



DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY

Tuesday

201901029

New tuberculosis treatment

New tuberculosis treatment for developing countries to cost \$1,040 (The Tribune: 201901029)

<https://www.tribuneindia.com/news/health/new-tuberculosis-treatment-for-developing-countries-to-cost-1-040/853064.html>

A newly approved three-drug treatment for tuberculosis will be available in 150 countries including India and South Africa, priced at \$1,040 for a complete regimen, more than twice the cost proposed in the past by advocacy groups for other treatments.

The United Nations-backed Stop TB Partnership said on Monday that BPaL would be obtainable in eligible countries through the Global Drug Facility (GDF), a global provider of TB medicines created in 2001 to negotiate lower prices for treatments.

Tuberculosis was responsible for 1.5 million deaths in 2018.

BPaL is an oral treatment that promises a shorter, more convenient option to existing TB treatment options, which use a cocktail of antibiotic drugs over a period of up to two years.

The new cocktail, which will treat extensively drug-resistant strains of the illness, consists of drug developer TB Alliance's newly-approved medicine pretomanid, in combination with linezolid and Johnson & Johnson's bedaquiline.

Pretomanid, which will be available at \$364 per treatment course, is only the third new medicine for drug-resistant tuberculosis to be approved in about 40 years, after J&J's bedaquiline and Otsuka Pharmaceutical Co Ltd's delamanid.

Advocacy groups have long criticised the cost for bedaquiline and delamanid. Not-for-profit Médecins Sans Frontières (MSF), or Doctors Without Borders, has waged a running battle in public with J&J over its \$400 price tag for a six-month course for bedaquiline.

MSF has argued that bedaquiline could be produced and sold at a profit for 25 cents per day, and that the price of treatments for drug-resistant TB should be no higher than \$500 for a complete treatment course.

Leena Menghaney, the South-Asia head for MSF's Access Campaign, said it was a cause of concern that pretomanid was priced just below the price of bedaquiline.

But Stop TB Partnership says costs of other regimens for extremely drug-resistant TB range from \$2,000 to \$8,000 for courses of at least 20 months.

TB Alliance in April granted a license to US drugmaker Mylan NV to manufacture and sell pretomanid as part of certain regimens in high-income markets, as well as a non-exclusive license for low-income and middle-income countries, where most tuberculosis cases occur.

Stop TB Partnership said it would start supplying the regimen following World Health Organization's guidance on using the drug. Mylan, however, said it will also sell the drug directly to countries.

Prices in low-income countries would be in-line with the price offered through GDF, but would be decided on a case by case basis where the drug is not supplied through GDF, it said.

The drug will be available in bottles of 26 tablets, with a six-month treatment requiring seven bottles. Agencies

Soft drinks consumption

Soft drinks consumption common factor between obesity, tooth wear (The Tribune: 201901028)

<https://www.tribuneindia.com/news/health/soft-drinks-consumption-common-factor-between-obesity-tooth-wear/853041.html>

The consumption of sugar-sweetened acidic drinks—such as soft drinks—is the common factor connecting obesity and tooth wear among adults, according to a study which suggests that dentists should be concerned about the calories their patients get from carbonated beverages.

The researchers, including those from King's College London, found that being overweight, or obese, was strongly associated with having worn-out teeth.

The findings of the study, published in the journal *Clinical Oral Investigation*, suggests that the increased consumption of sugary soft drinks by obese patients may be the leading cause of the erosion of the tooth enamel, and dentine—the hard bony structure forming the bulk of a tooth.

The researchers analysed a sample of survey participants of 3,541 patients in the United States based on data from the National Health and Nutrition Examination Survey 2003-2004.

For the study, the researchers took into account patient BMI, their intake of sugar sweetened acidic drinks, and their levels of tooth wear.

“It is the acidic nature of some drinks such as carbonated drinks and acidic fruit juices that leads to tooth wear,” said lead author Saoirse O’Toole from King’s College London.

According to the researchers, tooth wear ranked as the third most important dental condition—after cavities and gum disease—and its leading cause is the consumption of acidic foods and drinks.

“This is an important message for obese patients who are consuming calories through acidic sugar sweetened drinks. These drinks may be doing damage to their body and their teeth,” O’Toole said.

The researchers said that changing consumption habits can help patients prevent tooth wear, or at least stop it before it gets worse.

“There is also an important message for dentists. We should be asking our patients who are obese and have tooth wear what calories they are drinking as this may be having an effect on their full bodies - not just their teeth,” O’Toole said. PTI

New T B Treatment (The Asian Age: 201901028)

<http://onlinepaper.asianage.com/articledetailpage.aspx?id=13998324>

New TB treatment for developing countries to cost \$1,040

**MANOJNA MADDIPATLA,
MANAS MISHRA
OCT. 28**

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Macleods gets non-exclusive licence to make new drug

New Delhi, Oct 28: TB Alliance, a not-for-profit organisation, on Monday said it has granted a non-exclusive licence to manufacture anti-TB drug pretomanid to Macleods Pharmaceuticals Ltd.

Macleods has agreed to commercialise the anti-tuberculosis (TB) medicine in about 140 countries and territories, including India, after getting the regulatory approvals, TB Alliance said in a statement.

“We are proud to partner with Macleods, which has a strong record of delivering high-quality, affordable tuberculosis medicines,” TB Alliance President and CEO Mel Spigelman said.

TB Alliance is committed to ensuring an affordable, sustainable and competitive market for all its new TB products, he added.

“This important collaboration with TB Alliance will ensure access-



ibility of pretomanid in countries where it is needed the most,” Macleods Business Development Director Vijay Agarwal said.

TB Alliance has earlier collaborated with Macleods on the introduction of child-friendly formulations of first-line TB medicines, the

statement said.

Meanwhile, Macleods Pharma USA Inc is recalling 31,968 bottles of Pioglitazone Hydrochloride tablets used for treatment of diabetes in the American market.

The tablets being recalled are in the strength of 15 mg and have been manufactured by Macleods Pharmaceuticals Ltd in its Baddi facility in Himachal Pradesh, an enforcement report of the USFDA said.

The voluntary ongoing class II recall is on account of the product being “superpotent”, it added.

As per the USFDA, a class II recall is initiated in a situation, “in which use of or exposure to a violative product may cause temporary or medically reversible adverse health consequences or where the probability of serious adverse health consequences is remote”. — PTI

of at least 20 months. TB Alliance in April granted a license to U.S. drugmaker Mylan NV to manufacture and sell pretomanid as part of certain regimens in high-income markets, as well as a non-exclusive license for low-income and middle-income countries, where most tuberculosis cases occur.

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— Reuters

Back Pain ((The Asian Age: 201901028)

<http://onlinepaper.asianage.com/articledetailpage.aspx?id=13997401>



Boman Irani was diagnosed with herniated disc at lumbar phase 4 and 5 (L4-L5)

Fixing a bad back

One of the most common and debilitating conditions, back pain can be brought on by a number of causes, but proper diagnosis, treatment and precautions can help alleviate some of the distress

- Strained muscles or ligaments
- A muscle spasm
- Muscle tension
- Damaged disks
- Injuries, fractures or falls
- Activities that can lead to strains or spasms include:
 - Lifting something improperly
 - Lifting something that is too heavy
 - Making an abrupt and awkward movement
- Poor physical fitness
- Advanced age
- Obesity and excess weight
- Smoking
- Strenuous physical exercise or work, especially if done incorrectly
- Genetic factors
- Medical conditions, such as arthritis and cancer

STRUCTURAL PROBLEMS
A number of structural problems may also result in back pain.

● **Ruptured discs:** Each vertebra in the spine is cushioned by disks. If the disk ruptures, there will be more pressure on a nerve, resulting in back pain.



DIAGNOSIS
● An X-ray, MRI or CT scan can give information about the state of the soft tissues in the back.

● X-rays can show the alignment of the bones and detect signs of arthritis or broken bones, but may not reveal damage in the muscles, spinal cord, nerves or disks.

● MRI or CT scans can reveal herniated disks or problems with tissues, tendons, nerves, ligaments, blood vessels, muscles, and bones.

● Bone scans can detect bone tumors or compression fractures caused by osteoporosis. A radioactive substance or tracer is injected into a vein. The tracer collects in the bones and helps the doctor detect bone problems with the aid of a special camera.

● Electromyography or EMG measures the electrical impulses produced by nerves in response to muscles. This can confirm nerve compression, which may occur with a herniated disk or spinal stenosis.

SURGERY
"Surgery for back pain is very rare. If a patient has a herniated disk, surgery may be an option, especially if there is persistent pain and nerve compression which can lead to muscle weakness," says Dr Sukumar.

Examples of surgical procedures include:

- Endoscopic discectomy
- Endoscopic decompression of stenosis
- Microdiscectomy
- Fusion

SWATI SHARMA THE ASIAN AGE

Fans of Boman Irani were shocked when the actor took to his Instagram account and posted a picture of himself in a wheelchair, holding a walking stick at an airport on his way back from Hyderabad. After finding that all the painkillers and over-the-counter balms were useless, he apparently consulted a battery of doctors until an MRI revealed he had a herniated disc at lumbar phase 4 and 5 (L4-L5), which was additionally causing the ache radiating down the leg which was fine. The actor is not alone — there are in fact, many who live with unnecessary pain related to spinal conditions, says Dr Sukumar Sura, senior spine and neuro surgeon, Yashoda Hospitals, as he explains what causes spinal pain, its symptoms, and how it can be treated.

Back pain is a common reason for absence from work and for seeking medical treatment. It can be uncomfortable and debilitating. "Lower back pain is caused by spinal degeneration and injury. Conditions linked to back pain are muscle or ligament strain," says Dr Sukumar.

TIME TO SEE A DOCTOR:

- Feel intense or constant pain
- Develop pain that extends down one or both legs

- Have weakness, numbness or tingling in one or both legs
- Experience swelling, redness or unintentional weight loss
- Can't work, sleep or perform daily activities
- Experienced a trauma such as a car crash or fall
- Develop a fever
- Trouble passing stool or urinating

The human back is composed of a complex structure of muscles, ligaments, tendons, disks and bones, which work together to support the body.

"People with ongoing or recurrent episodes of lower back pain should consider the benefits of walking as a low-impact form of exercise. Aerobic exercise has long been shown to reduce the incidence of low back pain. However, for some back conditions, walking will aggravate or cause too much pain to be bearable," warns Dr Sukumar.

CAUSES

The segments of the spine are cushioned with cartilage-like pads called disks. "Problems with any of these components can lead to back pain. In some cases, the cause remains unclear. Damage can result from strain, medical conditions and poor posture among others," he adds.

STRAIN

Back pain commonly stems from strain, tension or injury. Frequent causes are:

● **Bulging disks:** In much the same way as ruptured disks, a bulging disk can result in pressure on a nerve.

● **Sciatica:** A sharp and shooting pain travels through the buttock and down the back of the leg, caused by a bulging or herniated disk pressing on a nerve.

● **Arthritis:** Osteoarthritis can cause problems with the joints in the hips, lower back, and other places. In some cases, the space around the spinal cord narrows. This is known as spinal stenosis.

● **Abnormal curvature:** If the spine curves in an unusual way, back pain can result. An example is scoliosis, in which the spine curves to the side.

● **Osteoporosis:** Bones, including the vertebrae of the spine, become brittle and porous, making fractures more likely.

● **Kidney problems:** Kidney stones or kidney infection can cause back pain.

RISK FACTORS

The following factors are linked to a higher risk of developing low back pain:

- occupational activities
- pregnancy
- a sedentary lifestyle



Dr Sukumar Sura, senior spine and neuro surgeon, Yashoda Hospitals

MEDICAL TREATMENT

● **Medication:** Back pain that does not respond well to OTC painkillers may require a prescription NSAID, Codeine or hydrocodone, which are narcotics, may be prescribed for short periods. These require close monitoring by the doctor. In some cases, muscle relaxants may be used.

● **Antidepressants:** such as amitriptyline may be prescribed, but research is ongoing as to their effectiveness, and the evidence is conflicting.

● **Physical therapy:** Applying heat, ultrasound, and electrical stimulation - as well as some muscle-release techniques to the back muscles and soft tissues - may help alleviate pain. As the pain improves, the physical therapist may introduce some flexibility and strength exercises for the back and abdominal muscles. Techniques for improving posture may also help. The patient will be encouraged to practice the techniques regularly, even after the pain has gone, to prevent back pain recurrence.

● **Corticosteroid injections:** If other options are not effective, these may be injected into the epidural space around the spinal cord. Corticosteroid is an anti-inflammatory drug. It helps reduce inflammation around the nerve roots. Injections may also be used to numb areas thought to be causing the pain.

"The worst time of my life was when I fell prey to the degeneration of the L4 and L5 in my spinal cord. It is associated with the spine where the disc, joints and the soft tissues are affected. Not many people are aware of this problem. My body had become a bit curved. I used to pop around 36 pills a day. I could not even work because of my physical condition and was bed ridden for six months."
— Mouni Roy, actor



Cancer

दिल्ली से सटे हरियाणा के एक और गांव में कैंसर का कहर, 3 दिन के भीतर 2 लोगों की मौत (Dainik Jagran: 20191029)

<https://www.jagran.com/haryana/mewat-ncr-two-people-died-in-three-days-due-to-cancer-in-haryanas-nooh-district-19707053.html>

देश की राजधानी दिल्ली से बेहद करीब हरियाणा के नूह में साकरस गांव के बाद रनियाली गांव के लोग जानलेवा बीमारी कैंसर की चपेट में आ रहे हैं।

फिरोजपुर झिरका/नूह [अख्तर अलवी]। देश की राजधानी दिल्ली से बेहद करीब हरियाणा के नूह में साकरस गांव के बाद रनियाली गांव के लोग जानलेवा बीमारी कैंसर की चपेट में आ रहे हैं। तीन दिन के अंदर दो लोगों की मौत कैंसर के कारण हुई एक साल में दस लोग मौत का शिकार हो चुके हैं।

वहीं, पांच लोग कैंसर से पीड़ित हैं, जिनका इलाज चल रहा है। किसी को मुंह का तो किसी की आंत में कैंसर है। दो महिलाएं स्तन कैंसर से पीड़ित हैं। गांव वाले बीमारी की वजह खारे पानी को बता रहे हैं। वहीं स्वास्थ्य विभाग के अधिकारी का कहना है कि जांच के बाद ही वजह पता चलेगी।

बता दें कि साकरस गांव में तीन साल के भीतर कैंसर की बीमारी से करीब 40 लोगों की मृत्यु के बाद यह गांव सुर्खियों में आ गया। अब पास के गांव रनियाली में भी कैंसर से मौतें होने का मामला प्रकाश में आया है। यहां 55 वर्षीय बस्सी व 45 वर्षीय अली मोहम्मद की तीन दिन के भीतर कैंसर से मौत हो गई।

इसको लेकर गांव के सरपंच नफीस अहमद ने बताया कि गांव में अब तक करीब 10 लोग कैंसर की बीमारी से मर चुके हैं। यह सिलसिला अभी भी जारी है। गांव में शौकत 23, हंजला 14, बस्सी 55, अली मोहम्मद 45, सबीला (30) व अन्य पांच की कैंसर के कारण मौत हो चुकी है। चार से पांच लोग अभी भी इस बीमारी से पीड़ित हैं।

कहीं पानी में तो गड़बड़ी नहीं

गांव में भूमिगत जल कैंसर का कारण हो सकता है। ऐसा ग्रामीण और स्वास्थ्य विभाग के अफसर मानते हैं। सरपंच नफीस ने बताया कि अगर गांव के पानी की लैब में जांच करवाई जाए तो यह पानी पीने की योग्यता पर खरा नहीं उतरेगा। यह भी जानना जरूरी है कि पानी क्यों जहरीला हो रहा है।

डॉ. कृष्ण कुमार (एसएमओ, झिरका) का कहना है कि टीम भेजकर मरीजों की शुरुआती जांच की जाएगी। भूमिगत जल की जांच की जाएगी। जांच रिपोर्ट आने पर उच्च अधिकारियों के संज्ञान में यह मामला डाला जाएगा।

Microprotin

माइक्रोप्रोटीन में गड़बड़ी से होती हैं कैंसर जैसी खतरनाक बीमारियां (Dainik Jagran: 20191029)

<https://www.jagran.com/world/america-mysterious-microprotein-disturbances-may-cause-dangerous-diseases-like-cancer-jagran-special-19707049.html>

शोधकर्ताओं ने कहा कि मानव शरीर में मौजूद एक प्रोटीन मॉलीक्यूल (अणु) में अमीनो एसिड की लगभग 300 रासायनिक इकाइयां होती हैं जबकि माइक्रोप्रोटीन की संख्या 100 के आसपास होती है।

लास एंजिलिसा कोशिकाओं का पावर हाउस कहे जाने वाले माइटोकॉण्ड्रिया में शोधकर्ताओं ने पीआइजीबीओएस नामक माइक्रोप्रोटीन का पता लगाया है। शोधकर्ताओं का दावा है कि यह प्रोटीन कोशिकाओं के भीतर होने वाले तनाव को कम करने में सहायता करता है। यदि इसमें कुछ

गड़बड़ी हो जाती है तो हमारा शरीर कैंसर जैसी खतरनाक बीमारियों की चपेट में आ सकता है। शोधकर्ताओं ने कहा, 'इस माइक्रोप्रोटीन के अध्ययन से हम किसी भी बीमारी के बारे में अपनी समझ को और बढ़ा सकते हैं'

इस अध्ययन के शोधकर्ताओं में अमेरिका के साल्क इंस्टीट्यूट के शोधार्थी भी शामिल थे। शोधकर्ताओं ने कहा कि मानव शरीर में मौजूद एक प्रोटीन मॉलीक्यूल (अणु) में अमीनो एसिड की लगभग 300 रासायनिक इकाइयां होती हैं, जबकि माइक्रोप्रोटीन की संख्या 100 के आसपास होती है। नेचर कम्युनिकेशंस नामक जर्नल में प्रकाशित अध्ययन में कहा गया है कि पीआइजीबीओएस 54 अमीनो एसिड के अणुओं से बना होता है। यह माइक्रोप्रोटीन कैंसर जैसी बीमारियों के स्ट्रेस सेल को लक्ष्य कर सकता है।

प्रोटीन की कार्यप्रणाली का ऐसे लगाया पता

आमतौर पर शोधकर्ता प्रोटीन को खोजने और इसके कार्यों की जांच के लिए इसे ग्रीन फ्लोरोसेंट प्रोटीन (जीएफपी) से जोड़ते हैं। हालांकि, इस अध्ययन के शोधकर्ताओं ने पाया कि जब उन्होंने पीआइजीबीओएस के साथ जीएफपी को चिह्नित करने की कोशिश की तो यह माइक्रोप्रोटीन फ्लोरोसेंट टैग के आकार के मुकाबले बहुत छोटा हो गया था, जिसे उन्होंने बाद में स्प्लिट जीएफपी के जरिये हल किया और जीएफपी के एक छोटे हिस्से (बीटा स्टैंडर्ड) को पीआइजीबीओएस के साथ मिलाया। इसके बाद शोधकर्ता यह पता लगाने में सफल हुए कि पीआइजीबीओएस अन्य प्रोटीन्स के साथ मिलकर कैसे काम करते हैं?

अन्य प्रोटीन्स के साथ मिलकर करते हैं काम

शोधकर्ताओं ने कहा, 'अध्ययन के दौरान उन्होंने पाया कि ये प्रोटीन माइटोकांड्रिया की बाहरी झिल्ली पर बैठ जाते हैं और अन्य कोशिकाओं के प्रोटीन के साथ संपर्क करना शुरू कर देते हैं। पीआइजीबीओएस सीएलसीसी1 नामक प्रोटीन के साथ मिलकर काम करना शुरू कर देते हैं। सीएलसीसी1 एक सेल ऑर्गेनेल का हिस्सा है, जिसे एंडोप्लाज्मिक रेटिकुलम (ईआर) कहा जाता है।

कनेक्शन की तरह काम करता है पीआइजीबीओएस

साल्क इंस्टीट्यूट के शोधकर्ता और इस अध्ययन के सह-लेखक कियान चू ने कहा, 'पीआइजीबीओएस माइटोकांड्रिया और ईआर को एक साथ जोड़ने के लिए एक कनेक्शन की तरह काम करता है और ईआर में तनाव को सामान्य रखने के लिए पीआइजीबीओएस सीएलसीसी 1 की मदद लेता है। चू ने कहा कि हमने माइक्रोप्रोटीन में ऐसा होते पहले कभी नहीं देखा था। अध्ययन में कहा गया है कि पीजीबीओएस के बिना ईआर में तनाव का अनुभव होता है और विकृत प्रोटीन बनने की संभावना अधिक होती है। शोधकर्ताओं ने कहा कि इससे कोशिकाएं अनियमित प्रोटीन को साफ करना शुरू कर देती हैं और खत्म होने लगती हैं और शरीर को कैंसर जैसी बीमारियां जकड़ने लगती हैं।

Malaria

दिल्ली में तेजी से बढ़ रही है डेंगू और मलेरिया के मरीजों की संख्या, आप भी रहें सतर्क (Dainik Jagran: 20191029)

नगर निगम की तरफ से जारी रिपोर्ट के अनुसार राष्ट्रीय राजधानी दिल्ली में पिछले सप्ताह 189 मामले सामने आये।

नई दिल्ली, प्रेटा। दिल्ली में डेंगू और मलेरिया के मामले लगातार बढ़ रहे हैं। सोमवार को नगर निगम की तरफ से जारी रिपोर्ट के अनुसार राष्ट्रीय राजधानी दिल्ली में पिछले सप्ताह 189 मामले सामने आये। जबकि इस साल अब तक डेंगू के 830 मामले सामने आए हैं। इसके अलावा मलेरिया के मरीजों की भी संख्या में बढ़ोतरी हुई है। नगर निगम के अनुसार, 26 अक्टूबर तक इसके 574 मामले सामने आये हैं।

नगर निगम की रिपोर्ट के अनुसार, इस महीने 26 अक्टूबर तक दिल्ली में मलेरिया के 206 नए मामले सामने आए हैं। जबकि सितंबर महीने में 214 मामले सामने आये थे। वहीं डेंगू के मरीज भी तेजी से बढ़ रहे हैं। इस महीने डेंगू के 189 मामले सामने आये। सितंबर महीने में 190 डेंगू के मरीज पाये गए थे।

तेजी से बढ़ रही डेंगू और मलेरिया के मरीजों की संख्या

दक्षिण दिल्ली नगर निगम (SDMC) के मुताबिक, दिल्ली में अगस्त महीने में डेंगू के 52 मरीज पाये गए थे। जबकि जुलाई में 18 और जून में 11 मरीज पाये गए। वहीं अगस्त में मलेरिया के 56, जुलाई में 54, जून में 35, मई महीने में 8 और अप्रैल में एक मरीज पाये गए। इन सभी आंकड़ों से स्पष्ट है अभी हाल के महीने में डेंगू और मलेरिया के मरीजों की संख्या बढ़ी है।

बता दें कि दिल्ली सरकार और नगर निगम की तरफ से डेंगू से बचाव के लिए जागरूकता अभियान चलाया जा रहा है। सीएम केजरीवाल खुद लोगों को अपील कर चुके हैं कि वे अपने घरों में पानी को इकट्ठा होने ना दें। मच्छर जनित बीमारी से बचाव के लिए नगर निगम समय-समय पर दवाओं का छिड़काव भी करती रही है। इसके बावजूद डेंगू और मलेरिया के मरीजों की संख्या बढ़ना चिंताजनक है।

Dengue

189 dengue cases in one week, total still lowest in last 5 years (Hindustan Times: 20191029)

<https://epaper.hindustantimes.com/Home/ArticleView>

Delhi recorded 189 cases of dengue in the week ending October 26, the highest for a single week this year, according to data from the municipal corporations of Delhi. The city so far has recorded 833 cases of the mosquito-borne disease. There have been no casualties.

The total number of cases recorded till October (833) is the lowest in the last five years.

“Latest figures show that till 26 October, there have been 833 cases of dengue in Delhi this year so far, and there has been no casualty. This is the lowest figure for Delhi in the last five years,” Delhi health minister Satyendar Jain.

“Delhi is well on course to defeat dengue this year. I appeal to everyone to keep up the prevention and awareness efforts for next few weeks,” he said.

Delhi government’s mass campaign ‘10 Hafte10 Baje10 Minute’ launched in September called on people to check for breeding and scrub out containers with clean, stagnant water to prevent breeding.

Aedes Aegypti, the mosquito that transmits diseases like dengue and chikungunya, breeds in clean water and has a life-cycle of eight to ten days. Cleaning out water containers, coolers, bird baths, and feng shui bamboo every week disrupts their life cycle and prevents breeding.

The campaign was launched after experts warned Delhi government of a likelihood of higher number of cases this year. “In 2015, there was an outbreak in Delhi. In the years after that we worked on prevention and the number of dengue cases came down. But, experts told us that dengue usually makes a comeback in 3 to 4 years, and we were worried that there might be a surge again. But our campaign received so much support and so far the number of cases are low,” said Jain.

Capital's air quality

Capital's air quality dips to season's worst (The Hindu: 20191029)

<https://www.thehindu.com/news/national/capitals-air-quality-dips-to-seasons-worst/article29817206.ece>

Haze envelops the national capital on Monday, a day after Deepavali.

‘Very poor’ to ‘severe’ AQI, but post-Diwali air cleaner compared with previous years

Delhi's air quality nosedived to the season's worst on Monday, reaching the higher end of ‘very poor’ category on Monday.

While it was due to a mix of factors including bursting of firecrackers on Diwali night that went beyond the Supreme Court-prescribed time slot of 8-10 p.m, the Capital experienced cleaner post-Diwali air compared with previous years.

The Delhi Pollution Control Committee (DPCC) said peak values of PM_{2.5} — the deadly respirable particles — were lower than last year's.

Readings over time

The average Air Quality Index of the past 24 hours at 4 p.m. on Monday was 368, ‘very poor’, according to the Central Pollution Control Board (CPCB) that functions under the Environment Ministry. But another government-run entity, the Earth Sciences Ministry's System of Air Quality and Weather Forecasting And Research (SAFAR), put the AQI in the ‘severe’ category at 506 around 4 p.m. Though both CPCB's and SAFAR's AQI is an average of the past 24 hours, the former considers 37 monitoring stations and the latter 10. Both also use different methodologies to arrive at their AQI figure.

The city's AQI at 9.30 p.m. on Monday stood at 401, 'severe' category, with 18 out of the 35 monitoring stations for which data were available showing ‘severe’ and the rest of the stations showing ‘very poor’ AQI, according to CPCB.

The peak level of PM_{2.5} on the intervening night of Sunday and Monday was recorded around midnight at 1,070 ug/m³, which was less than the peak level of 1,560 ug/m³ recorded at the same time in 2018, according to the DPCC. The peak value thus shows a reduction of about 31%.

SAFAR on Monday advised people to avoid all outdoor physical activities, give morning walks a miss, and close windows of rooms.

“Stop any activity if you experience any unusual coughing, chest discomfort, wheezing, breathing difficulty, or fatigue and consult a doctor,” the advisory said.

AQI leasttoxic since 2015: CPCB

Post-Deepavali AQI leasttoxic since 2015: CPCB (The Hindu: 20191029)

<https://www.thehindu.com/news/cities/Delhi/post-deepavali-aqi-leasttoxic-since-2015-cpcb/article29817278.ece>

‘Air quality in Ghaziabad, Noida, Gurugram also better’

Air quality in the city immediately after Deepavali was the least bad since 2015, and in the satellite cities of Ghaziabad, Noida and Gurugram, it was the least toxic since 2017, according to data from the Central Pollution Control Board (CPCB).

“Overall, this year, Deepavali had seen less pollution in terms of both gaseous and particulate matter. This may be attributed to cumulative effects of ground level actions and introduction of green crackers in the market and favourable meteorological conditions,” the CPCB said in a statement on Monday.

The CPCB’s evening report, which records the average pollution over the previous 24 hours, said that the air quality index on Monday was 368. This is better than 390 a day after Deepavali in 2018, 403 in 2017 and 445 in 2016. The number notwithstanding, the air quality was classified as ‘very poor’ like last year. When the index crosses 400, as it did in 2017 and 2016, it is recorded as ‘severe,’ or a State that warrants emergency action under the Graded Response Action Plan.

The average air quality reported by the CPCB hides the large variation in air quality during the day. For instance, at the air quality monitoring station in Rohini, the index had soared to 500 after 12.30 a.m. on Monday. According to the 2018 Supreme Court order, crackers were legally permitted only from 8 p.m. to 10 p.m. on Deepavali night.

More than the quantity of crackers burnt, it is the unfavourable meteorology that has a disproportionately higher influence on the air quality on the day following Deepavali. In 2017, for instance, the index classified Delhi’s air as “severe” at 403 even though the CPCB said that the concentration of pollutants was lower than in 2016, when too, after Deepavali the AQI was in the ‘severe’ category at 445. Both these years, early morning moisture and stalled winds retarded the flushing out of pollutants.

‘Stubble burning on rise’

CPCB officials said that the contribution of stubble burning in Punjab and Haryana in the pollutant mix in Delhi was increasing. Coupled with slowing down of wind speed, it would see the air quality gradually dip in the next few days.

“If 50% of the total load of firecrackers as compared to last year is added, the air quality index (AQI) may plunge to ‘severe’ category but for a shorter period of time unlike 2018, it persisted for several days and with relatively much less magnitude [half] than 2018 Deepavali period,” as per a forecast by meteorological agency SAFAR on October 26. The CPCB consults SAFAR forecasts.

On Monday, SAFAR said, while the air quality had dipped to 'severe', the concentrations were "much less than that of the last three years. The main factors contributing to this was high boundary layer wind speed. It helped to flush out and disperse high firecracker emissions." In its post-Deepavali report, the CPCB said that the city's average particulate matter (PM2.5) was 284 ug/m3. Anand Vihar station recorded highest 24 hourly average at 415 ug/m3. "The PM2.5 average of 37 stations on Deepavali day was found lower by 40 ug/m3 and PM10 was also found lower by 41 ug/m3 in 2019 as compared to 2018 Deepavali day," the agency noted.

Pollution

Five cities in Haryana among 10 most polluted (The Tribune: 20191029)

<https://www.tribuneindia.com/news/haryana/five-cities-in-haryana-among-10-most-polluted/853258.html>

Five Haryana cities ranked among the 10 most polluted cities across the country after Diwali. In fact, the state occupied 17 of the 34 slots on the list of cities that recorded "very poor" air quality index (AQI).

Muzaffarnagar with AQI 426, which fell in "severe" category, had the worst air quality in the country. It was followed by Moradabad (398), Noida (397) and Ghaziabad (396), which fell in "very poor" bracket.

Then came Kurukshetra and Sirsa, which recorded the worst air quality in Haryana with AQI at 392, followed by Ambala (AQI 385). All three were in "very poor" category. Jind (373) and Gurugram (372) were the other two Haryana cities that ranked among the top 10 most polluted cities.

In Punjab, Jalandhar recorded worst air quality (AQI 377) followed by Ludhiana (353).

The list was based on data collected from 4 pm on October 27 to 4 pm on October 28. A day before (4 pm on October 26 to 4 pm on October 27), Haryana had seven cities among the top 10 most polluted cities in the country. The AQI in 0-50 bracket is categorised as "good", 51-100 "satisfactory", 101-200 "moderate", 201-300 "poor" and 301-400 "very poor". If AQI is above 400, it has respiratory effects even on healthy people.

According to the Central Pollution Control Board, the sub-indices for individual pollutants at a monitoring location are calculated using its 24-hour average concentration value (8-hour in case of carbon monoxide and ozone) and health breakpoint concentration range. The worst sub-index is the AQI for that location.

Experts say Haryana has more number of cities in the "very poor" category not only due to Diwali pollution, but also due to stubble burning. Other cities of the state having "very poor" AQI were Jind (373), Hisar (370), Panipat (366), Faridabad (358), Dharuhera (345), Narnaul (343), Yamunanagar (342), Bhiwani (337), Rohtak (329), Manesar (326), Kaithal (319) and Mandikhera (304).

All Haryana cities in "very poor" category had PM 2.5 as the major pollutant, while it was PM 10 in case of Karnal and Kaithal. "On October 26, we noticed 2,000 stubble-burning spots through satellite. On October 28, the number was 1,250. So stubble burning is one of the

factors,” said Dr Ravindra Khaiwal, Additional Professor, Community Medicine and School of Public Health, PGI, Chandigarh.

“Around Diwali, vehicular movement is also more, there are traffic jams and dust due to movement of vehicles is also high. Firecrackers also add to the pollution,” he added.

E-cigarette companies

Vaping is injurious to health (The Hindu: 20191029)

<https://www.thehindu.com/opinion/op-ed/vaping-is-injurious-to-health/article29815933.ece>

Measures being taken against e-cigarette companies in the U.S. could result in a dip in sales

The absence of vaping-related illness during the last ten years of increasing electronic cigarettes use has often been cited to silence the critics of the latter. But all that has changed in the blink of an eye. As on October 15, 2019, the number of patients with a mystery lung injury associated with the use of e-cigarettes shot up to 1,604 from 49 States. There have also been 34 deaths from 24 States.

The mysterious lung injury in e-cigarette users started in April 2019, when 53 victims with a median age of 19 years in Illinois and Wisconsin were hospitalised, many under intensive care. The victims experienced coughing, shortness of breath and other symptoms and their health had deteriorated to a point that it necessitated hospitalisation.

While the U.S. Food and Drug Administration (FDA) or the Atlanta-based Centres for Disease Control and Prevention (CDC) are yet to identify the cause of the lung injuries, the only commonality among all the patients is that they were e-cigarette users.

In 2009, except menthol, the FDA had banned flavours in cigarettes as it was convinced that they lured children and teenagers into smoking. Internal tobacco industry documents reveal that flavours were used to target potential new young customers, according to a 2016 paper. It is not clear why, despite overwhelming evidence of youth hugely favouring flavoured vape devices, the FDA did not act. It waited till September 11 for U.S. President Donald Trump to call for a ban on flavoured e-cigarettes before announcing its plan to remove all them from the market, at least temporarily.

On October 17, JUUL Labs Inc suspended retail sale of flavoured – mango, creme, fruit, and cucumber – e-cigarette devices and cartridges pending a review by the FDA. The company’s deceit was not lost as mint and menthol flavours, which an overwhelming majority of high school students prefer, are still available.

As per the National Youth Tobacco Survey, the percentage of school children who reported using mint and menthol flavour increased from over 42% in 2017 to nearly 64% in 2019. The fruit flavour, which has the most takers, dropped slightly from about 70% in 2017 to 66% in 2019.

The 2018 National Youth Tobacco Survey found more than 3.6 million middle and high school students used e-cigarettes in 2018, sharp increase from 1.5 million the previous year. The survey found that youth used flavoured products more often than in 2017. In 2019, more than

a quarter of high school students and 20% of junior reported using e-cigarette within the past 30 days.

The dramatic rise in e-cigarettes use by children is not at all surprising. After all, the e-cigarettes makers have been following the time-tested machinations of the big tobacco companies to a T. Like in the case of cigarettes, constant exposure to e-cigarette advertisements on social media, print and on TV have contributed to higher rates of experimentation, studies found.

Advertisements for e-cigarettes targeting the youth used messages that have historically been effective in marketing tobacco cigarettes. For example, advertisements depicting e-cigarette use as “glamorous, cool, attractive, liked by celebrities and as a symbol of freedom,” together with celebrity endorsements hearken back to the banned ploys employed by tobacco companies decades ago. The same is true of health claims that e-cigarettes are safer than tobacco cigarettes, and their endorsement by doctors as a smoking-cessation tool, even in the absence of hard data.

The tide is slowly turning. In May 2019 the Federal Trade Commission began investigating JUUL for its marketing efforts, including the use of social media influencers to promote its vaping devices. In mid-September, CBS, WarnerMedia and Viacom dropped all e-cigarette advertising and JUUL suspended broadcast, digital and print advertising.

These measures could result in a considerable dip in sales as flavoured pods account for 80% of JUUL’s sales. But only time will tell whether dampening youth use is a ploy to secure FDA authorisation in May 2020.

‘Unintended pregnancy

Unintended pregnancy endangers mother, child’ (The Hindu: 20191029)

<https://www.pressreader.com/india/the-hindu/20191029/281741271212053>

WHO study highlights need for high-quality family planning

The risks include malnutrition, illness, abuse and neglect, and even death.

A study conducted by the World Health Organization (WHO) in 36 countries found that two-thirds of sexually active women who wished to delay or limit childbearing stopped using contraception for the fear of side effects, health concerns and underestimation of the likelihood of conception. This led to one in four pregnancies being unintended.

Globally, 74 million women living in low and middle-income countries have unintended pregnancies annually. This leads to 25 million unsafe abortions and 47,000 maternal deaths every year. WHO warned that unwanted pregnancies may lead to a wide range of health risks for the mother and child. The risks include malnutrition, illness, abuse and neglect, and even death. Unintended pregnancies can further lead to cycles of high fertility, as well as lower educational and employment potential and poverty – challenges which can span generations.

As per the figures published by last year on the incidence of abortion and unintended pregnancy in India, it is estimated that 15.6 million abortions occurred in India in 2015.

“In India the abortion rate was 47 per 1,000 women aged 15-49 years. 3.4 million abortions (22%) were obtained in health facilities, 11.5 million (73%) abortions were medication abortions done outside of health facilities, and 0.8 million (5%) abortions were done outside of health facilities using methods other than medication abortion,” the study had said.

In India, abortions accounted for one-third of all pregnancies, and nearly half of the pregnancies were unintended.

The WHO report stated that modern methods of contraception had a vital role in preventing unintended pregnancies.

Mari Nagai, former medical officer for Reproductive and Maternal Health at WHO and an author of the report, said that high-quality family planning offered a range of potential benefits that encompassed not only improved maternal and child health, but also social and economic development, education, and women’s empowerment.

The study’s findings highlighted the need for services that “take a shared decisionmaking approach to selecting and using effective methods of contraception that most fit the needs and preferences of clients, identify early when women and girls are having concerns about the method they are using and enable women and girls to change modern methods while remaining protected through effective counselling and respect of their rights and dignity.”

Delhi’s air turns ‘very poor’

Delhi’s air turns ‘very poor’: How to protect kids from pollutants (The Indian Express: 20191029)

<https://indianexpress.com/article/parenting/health-fitness/delhi-air-quality-very-poor-how-to-protect-kids-from-pollution-6091161/>

More than half of all deaths from acute lower respiratory infection (ALRI) in kids under five years are caused by exposure to air pollution.

A day after Diwali celebrations, air quality in Delhi has now turned ‘very poor’, with Air Quality Index (AQI) of 463 at 9 am, as per reports.

Air pollution is among the leading causes of death in children, according to World Health Organisation (WHO), as kids breathe faster than adults, making them more susceptible.

With air quality deteriorating, parents should ensure their kids get minimum exposure to pollutants and are well protected to prevent respiratory issues. Here are some tips to keep in mind.

How to protect kids from air pollution

Newborn babies are the most vulnerable to diseases with their immunity not having developed fully yet. More than half of all deaths from acute lower respiratory infection (ALRI) in kids under five years are reportedly caused by exposure to air pollution. It also increases the risk of asthma, damage brain tissue impacting cognitive development and even increases the risk of childhood obesity.

Here's what parents can do:

1. Do not take your baby out of the house before they are at least a month old, especially during the morning hours when air pollution is usually at its worst. Afternoons are a relatively safer period.
2. Use air purifiers in the room along with a humidifier. Dry air can lead to nasal blockage and your baby may end up crying excessively.
3. Indoor plants or vertical gardens can work as natural air purifiers.
4. Kids should also be protected from household air pollution too. This means, try and avoid dusting or cleaning and use of chemical sprays around your child.

Final prayers for Sujith as body is lowered into grave

5. Keep doors and windows shut during peak hours of poor air quality.
6. Using air masks can limit exposure to pollutants.

Anti-pollution foods for kids

To fight the impact of air pollution, kids need to strengthen their immunity. They should be given enough of foods rich with anti-oxidants to protect the body.

1. For newborn babies, breastfeeding is essential since it gives them a lot of immunity and keeps them protected from diseases.
2. Parents should ensure their kids eat plenty of vegetables and fruits containing vitamin C like lemon, carrots and apples.

Who is Gopal Kanda?

3. Turmeric and honey make a good combination for kids who need to build their immunity. You can also give them basil, mixed with honey and ginger on an empty stomach in the morning.
4. Jaggery has anti-inflammatory properties and will keep your kids healthy.
5. Neem removes impurities from the blood and helps in developing immunity.
6. Ghee is a great source of omega 3 fatty acids, which can be added to your kids' diet in regulated amounts.
7. Ayurvedic mixes such as Haridrakhand and Chyawanprash are also recommended. Most kids like to eat these due to their sweet taste.

Exercise to cope with air pollution

Breathing exercises are a good way to prevent respiratory diseases. These exercises include pranayams like Bhramari, Hot Air Balloon or Tumble Dry, to name a few.

Indian Brain Atlas

Indians have smaller brains, reveals study (The Times of India: 20191029)

<https://timesofindia.indiatimes.com/india/indians-have-smaller-brains-reveals-study/articleshow/71798234.cms>

Researchers at the International Institute of Information Technology, Hyderabad (IIIT-H) have created the first-ever Indian Brain Atlas

The study has revealed that the Indian brain, on an average, is smaller in height, width and volume when compared to Western and other eastern populations

HYDERABAD: Researchers at the International Institute of Information Technology, Hyderabad (IIIT-H) have created the first-ever Indian Brain Atlas. The study has revealed that the Indian brain, on an average, is smaller in height, width and volume when compared to Western and other eastern populations. This will help in early diagnosis of Alzheimer's and other brain-related ailments.

The research has been published in Neurology India, a peer-reviewed journal.

Jayanthi Sivaswamy of the Centre for Visual Information Technology, who worked on the project, said that the Montreal Neurological Institute (MNI) template, which is used as the standard, was created using Caucasian brains. This, according to the researchers, is not ideal to analyse brain differences in the Indian population.

He has been granted 14-day furlough after model code of conduct ended yesterday. Is parivartan ki neev ke andaar woh humare kandho ko taqat denge toh mera liye usse badi khushi ki baat kuch nahi hai.

“As Indian brains are smaller in size when compared to MNI, the difference in scans can look alarming and lead to misdiagnosis,” Jayanthi told TOI. She added that MRI images are compared with pre-loaded MNI template to arrive at a diagnosis. “There is clear evidence based on the study that it is desirable to build a larger atlas as it is important to understand structurally what is normal. This would help catch several brain conditions early on.”

Jayanthi said that even Chinese and Korean brain templates had been constructed, but there was no corresponding template for the India-specific population. She said that the first attempt by the IIIT-H team at creating an India-specific atlas involved 50 individuals, evenly balanced out across genders.

Health apps

Health apps may be giving you wrong diagnosis (The Times of India: 20191029)

<https://timesofindia.indiatimes.com/world/rest-of-world/health-apps-may-be-giving-you-wrong-diagnosis/articleshow/71799370.cms>

NEW YORK: Flo and Clue, two popular period-tracking apps, recently introduced health tools that evaluate a woman's risk for the hormonal imbalance known as polycystic ovary syndrome.

In September alone, more than 636,000 women completed the Flo health assessments, said the app's developer, Flo Health. The app then recommended that 240,000 of those women, or about 38%, ask their doctors about the hormonal disorder. But what many women who used the Flo and Clue health tools may not have known is that the apps did not conduct high-level clinical studies to determine the accuracy of their health risk assessments or the potential for unintended consequences such as overdiagnosis. As a result, some experts said, the new tools could lead some women to be labelled with a hormonal imbalance they did not have or that may have no significant repercussions for their health.

"You could be making a lot of people concerned they have a problem that they don't know will have absolutely no clinical consequences for them," said Dr Jennifer Doust, a professor of clinical epidemiology at Bond University who has studied polycystic ovary syndrome.

Flo's and Clue's health assessments are part of a shift in digital medicine. Health tracking apps have for years helped people collect and chart data on their heart rates, moods, sleep patterns and menstrual cycles. But now some of these apps are going further by using that data to predict an individual's risk for problems like heart conditions.

While some of the apps' new evaluation tools may be useful and helpful, determining whether they are accurate can be difficult. Most apps lack high-level evidence on their outcomes, according to a recent study in *Nature Digital Medicine*. And as long as consumer health apps make vague health promises — like improved well-being — and do not claim to diagnose or treat a disease, they are not typically required to submit effectiveness evidence for vetting by the Food and Drug Administration.

"It's certainly become confusing as a consumer if these apps are making claims about helping you learn about mental health, PCOS, heart disease, diabetes," said Dr. John Torous, director of the digital psychiatry division at Beth Israel Deaconess Medical Center in Boston, one of the authors of the *Nature* study.

Flo, which has more than 30 million active monthly users, and Clue, with more than 12 million, have good intentions. Their developers each said they had worked with medical experts to develop the assessments and had based them on international medical guidelines for identifying PCOS. The apps also include prominent disclaimers saying that their assessments for PCOS should not be construed as diagnoses.

But in a recent news release, Flo described its service as a "digital, pre-diagnostic tool" to help women "discover if they have PCOS." Clue said its "probabilistic statistical model" for the hormonal imbalance offered a "smart assessment that can be