदद से कैंसर का इलाज करने और न्यूरल कोशिकाएं उगा कर हृदयाघात को रोकने में मदद मिल सकती है। वैज्ञानिकों के अनुसार दांतों में मिलने वाले स्टेम सेल की मदद से हड्डियों को, गुदों को और आंखों की टिश्यू को दोबारा उगाया जा सकता है।

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