DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE Day

Thrusday **20190620**

Ozone pollution

Ozone pollution higher this summer, says CSE (The Hindu: 20190620)

https://www.thehindu.com/news/cities/Delhi/ozone-pollution-higher-this-summer-says-cse/article28079591.ece

Ozone pollution has increased in Delhi-NCR this summer compared to last year, an analysis by the Centre for Science and Environment, Delhi, has found.

"When temperature increases, the rate of production of ozone also increases. It can cause fatigue, breathlessness, and asthma," an official at the System of Air Quality and Weather Forecasting said. Surface ozone is not a primary pollutant, but it is produced due to chemical reactions of nitrogen oxides and carbon monoxide in the presence of sunlight.

According to the analysis, during this summer, the Delhi-NCR region had more days with average ozone levels more than the national air quality limits than the last summer. The CSE tracked the daily ozone data released by the CPCB for Delhi and NCR from April 1 - June15, 2019, to arrive at the conclusion.

"As the air quality index is also beginning to show ozone as a dominant pollutant, it will require strong action to cut down gaseous emissions from combustion sources – vehicles and industry," said Anumita Roychowdhury, Executive Director (research and advocacy) of CSE, who did the analysis.

Expert medical team

Bihar AES deaths: SC to hear plea seeking formation of expert medical team (The Hindu: 20190620)

https://www.thehindu.com/news/national/bihar-aes-deaths-sc-to-hear-plea-seeking-to-form-expert-team-for-treatment-of-kids/article28075250.ece

 A Vacation Bench agreed to hear the plea on June 24 after the petitioner's counsel sought an urgent listing of the matter.

The Supreme Court on June 19 agreed to hear a plea seeking a direction to the Centre to urgently constitute a team of medical experts for the treatment of the children in Bihar's Muzaffarpur, who are suffering from suspected Acute Encephalitis Syndrome (AES), which has claimed more than 100 lives.

A Vacation Bench of Justices Deepak Gupta and Surya Kant agreed to hear the plea on June 24 after the petitioner's counsel sought an urgent listing of the matter.

The plea also sought a direction to the Centre for providing all necessary medical equipment and other supports for the effective treatment of the children suffering from the epidemic disease.

The petition, filed by advocate Manohar Pratap, claimed that he was deeply pained and saddened by the deaths of more than 126 children, mostly in the age group of one to 10 years, in the past week and the figures were rising day by day.

"The deaths of children are a direct result of negligence and inaction on the part of the respective State governments of Bihar, Uttar Pradesh and Union of India in handling the epidemical situation which arises every year due to outbreak of AES also called Japanese encephalitis," the plea said.

It claimed that thousands of young children were losing their lives every year from the disease but the governments (State and Centre) had done nothing to prevent its spread.

126 children die in one week

"This year i.e. in 2019, the epicentre of the said disease is Muzaffarpur in Bihar where more than 126 children have lost their lives in past one week. Media reports shows that there is acute shortage of doctors, medical facilities, intensive care units and other medical equipment in the hospitals in nearby areas and children are dying in hospitals due to lack of required facilities," the petition said.

The petitioner sought a direction to the Centre for constituting a board of experts in the medical field and immediately send it to the place of the outbreak i.e. Muzaffarpur, to review and assist the emergency situation.

He had also asked the apex court to direct the Centre and the Bihar government for immediately arranging 500 stationary and 100 mobile intensive care units (ICU) with required medical

professionals to deal with the patients from the remote areas and the emergency situation which occurred due to the AES outbreak.

The plea had sought a direction to the Bihar government to notify an extraordinary order directing all the private medical institutions in the affected area to admit and provide treatment free of cost to the patients.

The petitioner also sought directions for all possible steps to stop the disease outbreak in the earlier epicentre, Gorakhpur in Uttar Pradesh, and to create awareness about the preventive steps and first-aid, which requires to be given to the patient in the case of AES.

He has asked for a compensation of ₹10 lakh to members of the family of the deceased who have died due to negligence of the state machinery.

The official figure of deaths is 105, with both the SKMCH hospital and the privately owned Kejriwal hospital in Muzaffarpur reporting one casualty during the night.

Emergency review meeting held

Bihar Chief Minister Nitish Kumar, who had been in New Delhi since June 15, returned to the State capital on June 17 evening and held an emergency review meeting on the AES situation with officials.

Instructions were also issued for equipping primary health centres with necessary facilities so that children in remote areas with symptoms of AES could be provided with medical attention closer home as, in several cases, the time involved in travelling to the district headquarters and seeking admission to hospitals led to worsening of the condition.

A team of Union health department officials visited the district over the weekend and clarified that AES was an umbrella of symptoms, unlike Japanese Encephalitis which was a viral infection.

The symptoms include high fever, convulsions and extremely low level of sugar in the blood. Among the factors said to trigger the syndrome are malnutrition.

Moreover, the litchi grown in Muzaffarpur is said to contain a toxin which can cause a drop in blood sugar levels if consumed by a malnourished child.

Acute encephalitis syndorme (AES) i

Top court to take up plea on sending team to Bihar (The Tribune: 20190620)

https://www.tribuneindia.com/news/nation/top-court-to-take-up-plea-on-sending-team-to-bihar/790334.html

Inconsolable: Family members mourn the loss of their child to Acute Encephalitis Syndrome (AES) at a hospital in Muzaffarpur. pti

As more than 100 children die of suspected acute encephalitis syndorme (AES) in Bihar, the Supreme Court today agreed to hear on June 24 a PIL seeking direction to the Centre to intervene and urgently send a team of medical experts to Muzaffarpur for treatment of children suffering from the disease.

A vacation Bench headed by Justice Deepak Gupta agreed to take up the issue on Monday after the petitioner's counsel sought an urgent listing of the matter.

Filed by advocate Manohar Pratap, the PIL sought direction to the Centre to provide all necessary medical help and support for effective treatment of children suffering from the

epidemic. The petitioner also demanded compensation of Rs 10 lakh to surviving members of family of each child who died due to negligence of the state machinery.

Pratap claimed he was deeply pained and saddened by the deaths of children, mostly in the age group of one to 10 years, in the past one week and the figures were rising by the day.

“The deaths of children are a direct result of negligence and inaction on part of the respective state governments of Bihar, UP and Union of India in handling the epidemical situation, which arises every year due to outbreak of AES also called Japanese encephalitis,” the plea alleged. It said thousands of young children were losing lives yearly from the disease but the governments (state and Centre) had done nothing to prevent its spread.

"This year… the epicenter is Muzaffarpur in Bihar…. Media reports show there is acute shortage of doctors, medical facilities, intensive care units and other medical equipment in the hospitals in nearby areas and children are dying in hospitals due to lack of required facilities," the petition said.

The petitioner sought direction to the Centre for constituting a board of experts in the medical field and immediately sending it to the place of the outbreak i.e. Muzaffarpur, to review and assist the emergency situation.

The plea also sought direction to the Central and Bihar governments for immediately arranging 500 stationary and 100 mobile intensive care units with required medical professionals.

Toll mounts to 113

Muzaffarpur: Fresh deaths due to acute encephalitis syndrome have been reported in Muzaffarpur district, taking the total number of casualties to 113. The deaths took place at Shri Krishna Medical College and Hospital (SKMCH), where 20 fresh cases were brought since Tuesday night. The number of children admitted to the hospital with the disease is 372 since June 1, the district administration said. The SKMCH has reported 93 casualties so far and only 118 children have been discharged after treatment. PTI

Centre rushes paediatricians to Muzaffarpur

Facing heat on unabated child deaths in Muzaffarpur, the Centre on Wednesday rushed five teams of senior paediatricians and paramedics to the district to further strengthen containment and disease management efforts.

Ten pediatricians (including five senior consultants) and five paramedics from Ram Manohar Lohia Hospital, Safdarjung and Lady Hardinge Medical Colleges will be part of the five teams.

“The teams will strengthen the clinical care to the existing patients in the hospitals and also strengthen surveillance of cases from the peripheral areas,” Health Minister Harsh Vardhan said. TNS

Encephalitis Syndrome

Here's all you need to know about Acute Encephalitis Syndrome (The Tribune: 20190620)

https://www.tribuneindia.com/news/health/here-s-all-you-need-to-know-about-acute-encephalitis-syndrome/790129.html

Acute encephalitis syndrome (AES), which has claimed more than 100 lives in Bihar's Muzaffarpur region, is a serious neurological illness that causes inflammation of the brain.

Symptoms of AES, colloquially known as "chamki bukhar", may include headache, fever, confusion, stiff neck and vomiting. The disease most commonly affects children and young adults and can lead to mortality.

According to the National Health Portal (NHP), viruses are the main causative agents in AES cases, although other sources such as bacteria, fungus, parasites, chemicals, toxins and non-infectious agents have also been blamed.

The Japanese encephalitis virus (JEV) is a major cause of AES in India (ranging from 5-35 per cent), according to the NHP.

Viruses, including herpes, influenza A, West Nile and dengue, are the some of the other causes of sporadic outbreaks of AES in India, the portal said.

However, the causes and manner of the disorder in a large number of AES cases still remain unidentified.

"The recent outbreak of encephalitis in Muzaffarpur seems like a viral. However, we are yet to find out what virus it is," Dr Sudip Das, consultant paediatrician, Columbia Asia Hospital, Gurgaon, told PTI.

"There are many theories behind it. There is one study that suggests that deaths occurred due to acclimatisation failure in children rather than the environmental factors such as the heat wave and poor rainfall in the area," said Das.

According to Dr Manish Mannan, head of department, Paediatrics and Neonatology in Gurgaon's Paras Hospital, there are two competing theories for the epidemic -- one, caused by heat stroke, and two, caused by a toxin in the locally-grown fruit, litchi.

"It is said that malnourished children who ate litchis and went to sleep without a meal fell ill in the pre-monsoon season between 4 am to 7 am," Mannan told PTI.

"People now know what encephalitis is but the root cause behind it is still unknown. Studies have been conducted across every lab to know the reason behind the near-fatal disease. The encephalitis, which happened in Muzaffarpur, is an outbreak and had happened in the past too," he added.

There were more than 44,000 cases and nearly 6,000 deaths from encephalitis in India between 2008 and 2014, said a 2017 study published in The Indian Journal of Medical Research (IJMR).

In 2016, over 125 children were reported to have died in one hospital in Gorakhpur in UP alone, researchers wrote in the journal. They said the patients often report acute onset of fever and

altered consciousness, with a rapidly deteriorating clinical course, leading to death within hours.

Outbreaks of the acute neurological illness with high mortality among children occur annually in Muzaffarpur, the country's largest litchi cultivation region.

Heat, humidity, malnourishment, the monsoon and pesticides have all been considered potential causes.

A study published in 2017 in The Lancet journal claimed that eating litchi fruit may be associated with acute toxic encephalopathy—the mysterious brain disease that has caused hundreds of unexplained deaths among children in recent years in Bihar.

In the hospital-based surveillance, researchers from the National Centre for Disease Control in New Delhi and the US Centers for Disease Control and Prevention undertook laboratory investigations to assess potential infectious and non-infectious causes of this acute neurological illness.

The study found litchi consumption and the absence of an evening meal in the 24 hours preceding illness onset were associated with illness.

The absence of an evening meal significantly increased the effect of eating litchis on illness. Tests for infectious agents and pesticides were negative.

The possible reason behind the death among children, according to the study, was hypoglycaemia -- low levels of glucose in the blood.

These children were from the poorer sections of society where malnourishment is rampant. The children spend the day in orchards eating litchis—sometimes unripe or half-ripe ones too.

The children return home in the evening and sometimes skip dinner. This leads to night-time hypoglycaemia, the researchers wrote in the journal.

According to the researchers, lack of food combined with toxins hypoglycin A and methylenecyclopropylglycine (MCPG) present in litchi seeds may be the cause of the illness. PTI

AIIMS to begin study on cause of AES

As death toll rises, AIIMS to begin study on cause of AES (Hindustan Times: 20190620)

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

Experts say that in nearly 40% encephalitis cases, the cause remains unknown

From page 01 NEW DELHI: The All India Institute of Medical Sciences (AIIMS), Delhi, is set to begin a comprehensive study into the actual cause of acute encephalitis syndrome (AES) that is annually killing thousands of children under the age of 15 in the country.

Relatives visit children suffering from AES in a hospital ward in Muzaffarpur on Wednesday.

The study, which is scheduled to begin next month, is not outbreak-related and will only focus on causes that trigger the syndrome in children admitted at AIIMS. Over 113 children have died of AES in Bihar hospitals since June 5.

Experts say that in nearly 40% AES cases, the cause remains unknown because of inadequate etiological (to know the cause of the disease) studies in the field.

“The cases are put under the ‘unknown cause’ category, and there’s no way to know what caused AES. The reasons could be many, this is probably the first time a single project is including viruses, bacteria, fungi, parasites and auto-immune disorders,” said Dr Sheffali Gulati, chief of child neurology division in department of paediatrics at AIIMS, Delhi.

“The project needs special equipment that we recently procured, and work is going to start next month. We will collect blood and cerebro-spinal fluid samples to know the actual cause.”

As part of the study that will target multiple conditions in one experiment, the researchers will cover a wide spectrum of infections, including dengue, chikungunya, malaria, herpes, Japanese B encephalitis, meningitis, E coli, H influenza, pneumonia etc.

AIIMS’ Centre for Advanced Research and Excellence will be handling the project that is being jointly funded by the Union ministry of health and family welfare and India Infrastructure Finance Company Limited (IIFCL), as a part of its corporate social responsibility.

“The AES study is one of 11 projects that the centre will be working on. Since litchi fruit is a known cause, I am looking for collaborators to include environmental toxins to make the study comprehensive,” Gulati said.

The research will study acute, subacute and chronic encephalopathy/ encephalitis syndrome affecting infants, children and adolescents admitted at AIIMS. Experts from the hospital’s microbiology department will also be a part of the project.

Though there is no formal registry in place, the hospital on average gets 15-20 cases of children with AES in a month, with the number going up during monsoon. Apart from Delhi-National Capital Region, cases come from Uttar Pradesh, Bihar, West Bengal, Gujarat, Rajasthan, Punjab, Haryana, and even countries like Bangladesh.

As part of the project, there is a plan to put in place a national registry for AES cases so that exact numbers can be documented.

Experts in the field say studies involving multiple conditions have been done in the past to know the cause of AES. According to a former National Centre for Disease Control official, “There have happened some such studies in the past, which is why in about 50% of the cases we do know what’s causing the syndrome. However, we need more research in the area and the AIIMS study will surely help.”

Dinosaur Bones (The Asian Age: 20190620)

http://onlineepaper.asianage.com/articledetailpage.aspx?id=13222767

Dinosaur bones are home to unique microscopic life

Washington: Scientists have discovered modern microbes living in fossilised dinosaur bones, a finding that further quashes hopes of creating clones of the ancient prehistoric animals from preserved proteins. Some paleontologists have reported finding dinosaur bones that contain exceptionally preserved traces of the protein collagen, along with soft tissues like blood and bone cells.

It has been speculated that these preserved proteins can be used to resurrect the extinct dinosaurs. Scientists from Field Museum in the US who looked for preserved collagen, the protein in bone and skin, in dinosaur fossils.

Instead of finding protein, the researchers found huge colonies of modern bacteria living inside the dinosaur bones.

"This is breaking new ground — this is the first time we've discovered this unique microbial community in these fossil bones while they're buried underground," said Evan Saitta, a postdoctoral researcher at the Field Museum. "And I would say that it's another nail in the coffin in the idea of dinosaur proteins getting preserved intact," said Saitta.

"Some molecules can survive in the fossil record, but I suspect proteins can't; they're unstable on those timescales in the conditions of fossilization," explains Saitta.

"There's been an uptick in interest in these supposed dinosaur proteins," said Saitta, who set out to try to independently verify the presence of collagen in dinosaur fossils.

Researchers collected dinosaur fossils under as sterile conditions as possible so that new proteins or bacteria would not be introduced to the fossils and skew the results.

The team collected 75-million-year-old fossils from Centrosaurus — a smaller cousin of Triceratops — and then took the bones back to various laboratories to examine them. But they couldn't find the collagen proteins present in the Centrosaurus fossils. — *PTI*

> Scientists have discovered modern microbes living in fossilised dinosaur bones, quashing hopes of creating clones of the prehistoric animals from preserved proteins. Instead of finding protein, the study found huge colonies of modern bacteria living in their bones.

> The team collected 75-million-year-old fossils from Centrosaurus and then took the bones back to various laboratories to examine their organic composition but couldn't find the collagen proteins present in fresh bones

Autistic adolescents

Parental support essential when autistic adolescents want to learn to drive: Study (New Kerala: 20190620)

https://www.newkerala.com/news/read/160354/parental-support-essential-when-autistic-adolescents-want-to-learn-to-drive-study.html

Parental support plays a very important role when autistic adolescents want to learn to drive, recent findings suggest.

Autistic adolescents need the support of their parents or guardians to prioritise independence so that they are prepared for learning to drive, according to a study of specialised driving instructors who have worked specifically with young autistic drivers.

Driving instructors also emphasised the need to develop and refine best practices to guide the assessment and delivery of highly individualised instruction for autistic adolescents.

According to researchers, driving instructors are an important resource for families, especially for those with autistic adolescents learning to drive.

However, because not much is known about the specific experience of teaching autistic adolescents how to drive, this limits the ability to provide adolescents and families with proper guidance preparing for the learning-to-drive process.

To help bridge this gap, researchers conducted in-depth interviews with specialised driving instructors who had experience working with autistic adolescents and young adults.

This is the first study to examine the process and experience of driving instructors who provide behind-the-wheel training specifically for this population.

The study revealed a set of common themes that underscored the importance of parents of autistic adolescents in preparation for the learning-to-drive process, with driving instructors viewing parents as essential partners in supporting their efforts in teaching driving skills and promoting independence.

Findings were published in the Journal of 'Autism in Adulthood.'

Participating instructors said that parents can support and prioritise independence by encouraging their autistic adolescents to develop life skills such as mowing the lawn, cooking, and taking public transportation, before learning to drive.

Although the driving instructors identified a need to develop and refine best practices for assessment and instruction, they recognised that specific approaches must be tailored to meet the unique needs of each autistic adolescent driver, reflecting the spectrum that affects each adolescent differently.

Other suggestions from the instructors involved in this study included using of state-level vocational rehabilitation services to provide financial support for instruction, identifying and promoting prerequisite life skills prior to undertaking driving, parent-supervised driving instruction in partnership with professional driving instruction, and tailoring instruction to address the particular needs of learner drivers.

Obtaining a driver's license is a major milestone in the transition to adulthood. This milestone increases the independence and mobility of adolescents, which can potentially lead to improved access to educational, occupational training, social, and community engagement opportunities.

According to previous research, nearly one-third of autistic adolescents obtain a driver's license by the time they are 21 years old, which may improve their ability to transition into independent adulthood.

Poor oral hygiene

Poor oral hygiene associated with risk of several chronic diseases (New Kerala: 20190620)

https://www.newkerala.com/news/read/160273/poor-oral-hygiene-associated-with-risk-of-several-chronic-diseases.html

It is important to pay attention to oral care as poor oral health can increase the risk of hepatocellular carcinoma (HCC) by 75pc , finds study.

"Poor oral health has been associated with the risk of several chronic diseases, such as heart disease, stroke, and diabetes", explained Dr Haydee WT Jordao, lead author of the study.

The study published in 'United European Gastroenterology Journal', analyzed a large cohort of over 469,000 people in the United Kingdom, investigated the association between oral health conditions and the risk of a number of gastrointestinal cancers, including liver, colon, rectum and pancreatic cancer.

Models were applied to estimate the relationship between cancer risk and self-reported oral health conditions, such as painful or bleeding gums, mouth ulcers, and loose teeth.

Whilst no significant associations were observed on the risk of the majority gastrointestinal cancers and poor oral health, a substantial link was found for hepatobiliary cancer.

"There is inconsistent evidence on the association between poor oral health and specific types of gastrointestinal cancers, which is what our research aimed to examine," said Dr Jordao.

Of the 469,628 participants, 4,069 developed gastrointestinal cancer during the (average) six-year follow up. In 13 per cent of these cases, patients reported poor oral health.

Participants with poor oral health were more likely to be younger, female, living in deprived socioeconomic areas and consumed less than two portions of fruit and vegetables per day.

The biological mechanisms by which poor oral health may be more strongly associated with liver cancer, rather than other digestive cancers, is currently uncertain. One explanation is the potential role of the oral and gut microbiome in disease development.

"The liver contributes to the elimination of bacteria from the human body", stated Dr Jordao.

"When the liver is affected by diseases, such as hepatitis, cirrhosis or cancer, its function will decline and bacteria will survive for longer and therefore have the potential to cause more harm. One bacteria, Fusobacterium nucleatum, originates in the oral cavity but its role in liver cancer is unclear. Further studies investigating the microbiome and liver cancer are therefore warranted," said Dr Jordao.

Another theory explaining the higher cancer risk due to poor oral health suggested that participants with a high number of missing teeth may alter their diet, consuming softer and potentially less nutritious foods, which in turn influence the risk of liver cancer

5 easy exercises

Calm your muscles at workplace with these 5 easy exercises (New Kerala: 20190620)

https://www.newkerala.com/news/read/160262/calm-your-muscles-at-workplace-with-these-5-easy-exercises.html

Do you feel exhausted while sitting on a chair in front of a desktop for eight hours without any physical activity? Do you know that this can cause major health issues?

Don't worry, there is a way to get out of the problem. With the help of five simple and subtle exercise moves, which don't even require any equipment, one relax even while sitting on a chair, reported Forbes.

After constantly sitting for eight to nine hours, your body may tend to get stiff. In that case, there are several postures that you need to adopt while sitting on the chair to get rid of that stiffness.

Cat/Cow Pose

To undo some of the stiffness, start by placing your feet flat on the floor. As you slowly bend down move your pelvis forward and back, focus on working out your core muscles to feel that your body is getting loose.

Maintain your breathing while you perform the exercise and tilt the top of your pelvis back, drawing your belly button toward your spine like one would in a cat pose. Repeat it several times for better relaxation.

Pigeon Pose

Next exercise is that you need to move onto seated pigeon pose. Lift your right knee and place it over your left thigh so that your ankle bone rests on the top of your knee. Then you need to stretch on your right hip for better muscle relaxation.

Staff Pose

For this, you need to move forward towards the edge of the chair on which you are seated. Just spread your legs and extend it out in front with your heels resting on the floor and toes pointing toward the roof. Then take your right ankle and put it over your left.

Then as you inhale and exhale, follow the exercise until you feel a stretch in the hamstring muscles on your left side. You may also feel this stretch in your glutes and IT band.

Our bodies tend to react under tensions and work-related problems. So not just our front body gets affected by sitting for a longer duration, even our shoulders, neck, backbone also gets affected.

Seated Neck Rolls

To counteract this problem, one can start with easy neck related exercises. Put your hand on the arms of the hair and try to move your neck. Firstly start by bringing your right ear to the right shoulder, then to the centre and later ending it up with the left shoulder touching your left ear.

Then after doing this, you can easily rotate your neck 360 degrees clockwise and anti-clockwise for better muscle relaxation.

Reverse Prayer Pose

This exercise is one of the most effective ways to give rest to your arms, forearms and wrist pain while you constantly type or move the mouse.

In this version, you need to move forward again at the edge of the chair. Take your palms and arms behind, towards your lower back with fingers pointing upwards.

With this exercise, you need to feel your ribcage lift and lower with each breath.

This exercise offers a very slight backbend, which can help you reenergize and clear your thinking.

Just try out any of the above-mentioned moves while you feel tired and exhausted after sitting for a long time in front of a desktop. Try to calm your muscled down with these simple any time exercises.

Breast cancer

Breast cancer raises heart disease risk (New Kerala: 20190620)

https://www.newkerala.com/news/read/160145/breast-cancer-raises-heart-disease-risk.html

Researchers have found that postmenopausal women with breast cancer are at greater risk of developing cardiovascular disease.

"Heart disease appears more commonly in women treated for breast cancer because of the toxicities of chemotherapy, radiation therapy and use of aromatase inhibitors, which lower estrogen," said JoAnn Pinkerton, Professor at the University of Virginia.

The cardiovascular effects may occur more than five years after radiation exposure, with the risk persisting for up to 30 years.

"Heart-healthy lifestyle modifications will decrease both the risk of recurrent breast cancer and the risk of developing heart disease," Pinkerton said.

The goal of the study was to compare and evaluate risk factors for cardiovascular disease in postmenopausal women who are survivors of breast cancer and women without breast cancer.

For the findings, more than 90 postmenopausal breast cancer survivors were compared with 192 postmenopausal women.

The researchers found that postmenopausal women who are survivors of breast cancer showed a markedly stronger association with metabolic syndrome, diabetes, atherosclerosis, hypertriglyceridemia and abdominal obesity, which are major risk factors for cardiovascular disease.

The risk of cardiovascular mortality similarly increased to match death rates from cancer itself.

"Women should schedule a cardiology consultation when breast cancer is diagnosed and continue with ongoing follow-up after cancer treatments are completed," she added.

The study was published in the Menopause The Journal of the North American Menopause Society.

Drug

Drug to boost growth in kids with dwarfism shows promise (New Kerala: 20190620)

A drug that helps regulate bone development has been found to boost growth rates in children with achondroplasia, the most common type of dwarfism, in a global trial.

The patients' average boost in height to about 6 cm (2.4 inches) per year was close to growth rates among children of average stature, and the side effects of the drug were mostly mild, said study co-author Julie Hoover, Associate Professor at the McKusick-Nathans Institute of Genetic Medicine, Johns Hopkins University.

"Right now, the results of the study show an impact on growth, and this effect is sustained, at least over nearly four years in this trial," Hoover said.

Results of the phase-2 trial published in the New England Journal of Medicine showed that the drug, vosoritide, was generally well tolerated by patients.

On average, participants in the trial grew at a 50 per cent faster compared to baseline with no adverse effects on body proportion, the results showed.

Achondroplasia is caused by over-activity of a signal that stops growth, and could be likened to overwatering a plant, said lead author Ravi Savarirayan, Professor at Melbourne's Murdoch Children's Research Institute in Australia.

"This drug basically kinks the hose so that the plant gets the right amount of water and can resume regular growth," Savarirayan said.

Achondroplasia is a genetic bone disorder affecting about one in every 25,000 infants.

It is caused by a mutation in the FGFR3 gene that impairs the growth of bones in the limbs, the spine, and base of the skull.

The most common health complications experienced by children with achondroplasia are spinal cord compression, spinal curvature and bowed legs. About half of these children will need spinal or other surgery.

Unlike other treatments - such as growth hormone and limb-lengthening surgery - that focus on symptoms, vosoritide focuses on the underlying cause of achondroplasia and directly counteracts the effect of the mutation that slows growth.

The study ran over four years across research centres in Australia, France, Britain and the US with 35 children assigned to one of four groups receiving daily subcutaneous doses of the drug in increasing amounts.

The results showed vosoritide demonstrated dose-dependent increases in centimetres grown per year during the first six months, with improvements maintained over the study extension period of a further three years.

Vitamin D

How vitamin D helps fight treatment-resistant cancer (Medical News Today: 20190620)

https://www.medicalnewstoday.com/articles/325510.php

The main cause of failure in chemotherapy treatments is that tumors develop resistance to anticancer drugs. Now, a new study reveals how vitamin D can help to overcome this problem.

Scientist studying cell cultures in a petri dish under the microscope

Using cultured tumor cells, scientists found an 'active metabolite of vitamin D3' that kills cancer cells.

Researchers from South Dakota State University, in Brookings, have demonstrated that calcitriol and calcipotriol, two active forms of vitamin D, can block a mechanism that enables cancer cells to become drug-resistant.

The mechanism is a drug transporter protein called multidrug resistance-associated protein 1 (MRP1). The protein sits in the cell wall and drives a pump that ejects cancer drugs out of the cell.

The researchers showed that calcitriol and calcipotriol can selectively hone in on cancer cells that have too much MRP1 and destroy them.

Surtaj Hussain Iram, Ph.D. — an assistant professor of chemistry and biochemistry at South Dakota State University — is the senior study author of a recent Drug Metabolism and Disposition paper about the findings.

He states that "Several epidemiologic and preclinical studies show the positive effect of vitamin D in reducing cancer risk and progression, but we are the first to discover its interaction with drug transporter protein and its ability to selectively kill drug-resistant cancer cells."

Iram explains that calcitriol and calcipotriol cannot kill "naive cancer cells," which have not yet developed chemoresistance. However, once the cells become drug-resistant, they fall prey to calcitriol and calcipotriol.

Transporter proteins and multidrug resistance

Drug transporter proteins drive the cell processes that absorb, distribute, and expel drugs from the body.

Cancer cells that develop resistance to chemotherapy drugs often overexpress, or overproduce, transporter proteins. This abundance is the primary cause of chemoresistance.

Studies have linked overexpression of MRP1 with multidrug resistance in cancers of the breast, lung, and prostate.

The fact that calcitriol and calcipotriol can kill chemoresistant cancer cells is an example of what scientists describe as "collateral sensitivity."

Vitamin D may prolong life in people with cancer

Vitamin D may prolong life in people with cancer

Taking vitamin D supplements does not cut cancer risk, but it can help people who develop the disease to live longer, researchers find.

Collateral sensitivity is the "ability of compounds to kill" multidrug-resistant cells but not the parent cells that they came from.

Around 90% of chemotherapy treatment failures are due to acquired drug resistance. Multidrug-resistant cells have become resistant to drugs that differ, not only in structure, but also in the way that they act.

The main cause of such resistance are efflux pumps, which drive out so much of the drug that the level that remains in the cell is too low be effective.

'Achilles' heel of drug-resistant cancer cells'

However, while overexpression of MRP1 is an advantage in the sense that it enables cancer cells to pump out chemotherapy drugs, it is also a potential disadvantage, in that targeting the protein can knock out the pump.

As Iram points out, "Gaining strength in one area usually creates weakness in another area — everything in nature comes at a price."

"Our approach," he adds, "is to target the Achilles' heel of drug-resistant cancer cells through exploiting the fitness cost of resistance."

Using cultured cancer cells, he and colleagues tested eight compounds that previous studies had identified as being able to interact with MRP1.

Of the eight compounds, they found that "the active metabolite of vitamin D3, calcitriol, and its analog calcipotriol" both blocked MRP1's transport function and also only killed cells that overexpressed the transporter protein.

"Our data," the authors conclude, "indicate a potential role of calcitriol and its analogs in targeting malignancies in which MRP1 expression is prominent and contributes to [multidrug resistance]."

Wide-ranging implications

Iram says that their findings also have implications for the treatment of many other diseases.

MRP1 doesn't just reduce the effectiveness of cancer drugs, it can also weaken the effect of antibiotics, antivirals, anti-inflammatories, antidepressants, and drugs that treat HIV.

In addition, MRP1 is just one type of transporter protein. It belongs to a large family — called ABC transporters — that move substances in and out of all kinds of cells, not only in animals, but also in plants.

In fact, there are more ABC transporter proteins in plants, meaning that the findings could also have wide-ranging implications in food and agriculture.

"If we can get a better handle on these transporters, we can improve drug efficacy. Patients can take less medication yet get the same effect because the drugs are not being pumped out so much."

Lyme disease

Lyme disease: Why does joint pain persist (Medical News Today: 20190620)

https://www.medicalnewstoday.com/articles/325504.php

Researchers have found clues that might lead to a treatment for Lyme arthritis. The secret may lie in the walls of the bacterium that causes the condition.

Tick sign

Ticks are responsible for spreading Lyme disease.

Lyme disease occurs when a person becomes infected with a tick-borne bacterium called Borrelia burgdorferi.

Initial symptoms typically include general fatigue, fever, skin rashes, and headaches.

Although doctors can often treat Lyme disease with antibiotics, if they do not catch it early, the bacteria can cause long-term issues with the individual's joints.

In fact, following infection with B. burgdorferi, about 60% of people develop a condition called Lyme arthritis, the hallmarks of which are inflamed and painful joints.

Lyme arthritis can persist for months or even years in some cases.

Researchers are still unsure why joint symptoms can continue long after antibiotics have destroyed the bacteria.

Lyme disease in numbers

However, the true number of cases is likely to be much higher. In fact, the CDC estimate that there might be up to 300,000 cases each year.

According to the CDC, reports of Lyme disease have tripled since the late 1990s, and overall, tick-borne diseases are becoming more prevalent. This increase is due, at least in part, to rising global temperatures.

Due to the steady growth in the number of cases, scientists are keen to uncover more effective ways of treating the long-term symptoms.

One researcher who has embarked on this mission is Brandon Jutras from Virginia Tech in Blacksburg. He and his team have the spent the last few years trying to understand what drives Lyme arthritis.

Among the scientists who contributed to the most recent work was Prof. Allen Steere, one of the doctors who discovered and named Lyme disease.

The researchers published their most recent findings in the journal Proceedings of the National Academy of Sciences of the United States of America.

Clues in cell walls

Specifically, the team wanted to understand why some cases of Lyme arthritis do not respond to treatment. For some people, even when there appears to be no obvious infection, symptoms persist.

As the authors write, "Excessive, dysregulated host immune responses are thought to play an important role in this outcome, but the underlying mechanisms are not completely understood."

To investigate, they used samples that they had taken from people with Lyme disease who had not responded to antibiotic treatment.

They were interested in peptidoglycan (PG), a component of the protective layer that surrounds bacteria. Although most bacterial species synthesize PG, B. burgdorferi's version of PG (PGBb) has unusual chemical features.

These 10 essential oils can kill persistent Lyme disease

These 10 essential oils can kill persistent Lyme disease

A recent study concludes that several essential oils might kill persistent forms of Lyme disease.

Additionally, most species of bacteria recycle their PG as they multiply, but B. burgdorferi do not have the enzymes necessary to reuse it. Instead, PGBb breaks off into fragments that remain floating free in the environment.

The scientists wondered whether these fragments might help explain why inflammation persists, even after antibiotics have eradicated the bacteria.

An immune respns

The researchers showed that the immune system mounts a response to PGBb fragments. They found that markers of this immune activity were significantly higher in the synovial fluid from the participants' joints than in their blood serum.

To further investigate, the scientists purified PGBb, making sure that they removed all other traces of the bacteria. Then, they injected the sample into mice. As expected, within just 24 hours, the animals' joints became inflamed.

Jutras is keen to design interventions that can destroy PGBb in the joints of people with Lyme disease.

"This discovery will help researchers improve diagnostic tests and may lead to new treatment options for patients [...] with Lyme arthritis."

Lead author Brandon Jutras

The scientists hope that the findings will also be useful outside of Lyme arthritis, writing, "our finding that B. burgdorferi sheds immunogenic PGBb fragments during growth suggests a potential role for PGBb in the immunopathogenesis of other Lyme disease manifestations."

Next, Jutras is hoping to develop a clearer picture of the chemistry of PGBb and understand how it can hang around in the tissues of the body for such long periods.

"We are interested in understanding everything associated with how patients respond, how we can prevent that response, and how we could possibly intervene with blocking therapies or therapies that eliminate the molecule entirely," explains Jutras.

Designing a treatment based on these findings is still a long way in the future, but understanding more about how the condition manages to persist will certainly oil the wheels of future research. Scientists now have a new target to set their sights on.

Atrial fibrillation

Atrial fibrillation may raise dementia risk by 50 %(Medical News Today: 20190620)

A large study concludes that atrial fibrillation does, indeed, raise the risk of dementia even in people who did not have a stroke and that anticoagulants may reduce this risk.

An irregular heartbeat may be a sign of A-fib, which may, in turn, raise dementia risk.

Atrial fibrillation (A-fib) is a condition in which the heart beats irregularly. More specifically, the atria of the heart — the chambers that receive blood and pump it out to the heart's ventricles and the rest of the body — beat at an irregular rhythm.

A-fib is the most common form of arrhythmia, affecting between 2.7 and 6.1 million adults in the United States.

Previous research has shown that people with A-fib have a higher risk of dementia, and also that people can take blood thinners to reduce this risk.

New research confirms that the above is true, even in people who never experienced a stroke. The new study is the largest of its kind ever conducted.

Boyoung Joung, who is a professor of cardiology and internal medicine at Yonsei University College of Medicine in Seoul, Republic of Korea, is the leading author of the paper, which appears in the European Heart Journal.

A-fib raises dementia, Alzheimer's risk

In the new research, Prof. Joung and team examined 262,611 adults aged 60 and older who did not have A-fib or dementia at baseline, in 2004.

The scientists accessed the data from the Korea National Health Insurance Service Senior cohort and followed the study participants until 2013.

During the study period, 10,435 participants developed A-fib. Of these, 24.4% also developed dementia. However, only 14.4% of the participants without A-fib developed dementia.

"We found that the people who developed atrial fibrillation had a 50% increased risk of developing dementia compared [with] those who did not develop the condition," reports Prof. Joung.

"[T]his increased risk remained even after we removed those who suffered a stroke from our calculations. This means that among the general population, an extra 1.4 people per 100 of the population would develop dementia if they were diagnosed with atrial fibrillation. The risk occurred in people aged younger and older than 70 years."

Prof. Boyoung Joung

"We also found that atrial fibrillation increased the risk of Alzheimer's disease by 30% and more than doubled the risk of vascular dementia," continues Prof. Joung.

How blood thinners can help

"However, among people who developed atrial fibrillation and who took oral anticoagulants, such as warfarin, or non-vitamin K anticoagulants, such as dabigatran, rivaroxaban, apixaban, or edoxaban, the risk of subsequently developing dementia reduced by 40% compared [with] patients who did not take anticoagulants."

On the point of anticoagulants, or blood thinners, Prof. Joung thinks that "non-vitamin K anticoagulants, which have a significantly lower risk of cerebral hemorrhage than warfarin,

may be more effective than warfarin in terms of dementia prevention and this will be answered by an ongoing clinical trial."

The researcher also thinks that more investigations are necessary to determine "whether aggressive rhythm control, such as catheter ablation, helps to prevent dementia."

"Our study suggests that the strong link between atrial fibrillation and dementia could be weakened if patients took oral anticoagulants. Therefore, doctors should think carefully and be readier to prescribe anticoagulants for atrial fibrillation patients to try to prevent dementia."

Coronary heart disease

Coronary heart disease may speed up cognitive decline %(Medical News Today: 20190620)

It is natural for a person's memory and thinking abilities, or cognitive function, to wane as they age — even if they are in good health. However, the rate of cognitive decline can speed up if they experience heart attack or angina, according to new research.

senior woman reading on a tablet

Cognitive decline may speed up after a heart attack or angina.

Studies that have explored the links between circulation problems and cognitive decline have tended to focus on conditions that affect the blood supply to the brain, such as stroke.

Few of these earlier studies, however, have looked at the long-term links between incident coronary heart disease (CHD), such as heart attack and angina, and cognitive decline.

The recent Journal of the American College of Cardiology study is unique; it tracked cognitive decline both before and after incident CHD.

"Incident CHD," its authors conclude, "is associated with accelerated cognitive decline after, but not before, the event."

They suggest that the findings highlight the long-term relationship between cognitive decline and CHD.

Lead and corresponding study author Wuxiang Xie, Ph.D., says that because there is not yet a cure for dementia, it is important to detect and treat the brain condition as early as possible in order to delay its progression.

"Even small differences in cognitive function can result in an increased risk of dementia in the long-term," explains Xie, who holds research posts at Peking University Clinical Research Institute in China and in the School of Public Health at Imperial College London in the United Kingdom.

Narrow arteries reduce blood supply

CHD, or coronary artery disease, can develop when the arteries that feed the heart become narrow and obstruct blood flow.

The arteries become narrow because fatty deposits, or plaques, build up inside their walls. Medical professionals call this process atherosclerosis.

Syncing brain waves may fight age-related memory problems

Syncing brain waves may fight age-related memory problems

Synchronizing brain circuits involving two types of brainwave can revive working memory in older adults.

The reduction in blood flow causes heart muscle to receive less oxygen, increasing the likelihood of a heart attack. The reduction in blood supply can also cause chest pain, or angina.

CHD is the leading cause of death worldwide, according to the World Health Organization (WHO). In 2016, it was responsible for more than 9 million deaths.

Xie and his colleagues believe that their study is one of the largest to investigate cognitive decline in the years before and after receiving a diagnosis of CHD.

Their analysis took in data from 7,888 participants, aged 50 and older, from the English Longitudinal Study of Aging (ELSA).

CHD and cognitive decline

The ELSA collected data twice per year between 2002 and 2017. None of the participants had a history of heart attack, angina, or stroke or a diagnosis of dementia or Alzheimer's disease at the start of the study period.

The researchers excluded people who did not complete all the cognitive assessments or who had a stroke during the median follow-up of 12 years.

Over the follow-up period, the participants underwent three tests of cognitive function, which the researchers conducted in eight waves. The tests assessed verbal memory, semantic fluency, and sense of time, or "temporal orientation."

During the study period, 5.6% of the participants experienced angina or heart attacks. Everyone in this group demonstrated a more rapid decline in cognitive function in the three tests compared with those who did not experience a CHD event.

Those who developed angina showed a faster decline in the tests of temporal orientation, while verbal memory and semantic fluency declined more rapidly in those who experienced heart attacks.

The study authors note that they "found that incident CHD was significantly associated with faster rates of post-CHD-diagnosis cognitive decline, but not with cognitive changes in the years before or short-term changes following the event."

Speculating on the findings, they suggest that the reduction in oxygen to the brain is the likely reason for the link between CHD and faster cognitive decline.

Previous research linked CHD to interruptions of blood supply to the brain, or cerebral microinfarcts. Such links suggest that CHD might promote small vessel disease, which is a major contributor to dementia in older adults.

"Heart attack and angina patients need careful monitoring in the years following a diagnosis."

Pollution (Navbharat Times: 20190620)

http://epaper.navbharattimes.com/details/40379-69582-1.html

CSE का आकलन | हीट वेव बनी वजह, दिल्लीवालों को सांस की बीमारियों का खतरा बढ़ा

3 महीने में 28 दिन दिल्ली ओजोन पल्यूशन से जूझी

■ विशेष संवाददाता, नई दिल्ली

भीषण गर्मी की वजह से इस बार दिल्ली में ओजोन प्रदूषण भी पिछले साल से ज्यादा रहा है। सीएसई (सेंटर ऑफ साइंस एंड एनवायरनमेंट) ने अप्रैल से जून 2019 तक का ओजोन आकलन किया है। इसमें दावा किया है कि पिछले साल इन तीन महीनों में 17 दिन ओजोन प्रमुख प्रदूषक रहा था। इस बार 28 दिन ओजोन प्रमुख प्रदूषक रहा। कुछ रेजिडेंशल और कमर्शल लोकेशन जैसे- सीरी फोर्ट और नजफगढ़ में तो कुछ दिन ओजोन का स्तर 53 से 92 पर्सेंट तक अधिक रहा। एनसीआर में फरीदाबाद और गाजियाबाद में ओजोन प्रदूषण सबसे अधिक रहा। ओजोन सबसे नुकसानदेह गैस मानी जाती है। इसका सीधा असर सांस से जुड़ी बीमारियों और अस्थमा के मरीजों पर पड़ता है।

ओजोन का कोई सोर्स नहीं होता। यह तापमान बढ़ने पर कई गैसों के रिएक्शन से बनती है।

ओजोन को नियंत्रित करने के लिए गाड़ियों और इंडस्ट्री से होने वाले प्रदूषण पर कंट्रोल जरूरी है। सीएसई ने सीपीसीबी से मिले डेटा के आधार पर यह रिपोर्ट तैयार की है।

इसमें दावा है कि इस साल अब तक 16 पर्सेंट दिनों में ओजोन का स्तर तय स्टैंडर्ड से अधिक रहा। पिछले साल यह 5% था। सीएसई की एग्जीक्यूटिव डायरेक्टर (रिसर्च एंड एडवोकेसी) अनुमिता रायचौधरी के अनुसार, यह सबसे बड़ी चिंता का विषय है। इसके बढ़ने से सामान्य लोगों में सांस से जुड़ी बीमारियों का खतरा कई गुना बढ़ जाता है।

- सीरी फोर्ट, श्री अरविंदो मार्ग, आर के पुरम, जवाहरलाल नेहरू स्टेडियम, द्वारका सेक्टर-8, रोहिणी, बवाना, जहांगीरपुरी, नजफगढ़ और नरेला में हालात खतरनाक
- 27% दिन ओजोन का लेवल ज्यादा रहा जून में अब तक, पिछले साल पूरे महीने सामान्य था
- 20% दिन ओजोन का लेवल ज्यादा रहा मई में

आज से बढ़ेगी गर्मी

■ **विस, नई दिल्ली** : पिछले तीन दिनों से दिल्ली का मौसम सुहावना बना हुआ था। लेकिन अब गुरुवार से गर्मी बढ़ेगी। इस दौरान तापमान बढ़कर 40 डिग्री तक पहुंच सकता है, लेकिन लू की वापसी की संभावनाएं नहीं हैं। 24 और 25 जून को मौसम एक बार फिर से मौसम सुहावना हो जाएगा। 25 जून को तापमान फिर से 37 डिग्री पर सिमट सकता है। मौसम विभाग के अनुसार, बुधवार को अधिकतम तापमान 36.8 डिग्री रहा जो सामान्य से दो डिग्री कम था। वहीं न्यूनतम तापमान भी 24.2 डिग्री रहा।

Chamki Fever (Navbharat Times: 20190620)

http://epaper.navbharattimes.com/details/40377-59914-1.html

मुजफ्फरपुर में डॉक्टरों को इलाज ही नहीं, चमत्कार पर भी भरोसा

डॉक्टर बोले- सिर्फ 120 मिनट देता है चमकी

Narendra.Mishra@timesgroup.com

■ **'जब बच्चा** चमकी बुखार से पीड़ित होकर हमारे पास आता है, तब उसकी जान बचाने को सिर्फ 120 मिनट होते हैं। इस दौरान हमें इलाज और चमत्कार दोनों पर भरोसा रखना होता है। सबसे पहले बच्चों को हाई बुखार होता है और फिर वह अवचेतन की स्थिति में जाता है। फिर चंद मिनटों में उसकी जान चली जाती है। अधिकतर मामलों में यह सब दो घंटों में हो जाता है। ऐसे में मरीज कौन सी स्थिति में हमारे पास आता है, उससे तय होता है कि उसकी जान बचेगी या नहीं।' यह बात मुजफ्फरपुर में इस महामारी का इलाज कर रहे एक डॉक्टर ने एनबीटी से कही। वह पिछले 10 दिनों से लगातार अस्तपाल में मरीजों का इलाज कर रहे हैं।

तब जान कैसे बचे?

जान बचाने के लिए जब इतना कम वक्त मिल रहा है तो फिर जान कैसे बचे? इसके लिए सरकार ने तत्काल बरसों से लंबित प्रस्ताव को लागू करने की दिशा में पहल की है। सबसे प्रभावित इलाकों मीनापुर, बोचहां, कांटी, मोतीपुर में एक्सपर्ट की टीमें एंबुलेंस और मोबाइल मेडिकल सिस्टम के साथ कैंप करने लगी हैं और जहां भी बच्चों को बुखार की सूचना मिल रही है वहां सीधे घर जाकर उस केस की निगरानी करने लगी हैं। डॉक्टरों का कहना है कि शुरुआती चरण में मरीज पकड़ में आ जाए तो ठीक होने की संभावना बढ़ जाती है।

केंद्र डॉक्टरों की 5 टीम बिहार भेजेगा

बिहार के मुजफ्फरपुर और आसपास के इलाकों में इंसेफलाइटिस यानी चमकी बुखार से अब तक 130 बच्चों की मौत हो चुकी है। बुधवार को 22 और बीमार बच्चों को भर्ती कराया गया। अब तक अस्पताल भर्ती कराए गए कुल बच्चों की संख्या 372 हो गई है। स्वास्थ्य लाभ के बाद 118 बच्चों को अस्पताल से छुट्टी दी जा चुकी है। उधर, मुजफ्फरपुर में हालात से निपटने के लिए लेकर केंद्र सरकार ने डॉक्टरों की 5 टीम भेजने के निर्देश दिए हैं। इनमें बच्चों के 10 डॉक्टर और 5 सहायक होंगे। बच्चों के डॉक्टरों में 5 सीनियर कंसल्टेंट भी शामिल हैं।

मौत के मामले को सुनेगा सुप्रीम कोर्ट

सुप्रीम कोर्ट ने उस याचिका पर सुनवाई के लिए सहमति दे दी है जिसमें बिहार में चमकी बुखार से हो रही मौतों के मामले में मेडिकल एक्सपर्ट टीम गठित करने की गुहार लगाई गई है। साथ ही गुहार लगाई गई है कि इस बीमारी को रोकने के लिए केंद्र सरकार को निर्देश दिया जाए। जस्टिस दीपक गुप्ता और जस्टिस सूर्यकांत ने 24 जून को सुनवाई करने का फैसला किया है। याचिका में कहा गया है कि केंद्र और राज्य सरकार को निर्देश दिया जाए कि बिहार में 500 आईसीयू और मोबाइल आईसीयू की व्यवस्था की जाए।

तेजस्वी के 'गायब' होने पर सवाल

इस बीच प्रदेश की सियासत में सत्ता और विपक्ष में आरोप-प्रत्यारोप जारी है। राज्य की सबसे प्रमुख पार्टी आरजेडी के नेता तेजस्वी यादव आम लोगों के बीच नहीं दिख रहे। पार्टी नेताओं ने भी तेजस्वी के बारे में कोई जानकारी ना होने की बात कही है।

Tental Diseases (Hindustan Times: 20190620)

http://epaper.livehindustan.com/imageview_83183_48940606_4_1_20-06-2019_i_18.pagezoomsinwindows.php

दांतों की बीमारी से बढ़ता है अल्जाइमर का खतरा

अध्ययन

वाशिंगटन | एजेंसी

आप ये जानते हैं कि दांतों को सड़न से बचाने के लिए प्रतिदिन ब्रश करना जरूरी है। लेकिन, ये नहीं जानते होंगे कि दांतों की सफाई से अल्जाइमर के खतरे को भी दूर किया जा सकता है।

अल्जाइमर भूलने की एक बीमारी है जिसमें व्यक्ति की याददाश्त कम होने लगती है, उसे फैसले लेने में परेशानी होती है और वो ठीक तरह से बोल नहीं पाता है। ये बीमारी आमतौर पर बुजुर्गों में देखने को मिलती है।

मुंह से मस्तिष्क में प्रवेश करते हैं बैक्टीरिया : नॉर्वे की बर्गन यूनिवर्सिटी के वैज्ञानिकों ने मसूड़ों की बीमारी और अल्जाइमर बीमारी के बीच संबंध की खोज की है। साइंस एडवांसेज जर्नल में प्रकाशित एक अध्ययन के मुताबिक, मसूड़ों की बीमारी यह पता लगाने में एक निर्णायक भूमिका निभाती है कि किसी व्यक्ति को अल्जाइमर होगा या नहीं।

बर्गन यूनिवर्सिटी में क्लीनिकल साइंस डिपार्टमेंट की ब्रोगेलमन्स रिसर्च लैबोरेट्री की शोधकर्ता पिओटर का कहना है कि डीएनए- आधारित सबूत मिला है कि मसूड़ों में सूजन पैदा करने वाले बैक्टीरिया मुंह से मस्तिष्क में प्रवेश कर सकते हैं। नए अध्ययन के मुताबिक, मसूड़ों में सूजन पैदा करने वाले बैक्टीरिया एक प्रोटीन का निर्माण करते हैं जो मस्तिष्क में तंत्रिका कोशिकाओं को नष्ट कर देता है। ये बैक्टीरिया इस बीमारी के पैदा होने के खतरे को बढ़ा देती है।

अल्जाइमर के मरीजों में दिखी मसूड़ों की बीमारी

शोधकर्ताओं के अनुसार मसूड़ों की सूजन पैदा करने वाले बैक्टीरिया मुंह से दिमाग में जा सकते हैं, जहां वे हानिकारक एंजाइम छोड़कर मस्तिष्क में तंत्रिका कोशिकाओं को नष्ट कर सकते हैं। हालांकि, अब शोधकर्ता माइडेल के पास इसके डीएनए सबूत भी हैं। माइडेल ने अपने साथियों के साथ मिलकर अल्जाइमर से पीड़ित 53 लोगों पर अध्ययन किया। इसमें उनको 96 प्रतिशत अल्जाइमर के मरीजों में मसूड़ों की बीमारी देखने को मिली।

इस तरह कम कर सकते हैं खतरा: अध्ययन में पता चला है कि कुछ ऐसी चीजें हैं जो आप अल्जाइमर का खतरा कम करने के लिए खुद कर सकते हैं। इससे बचने के लिए हर दिन ब्रश करें। साथ ही फ्लॉसिंग का इस्तेमाल करें।

Pacmaker ((Hindustan Times: 20190620)

http://epaper.livehindustan.com/imageview_83183_48941226_4_1_20-06-2019_i_18.pagezoomsinwindows.php

यह उपकरण मांसपेशियों को मजबूत कर रीढ़ की हड्डी को स्वस्थ बनाएगा

पीठ दर्द दूर करेगा 'पेसमेकर'

सेहत

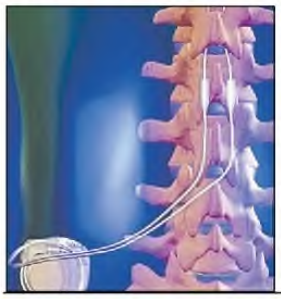
नई दिल्ली | हिटी

वैज्ञानिकों ने एक ऐसा पेसमेकर बनाया है जो रीढ़ की हड्डी में लगाया जा सकता है। इस पेसमेकर से पीठ में होने वाले अत्यधिक दर्द से छुटकारा मिल सकता है।

मांसपेशियों को करेगा मजबूत : माचिस के डिब्बे के आकार का यह उपकरण रीढ़ की हड्डी के पास मौजूद मांसपेशियों को विद्युत तरंगें भेजकर उसको मजबूत करता है। मांसपेशियां रीढ़ पर पड़ने वाले दबाव को कम करती हैं जिससे उसमें होने वाला दर्द कम हो जाता है।

एक शोध में ऐसे मरीजों पर पेसमेकर का इस्तेमाल किया गया जो पिछले 24 सालों से पीठ दर्द से परेशान थे। इन मरीजों को किसी भी इलाज से फायदा नहीं मिल पा रहा था। 10 में से छह मरीजों को इस इलाज से फायदा हुआ और अब यूके में 100 लोगों पर पीठ में लगने वाले इस पेसमेकर का परीक्षण किया जा रहा है। 20 से 59 साल के 20 फीसदी लोग अत्यधिक पीठ दर्द से परेशान होते हैं।

दिमाग के सिग्नल से मजबूत होती है रीढ़ की हड्डी



जब पेसमेकर की विद्युत तरंगों से रीढ़ के आसपास की मांसपेशियां मजबूत हो जाती हैं तब दिमाग सिग्नल भेजना दोबारा शुरू कर देता। यह सिग्नल मांसपेशियों को और मजबूत बनाते हैं और रीढ़ की हड्डी को और मजबूत करने में मदद करते हैं। इसका परीक्षण साउथहैम्पटन यूनिवर्सिटी अस्पताल में किया जा रहा है। इस पेसमेकर से लोगों के जीवन की गुणवत्ता में 80 फीसदी तक सुधार आया है। न्यूरोमॉड्यूलेशन पत्रिका में यह शोध प्रकाशित किया गया है।

क्या है इलाज

इस परेशानी का इलाज कुछ हद तक फिजियोथेरेपी से संभव है। फिजियोथेरेपी से मांसपेशियों का लचीलापन बढ़ता है और वह मजबूत होती हैं। गंभीर दर्द के मामलों में स्टेरॉयड इंजेक्शन दिया जा सकता है। इससे सूजन में कमी आती है। इसके अलावा मोरफिन आधारित पेनकिलर भी एक विकल्प है। वहीं, कई मामलों में सर्जरी का भी सहारा लेना पड़ता है जिसमें रीढ़ की हड्डियों में मौजूद विसंगति को दूर कर उसे ठीक किया जाता है।

सर्जरी की नहीं होगी जरूरत

नए पेसमेकर का इस्तेमाल करने से सर्जरी करने की जरूरत नहीं पड़ेगी। बिना चीर-फाड़ के इस पेसमेकर को पीठ में लगाया जा सकता है। यह पेसमेकर दिमाग द्वारा बंद की गई नसों के सिग्नल को दोबारा चालू कर देता है और मांसपेशियों को मजबूत बनाने में मदद करता है। इस पेसमेकर में एक बैटरी और छोटे इलेक्ट्रॉड हैं। इसे कमर से थोड़ा ऊपर त्वचा के नीचे ही इंप्लांट किया जाता है। ये इलेक्ट्रॉड रीढ़ में मौजूद डोरसल नसों से जुड़े हुए होते हैं।