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August 2, 2019/Et Healthworld

Rainy with a chance of illness

July 21, 2019/The Time of India

With every monsoon comes a series of illnesses. Here are some lifestyle changes one can start adopting as monsoons approach in order to prevent monsoon maladies.

1 Keep footwear out of the house to keep away the germs that come with it in the rains.

2 Avoid consuming raw green leafy vegetables as they carry high risk of contamination. You may also want to stop consuming raw salads served in restaurants as they are seldom washed properly.

3 Soaking fresh produce in warm water with salt and some apple cider vinegar will help eliminate all traces of grime and dirt which may contain disease-causing pests.

4 Keep fresh papaya leaves or its capsules handy as that can work wonders for boosting immunity and bumping up platelet levels in case malaria or dengue has struck someone.

And most importantly, when monsoons arrive, bolstering our immunity should be the first priority as that becomes the first line of defence against seasonal diseases like jaundice, malaria, dengue, Hepatitis A and E, diarrhoea or food poisoning. None of the above tips will help if immunity is low. Maintain good gut health, do not skip sleep, include a daily dose of probiotics, have fruits that are seasonal, stay active and get a handle on your stress levels to boost your defence system. Make homemade spice brews — like the one above — that can help boost your immunity and works as a great alternative to your evening chai.

From chocolates to yogurt: Does ‘sugar-free’ mean ‘no sugar’

July 21, 2019/The Indian Express

While most of us happily consume anything that says “sugar-free”, assuming that it doesn’t have sugar at all, what we don’t realise is that “sugar-free” doesn’t mean ‘no sugar’. Like we add white table sugar or brown sugar to our cakes, coffee, cookies and even fruits, food manufacturers are also known to add artificial sweeteners, a form of sugar, or typically high-fructose corn syrup to foods and beverages including crackers, tomato sauce and salad dressing. Even low-fat foods like flavoured yogurt are considered to be high on sugar. Pune-based diabetes researcher Dr Pramod Tripathi, founder, Freedom from Diabetes center, tells indianexpress.com, “Sugar-free and no added sugar labelled products do not mean the same thing”. “According to United States’ Food and Drug Administration guidelines ‘no added sugar’ means no sugar-containing ingredient is used during processing and ‘sugar free’ means a food must have 0.5 gram of sugar (naturally occurring or any sugar ingredient) per serving. Both these terms do not say anything about artificial sweeteners.” Either added by consumers themselves or found in processed foods, such sugars are called free sugars, and include glucose, dextrose, fructose, household sugar (sucrose), malt sugar (maltose) and also sugars that are found in honey, syrups, fruit juices and fruit juice concentrates.

One-hour exercise with proper hydration may tackle low BP: Study

July 21, 2019/The Indian Express



Suffering from low blood pressure? Do an hour or more of daily exercise and stay hydrated to improve the condition and control fainting or dizziness episodes, finds a NASA-funded study on astronauts. The study is the first to examine the condition called “orthostatic intolerance” during daily activities when the astronauts returned home. The researchers found that exercise regimens during space flight, followed by saline injections after landing, were sufficient to prevent the condition from occurring. “Doing an hour or more of daily exercise was sufficient to prevent loss of heart muscle, and when it was combined with receiving hydration on their return, the condition was prevented entirely. We expected to see up to two-thirds of the space crew faint. Instead, no one fainted,” said cardiologist Dr Benjamin Levine from UT Southwestern Medical Center. A similar condition is also diagnosed in patients as Postural Orthostatic Tachycardia Syndrome (POTS), which is predominantly found in women. The dizziness that it causes is life-changing and can be debilitating. Dr Levine has helped one Dallas patient return to a normal life. For the study, published in the journal *Circulation*, the researchers used a small blood pressure cuff on astronauts’ finger to measure blood pressure and every heartbeat.

Warm bath before going to bed can induce and enhance quality sleep

July 21, 2019/The Asian Age

A sound sleep is every individual's desire and need. A new study has put forth a simple technique to enhance your sleep quality and also hasten the sleep process. The study published in the journal 'Sleep Medicine Reviews' highlighted that taking a shower about 1-2 hours before bedtime in the water of about 104-109 degrees Fahrenheit (40-42 degree Celsius) can significantly improve your sleep. "When we looked through all known studies, we noticed significant disparities in terms of the approaches and findings," said Shahab Haghayegh, lead author on the paper. Researchers analysed around 5,322 studies and extracted pertinent information from publications meeting predefined inclusion and exclusion criteria to explore the effects of water-based passive body heating on a number of sleep-related conditions: sleep onset latency - the length of time it takes to accomplish the transition from full wakefulness to sleep; total sleep time; sleep efficiency -- the amount of time spent asleep relative to the total amount of time spent in bed intended for sleep; and subjective sleep quality. The findings showed that an optimum temperature of between 104 and 109 degrees Fahrenheit improved overall sleep quality. If people scheduled their bath 1-2 hours before bedtime, it can also increase the speed of falling asleep by an average of 10 minutes. Body temperature, which is involved in the regulation of the sleep/wake cycle, exhibits a circadian cycle, being 2-3 degrees Fahrenheit higher in the late afternoon/early evening than during sleep when it is the lowest. The average person's circadian cycle is characterized by a reduction in core body temperature of about 0.5 to 1 F around an hour before usual sleep time, dropping to its lowest level between the middle and later span of nighttime sleep. It then begins to rise, acting as a kind of a biological alarm clock wake-up signal. The temperature cycle leads to the sleep cycle and is an essential factor in achieving rapid sleep onset and high-efficiency sleep. The researchers found the optimal timing of bathing for cooling down of core body temperature in order to improve sleep quality is about 90 minutes before going to bed.

HIV cure soon? Human trials underway in China

July 22, 2019/The Times of India

HIV (Human Immuno Virus) is one of the deadliest infections affecting close to 36.9 million people globally, with over 2.1 million reported cases in India alone. While no cure for the viral disease has been found till date, in what may be termed promising, human trials may soon start, with a vaccine developed by a group of Chinese scientists having received a green signal. According to confirmed reports, scientists from China will soon start testing the HIV vaccine on 160 human volunteers. The vaccine is guaranteed to have long-lasting effects to fight the infection. This is the first time a vaccine like this has reached the second-phase human trial. The research group has already seen hundreds of volunteers registering; preparation for the same has been initialized in two Chinese hospitals. The vaccine, termed DNA-rTV, has been developed to boost the body's immunity, relying on the replication of the viral strain's DNA and effectively, cut back on its efficacy when it enters the body, shared scientist Shao Yiming at the Chinese Centre for Disease Control and Prevention. The researchers also added that the vaccine will be similar to the one used to fight and prevent smallpox spread. "With significant reduction of virulence, the vaccine will not cause infection in healthy receivers," added the researcher. What makes the vaccine promising is that it contains only parts of the virus's DNA material so the odds of catching an infection are significantly lowered down. When the vaccine is provided, the DNA cells will try to replicate itself, which in turn will trigger the body's immune system in place to produce more and more antibodies to fight it. This is one of the first vaccines under testing which contain the DNA of HIV.

Peanut consumption in early childhood can reduce allergy risk

July 23, 2019/The Asian Age

An early introduction to peanuts in an infant's diet can reduce the risk of peanut allergy, recent findings suggest. According to the latest study, infants who are fed peanut protein regularly have a lower risk of peanut allergy.

Researchers suggest that in order to prevent peanut allergy, peanut protein (such as peanut butter or powdered puff) may be introduced at home for most babies between 4 and 6 months as one of the first foods. Babies with severe eczema are more likely to have a peanut allergy, and those with no or only mild eczema are best-suited for peanut introduction in the home.

Infants with risk factors for peanut allergy, such as severe eczema, egg allergy or both, should be seen by a specialist before peanut introduction.

To reduce the risk of peanut allergy, 8 grams of peanut protein (1 heaped teaspoon of peanut butter) should be eaten at least twice a week, researchers suggested.

Asthma can be better combated with family support

July 23, 2019/The Asian Age



Want to help your child cope with asthma? Better family relationships are associated with good asthma management behaviours and outcomes for those living in dangerous neighbourhoods, a new study reveals. The findings of the study were published in the journal 'Paediatrics'. For children with asthma, neighbourhood environmental conditions, the role of allergens and pollutants, for example, have long been known to play an important role, but less is known about how social conditions in the neighbourhood might affect children's asthma. In the study, researchers sought to test whether there are social factors that can buffer children from the negative effects of difficult neighbourhood conditions, focusing on one particular factor they thought would be important in the lives of children, whether they had positive and supportive family relationships. "We found significant interactions between neighbourhood conditions and family relationship quality predicting clinical asthma outcomes," said lead study author Edith Chen. "When children lived in neighbourhoods that were high in danger and disorder, the better their family relationships, the fewer symptoms and activity limitations they had, and the better their pulmonary," Chen added. In contrast, Chen said, when children lived in neighbourhoods that were lower in danger and disorder, their symptoms, activity limitations and pulmonary function were generally good, and the nature of their family relationships didn't really matter.

Aspirin could be bad for your heart

July 23, 2019/The Asian Age

Millions of people who take aspirin to prevent a heart attack may need to rethink the pill-popping, Harvard researchers reported Monday. A daily low-dose aspirin is recommended for people who have already had a heart attack or stroke and for those diagnosed with heart disease. But for the otherwise healthy, that advice has been overturned. Guidelines released this year ruled out routine aspirin use for many older adults who don't already have heart disease — and said it's only for certain younger people under doctor's orders. How many people need to get that message? Some 29 million people 40 and older were taking an aspirin a day despite having no known heart disease in 2017, the latest data available, according to a new study from Harvard and Beth Israel Deaconess Medical Center. About 6.6 million of them were doing so on their own — a doctor never recommended it. And nearly half of people over 70 who don't have heart disease — estimated at about 10 million — were taking daily aspirin for prevention, the researchers reported in *Annals of Internal Medicine*. "Many patients are confused about this," said Dr. Colin O'Brien, a senior internal medicine resident at Beth Israel who led the study. After all, for years doctors urged people to leverage aspirin's blood-thinning properties to lower the chances of a first heart attack or stroke. Then last year, three surprising new studies challenged that dogma. Those studies were some of the largest and longest to test aspirin in people at low and moderate risk of a heart attack, and found only marginal benefit if any, especially for older adults. Yet the aspirin users experienced markedly more digestive-tract bleeding, along with some other side effects.

Head and neck cancer: The increasing burden on India

July 24, 2019/The Time of India



According to official data, overall 57.5 percent of global head and neck cancers occur in Asia, especially in India. Head and neck cancers in India account for 30 per of all cancers. Head and neck cancer begins in the mouth, nose, throat, larynx, sinuses, or salivary glands. It is said that the use of tobacco, alcohol consumption and infection with human papillomavirus (HPV) enhances one's risk of head and neck cancers. Symptoms can vary from a lump or a sore throat that does not heal, trouble in swallowing and hoarseness in the voice. According to Dr N. Aditya Murali, Consultant – Medical and Hemato Oncology, Aster CMI Hospital, “The commonest cause for any ulcers in the tongue or buccal mucosal region is because of deformed teeth causing friction in the area or a common vitamin deficiency which is corrected by a course of vitamin supplements. However, if these problems persist for more than 3-4 weeks or get worse in spite of treatment, they should immediately consult an oncologist. Another alarming symptom is bleeding from the oral cavity and difficulty or stiffness while opening the mouth.” Most people delay reporting the case to specialists. Dr Murali explains why. “Although most people notice if any ulcer is there on the tongue or in the gums region, or any difficulty in opening the mouth, people don't want to approach the oncologist because they are afraid of any surgery and the resultant disfigurement. Hence, this fear of loss of cosmesis is the primary reason for delay in treatment.”

Head injury may cause loss of smell, anxiety

July 24, 2019/The Tribune

While it is already known that people who suffer a major concussion can lose their sense of smell temporarily, researchers have found that even minor head injuries may lead to olfactory and anxiety problems. The study, published in the journal *Brain Injury*, found that even minor accidents like falling off a bike with a helmet on, taking a tumble on the ski slopes, slipping on ice and hitting one's head can provoke the same kind of problems as in major head injuries. “A lot of people suffer a mild concussion at some point in their life, so realising they have trouble smelling is the first step to telling their doctor about it,” said study lead author Fanny Lecuyer Giguere from the University of Montreal in Canada. “It's important that patients report any loss of smell, because it's not something their general practitioners normally ask about,” she said. For the study, the researchers compared 20 hospital patients who had mild concussions with 22 who had broken limbs but had no concussion. Within 24 hours of their accident, just over half of those with mild concussions had a reduced sense of smell versus five per cent of the patients with broken bones. A year later, although their sense of smell was back to normal, the first group of patients had significantly more anxiety than the control group. To test their capacity to identify smells, the researchers visited hospital patients in the alpine ski resort of Visp, Switzerland between December 2016 and February 2017. They were asked to identify synthetic odour of roses, garlic, cloves and more. A year later, the patients were sent a follow-up questionnaire.

Paleo diet can increase cardiovascular diseases

July 24, 2019/The Asian Age



People who follow the paleo diet were found to have twice the amount of a key blood biomarker that is linked closely to heart diseases, suggests a study. The study published in the 'European Journal of Nutrition' examined the impact of the diet on gut bacteria. Researchers compared 44 people on the diet with 47 following a traditional Australian diet. They measured the amount of trimethylamine-n-oxide (TMAO) in participants' blood. High levels of TMAO, an organic compound produced in the gut, are associated with an increased risk of heart disease.

The controversial Paleo (or 'caveman') diet advocates eating meat, vegetables, nuts and limited fruit, and excludes grains, legumes, dairy, salt, refined sugar and processed oils. Dr Angela Genoni, the lead researcher said that with the diet's growing popularity, it was important to understand the impact it could have on overall health. "Many diet" Paleo diet proponents claim the diet is beneficial to gut health, but this research suggests that when it comes to the production of TMAO in the gut, the diet". Paleo diet could be having an adverse impact in terms of heart health," she said. "We also found that populations of beneficial bacterial species were lower in the Paleolithic groups, associated with the reduced carbohydrate intake, which may have consequences for other chronic diseases over the long term." She said the reason TMAO was so elevated in people on the diet" Paleo diet appeared to be the lack of whole grains in their diet. "We found the lack of whole grains were associated with TMAO levels, which may provide a link between the reduced risks of cardiovascular disease we see in populations with high intakes of whole grains," she said.

Warning signs that indicate you have a serious thyroid problem

July 24, 2019/The Asian Age

The thyroid is a little, butterfly-shaped gland that is located in our neck. Don't be misled by its tiny size, as it is one of the most important glands in our body. It regulates our body temperature, keeps the heartbeat in sync and digests your food properly. A small malfunction of this vital gland and make your body go haywire. The American Thyroid Association estimated that nearly 20 million Americans have a form of thyroid disease that goes undiagnosed for years. Nearly 60 per cent of those with thyroid problems are unaware of it. Hypothyroidism happens when the gland doesn't secrete enough of the hormone. It leads to bodily systems slowing down. Hyperthyroidism is a condition where there is excess hormone being produced and systems speed up, reported The Epoch Times.

The following are symptoms of hypothyroidism:

Feeling sad or depressed: - Have you been feeling low, listless and disinterested in things? Are you crying for no apparent reason? Before jumping to the conclusion that it is depression, check your thyroid function. Maybe the body isn't producing enough of the hormone.

Constipation: - Low thyroid function also results in inability to digest food properly. Low thyroid function means body is not getting signals to work at normal pace, so bodily functions slow down. Thus, you will end up feeling constipated.

Sleeping too much Less thyroid hormone means slower heart rate and metabolism. Your body can't use the food and drink you consumed to use, so it makes you feel tired. No amount of sleep will make you feel well-rested.

[Cut down on chilli intake to keep dementia at bay](#)

July 24, 2019/The Asian Age



People love adding chilli to food to add a pop of spice and an extra kick to it. But research shows that consuming more than 50 gms of chilli a day can increase the risk of dementia. The study was conducted on 4,582 Chinese adults over the age of 55. It was found that there was more evidence of cognitive decline among those who consistently ate over 50 gms of chilli a day. Memory decline was even more noticeable and significant among chilli lovers. The study was published in the journal 'Nutrients'. Higher chilli consumption also resulted in lower BMI (Body Mass Index). This was proven by a study led by Zumin Shi from Qatar University. It showed that those who consumed in excess of 50 gms of chilli a day had almost double the risk of memory decline and poor cognition. "Chilli consumption was found to be beneficial for body weight and blood pressure in our previous studies. However, in this study, we found adverse effects on cognition among older adults," Zumin said. Chilli intake included both fresh and dried chilli peppers but not sweet capsicum or black pepper, researchers said. "In certain regions of China, such as Sichuan and Hunan, almost one in three adults consume spicy food every day," Li said. Capsaicin is the active component in chilli which reportedly speeds up metabolism, fat loss and inhibits vascular disorders but this is the first longitudinal study to investigate the association between chilli intake and cognitive function. Those who ate a lot of chilli had a lower income and body mass index (BMI) and were more physically active compared to non-consumers. Researchers said people of normal body weight may be more sensitive to chilli intake than overweight people, hence the impact on memory and weight.

[How to counter hyperglycemia quickly](#)

July 25, 2019/The Asian Age

When the blood glucose levels exceed a certain concentration, it can lead to a high blood sugar or hyperglycemia. This condition is often found in diabetics or those resistant to the effects of the insulin hormone. If hyperglycemia is left untreated, it can lead to organ and tissue damage, coma and even death, reported the American Diabetes Association. Keep constant tabs on your blood sugar level. If you find that your blood sugar level is crossing into dangerous territory, then there are several ways to lower your sugar levels fast, as listed by Live Strong.

Exercise: - Exercising regularly can counter hyperglycemia by using the excess sugar as fuel for the body. However, if the level is over 240 mg/dL, then do a urine test with a strip to check urine for presence of ketones. When body produces ketones. Then exercising can have an adverse effect and cause blood sugar levels to rise. Physical activity has immediate benefit as well as long-term effect by stabilising the blood sugar levels.

Plan next meal carefully: - People with diabetes follow a eating plan devised by a doctor or a nutritionist. If you are experiencing hyperglycemia symptoms, then stick to the diet plan. Cut back on portion sizes and reduce snacking in between meals. Completely cut out sweetened drinks from your daily meal.

IIT-Mandi researchers decode how lead toxicity may cause fatty liver disease



July 26, 2019/The Tribune

Researchers at the Indian Institute of Technology (IIT)-Mandi have, for the first time, unravelled the mechanisms by which lead salts may cause fatty liver disease, an advance that could pave the way for drugs to treat the disorder. Epidemiological studies have shown that this non-alcoholic fatty liver disease (NAFLD) affects nine per cent to 32 per cent of Indian population, researchers said. NAFLD is a dangerous epidemic and is a rapidly growing health problem intimately related to the metabolic group of diseases such as obesity and diabetes, among others, researchers said. It is a condition wherein there is excessive fat accumulation in the liver, according to the study published in the journal 'FEBS Letters'. "While the connection between lead and fatty liver disease has been known for a while, the actual mechanism by which lead worsens this condition has hitherto remained unknown," said Prosenjit Mondal, Assistant Professor at IIT Mandi. NAFLD, and most metabolic group of diseases, are often caused by the poor regulation of De novo lipogenesis (DNL), a complex process in which carbohydrates circulating in the blood are converted into fat. The poor regulation of DNL leads to abnormal production of fat, which settles in the liver and other internal organs as visceral fat, researchers said. It has been found that the metal lead (Pb²⁺), which is a serious environmental toxin, can lead to poor regulation of fat formation and deposition in the liver, they said.

What are gurmar leaves and why are they good for diabetics

July 26, 2019/The Asian Age

Gurmar or *Gymnema Sylvestre* is a tropical plant that is indigenous to India and grows wild in the tropical forests of central, western and southern parts of the country. The medicinal herb also grows in the tropical areas of Africa, Australia, and China. Known for its Ayurvedic properties, gurmar has proven to be beneficial in managing various ailments like diabetes, malaria and even snake bites and digestion issues. Due to the presence of flavonoids, cinnamic acid, folic acid, and ascorbic acid, gurmar leaves are high in antioxidants. A study published in *Journal of Herbs, Spices & Medicinal Plants* says that gurmar, which translates to 'destroyer of sugar', is rich in several active compounds like gymnemic acid, gymnemasides, anthraquinones, flavones, hentriacontane, pentatriacontane, phytin, resins, tartaric acid, formic acid, butyric acid, lupeol and alkaloid like gymnamine, which make it rich in antidiabetic properties. According to WebMD, "Gymnema contains substances that decrease the absorption of sugar from the intestine. Gymnema may also increase the amount of insulin in the body and increase the growth of cells in the pancreas, which is the place in the body where insulin is made." It is said that having one teaspoon of powdered gurmar leaves with water half an hour after lunch and dinner may help regulate the absorption of carbohydrates in the body. Also, the gymnemic acids in the herb blocks the sugar receptors on your tongue, decreasing your ability to taste sweetness. This can lead to reduced sugar cravings. The wonder herb is also known to aid weight loss with research indicating that consuming the leaves for 12 weeks can help reduce the body weight and body mass index in overweight people.

Pancreatic cancer can be triggered by hyperglycemia

July 27, 2019/The Asian Age

High blood sugar may increase the risk of pancreatic cancer, a new study has found. The disease stops the work of healthy cells in the pancreas and aids their out-of-control growth. The findings of the Korea-based study were published in the 'Journal of Clinical Endocrinology & Metabolism'. The five-year survival rate for people with pancreatic cancer is only nine percent because the disease is so difficult to diagnose and is often not found until later stages when the cancer has spread from the pancreas to other parts of the body, the research suggests.

"Diabetes is one of the major risk factors for pancreatic cancer," said the study's corresponding author, Cheol-Young Park of Kangbuk Samsung Hospital in Seoul.

"When we evaluated the pancreatic cancer incidence according to fasting glucose levels using a national cohort database, we found the number of pancreatic cancer cases rose as fasting glucose levels increased. This was true in people who had diabetes as well as those who did not," said Park. In this study, researchers evaluated pancreatic cancer incidence in Korea according to blood sugar levels using a national cohort database of more than 25 million patients. They found that as blood sugar level rises, the rate of pancreatic cancer significantly increases not only in diabetic population but also in those with prediabetes or normal range of blood sugar levels. Park said, "Our research implies that early detection of hyperglycemia in health checkups and lifestyle modification to improve glucose profile might offer a critical opportunity for lowering the risk of pancreatic cancer."

Take vitamin D supplements to slow progression of type 2 diabetes

July 27, 2019/The Asian Age

People suffering from a high risk of developing type 2 diabetes (prediabetes) can be identified by several risk factors including obesity or a family history of the disease. Although low vitamin D levels have previously been associated with an increased risk of developing type 2 diabetes, some studies have reported no improvement in metabolic function. However, these often had a low number of participants or included individuals with normal vitamin D levels at the start who were metabolically healthy, or who had long-standing type 2 diabetes. Whether vitamin D supplementation has any beneficial effect in patients with prediabetes or with newly diagnosed diabetes, especially in those who have low vitamin D levels, remains uncertain. In this study, lead researcher Dr. Claudia Gagnon along with her fellow researchers examined the effect of vitamin D supplementation on glucose metabolism in patients who are newly diagnosed with type 2 diabetes or identified as at high risk of developing the condition. Markers of insulin function and glucose metabolism were measured before and after six months of high-dose vitamin D supplementation (approximately 5-10 times the recommended dose). Although only 46 per cent of study participants were determined to have low vitamin D levels at the start of the study, supplementation with vitamin D significantly improved the action of insulin in muscle tissue of participants after six months. Dr. Claudia said, "The reason we saw improvements in glucose metabolism following vitamin D supplementation in those at high risk of diabetes, or with newly diagnosed diabetes, while other studies failed to demonstrate an effect in people with long-standing type 2 diabetes is unclear. This could be due to the fact that improvements in metabolic function are harder to detect in those with a longer-term disease or that longer treatment time is needed to see the benefits."

World Hepatitis Day: The growing threat of hepatitis in India

July 28, 2019/The Times of India

Hepatitis kills thousands of people every year across the globe and has been ranked as the second major infectious disease. Yet awareness about hepatitis among people is too low. Most of the people infected with this disease do not even know that they are infected. So, even after being infected with a preventable and treatable disease, people have to suffer because of their lack of awareness. Observing the growing menace of this disease across the globe, the World Health Organisation (WHO) a few years back launched a global campaign to elimination hepatitis by 2030. As the world celebrates World Hepatitis Day today on July 28, let's know where India stands and what are the challenges it is facing to eliminate this global menace.

The major challenge in India

Hepatitis is referred to as an inflammation of the liver caused by some specific kind of virus. If the virus is left untreated it can progress to fibrosis (scarring), cirrhosis or even liver cancer. There are mainly 5 hepatitis viruses, referred to as types A, B, C, D, and E. Where on one hand hepatitis A and E are caused by ingestion of contaminated food or water, hepatitis B, C and D usually occur as a result of parenteral contact with infected body fluids. Hepatitis B and C are generally transmitted from one person to the other through the transmission of contaminated blood or contaminated equipment during medical procedures and sexual contact. Out of all hepatitis, B and C are the most dangerous one and numerous stigmas are associated with it. As per the data put up by the Institute of Liver and Biliary Sciences, established by the Government of the National Capital Territory (NCT) of Delhi, around 4 crore people are suffering from Hepatitis B in India and almost 1.2 crores have Hepatitis C. Out of all, 1.5 lakh people die annually due to this disease.

Fluorescence imaging to identify cancer-affected breast tissues introduced in AIIMS

July 28, 2019/The Tribune

In a first, a state-of-the-art fluorescence imaging technology for easy identification of cancer-affected tissues in breast has recently been introduced at the AIIMS here. According to Dr SVS Deo, Head of the Department of Surgical Oncology at AIIMS, the technology will be a "game changer" in breast cancer surgery space as it precisely helps identify relevant tissue intra-operatively. During breast cancer surgery, surgeons inject a safe and affordable indocyanine green (ICG) dye in patients. Using Fluorescence Imaging technology, surgeons can view blood flow in vessels, micro-vessels, tissue perfusion and critical anatomical structures intra-operatively. "The relevant tissues light up in fluorescent green colour. The reliability and multiple applications of the imaging are a significant differentiation compared to currently used technologies like blue dye," he said. "Due to lack of this critical information, earlier all lymph nodes including healthy ones would be removed completely causing significant collateral damage to patient. With Fluorescence Imaging technology we can now save healthy tissue and improve patient safety and outcomes," Dr Deo said.

HIV infected cells damage cholesterol metabolism

July 28, 2019/The Asian Age

A recent study found that HIV-infected cells release vesicles that contain a viral protein called Nef, further damaging cholesterol metabolism and triggering inflammation in uninfected bystander cells. HIV infects only a limited repertoire of cells expressing HIV receptors. But HIV infection is also associated with conditions involving the dysfunction of cells that cannot be infected by HIV, such as hardening of the arteries, dementia, kidney impairment, and certain heart problems. These HIV-associated conditions persist even after the successful application of antiretroviral therapy when no virus is found in the blood. Many of these conditions involve impairments in cholesterol metabolism. In the new study published in the journal of PLOS Pathogens, researchers examined the mechanisms that may contribute to HIV-associated metabolic conditions. The results showed that the HIV protein Nef is released from infected cells in vesicles that are then rapidly taken up by uninfected bystander white blood cells, impairing cholesterol metabolism in these cells. This impairment caused the formation of excessive lipid rafts discrete lipid domains present in the external leaflet of the plasma membrane and the re-localisation of inflammatory receptors into rafts, triggering inflammation. The findings demonstrate how a single viral molecule released from infected cells into circulation may contribute to a range of pathogenic responses.

Did you know that smartphone usage can lead to obesity?

July 28, 2019/The Asian Age

In the 21st century everyone is hooked up with his smartphone, particularly young people, which lead to a decrease in physical activity, researchers have found. University students who used their smartphones five or more hours a day had a 43 per cent increased risk of obesity and were more likely to have other lifestyle habits that increase the risk of heart disease. "It is important that the general population know and be aware that, although mobile technology is undoubtedly attractive for its multiple purposes, portability, comfort, access to countless services, information and entertainment sources, it should also be used to improve habits and healthy behaviours," said Mirary Mantilla-Morrón, the lead author of the study presented at the ACC Latin America conference. "Spending too much time in front of the Smartphone facilitates sedentary behaviours, reduces the time of physical activity, which increases the risk of premature death, diabetes, heart disease, different types of cancer, osteoarticular discomfort and musculoskeletal symptoms," added Mirary Mantilla-Morrón. Researchers have analysed 1060 students of the Health Sciences Faculty at the Simon Bolívar University from June to December 2018. The study group consisted of 700 women and 360 men. With an average age of 19 years and 20 years respectively. Participating men were 36.1 per cent likely to be overweight and 42.6 per cent likely to be obese. Women were 63.9 per cent likely to be overweight and 57.4 per cent likely to be obese.

Researchers found the risk of obesity increased by 43 per cent if a smartphone was used five or more hours a day, as participating students were twice as likely to drink more sugary drinks, fast food, sweets, snacks and have decreased physical activity. Twenty-six per cent of the subjects who were overweight and 4.6 per cent who were obese spent more than five hours using their device.

World Heart Day 2019: Are you at risk of a heart disease?

July 29, 2019/The Times of India

We all know heart disease and stroke are two most common killers in India. Heart can be affected by a number of common diseases. The most common and dreaded disease of the heart is of course coronary artery disease or heart attack in which the blood supply to the heart muscles is reduced and stopped completely. Heart failure in which the pump function of the heart is reduced is another common ailment. Additionally disease of the heart valves or abnormality of heart rhythm is also important cardiac ailments. How to know your heart is at risk? There are certain known risk factors for heart disease, many of which are preventable

Know your blood sugar level:- High blood sugar level or diabetes is one of the most important risk factor for heart attack. Diabetics have 2-4 times increased risk of dying from heart attack compared to non-diabetic. Your normal fasting blood sugar should be below 100mg/dl and postprandial sugar (2 hours after meals) should be below 140mg/dl. HbA1C or glycosylated haemoglobin measures the average blood sugar over last 08-12 weeks and should be below 6.0%. Diabetes have fasting blood sugar > 126 gm/dl or HbA1C > 6.5%.

Know your blood pressure:- High blood pressure is another important modifiable risk factor. It is also called the silent killer because many patients do not get any warning or signs and symptoms. Normal blood pressure should be below 120/80 mmHg. A single or occasional high reading needs a closer monitoring of your blood pressure. Blood pressure reading between 120-139/80-89 mmHg is called pre-hypertension and such people need active life style changes to control BP blood pressure consistently above this require medication. The best way to protect from hypertension is to keep checking your blood pressure regularly.

New cell discovery could make liver transplants redundant

July 30, 2019/The Asian Age

Researchers have identified a new type of cell that may be able to regenerate liver tissue and treat liver failure without the need for transplants. The scientists at King's College London in the UK used single cell RNA sequencing to identify the cell type called a hepatobiliary hybrid progenitor (HHyP), that forms during our early development in the womb. HHyP also persist in small quantities in adults and these cells can grow into the two main cell types of the adult liver — Hepatocytes and Cholangiocytes — giving HHyPs stem cell like properties. The research, published in the journal Nature Communications, examined HHyPs and found that they resemble mouse stem cells which have been found to rapidly repair mice liver following major injury, such as occurs in cirrhosis. “For the first time, we have found that cells with true stem cell like properties may well exist in the human liver,” said Tamir Rashid from the King's College London. “This in turn could provide a wide range of regenerative medicine applications for treating liver disease, including the possibility of bypassing the need for liver transplants,” said Rashid. Liver disease can be caused by lifestyle issues such as obesity, viruses, alcohol misuse or by non-lifestyle issues such as autoimmune and genetic mediated disease. Symptoms of liver disease include jaundice, itching and feelings of weakness and tiredness and in more severe cases, cirrhosis.

New treatment discovered for Parkinson's and other brain diseases

July 30, 2019/The Asian Age

A discovery has revealed that a protein which was earlier linked to cell dysfunction and death is in fact critical for repairing breaks in DNA. The finding could lead to new treatments for Parkinson's and other brain diseases, suggests a study. The study published in the journal 'Scientific Reports,' demonstrates the role of protein- alpha-synuclein in preventing the death of neurons in brain diseases such as Parkinson's. The findings suggest that it may be possible to design new therapies to replace alpha-synuclein's function or boost it in people with Parkinson's disease and other neurodegenerative disorders. It also reveals that aggregates of alpha-synuclein, lewy bodies, are problematic because they pull alpha-synuclein protein out of the nucleus of brain cells. The study examined the cells of living mice and postmortem brain tissue in humans, revealed that these proteins perform a crucial function by repairing breaks that occur along the vast strands of DNA present in the nucleus of every cell of the body. Alpha-synuclein's role in DNA repair may be crucial in preventing cell death. This function may be lost in brain diseases such as Parkinson's, leading to the widespread death of neurons. "It may be the loss of that function that's killing that cell," said Vivek Unni senior author of the study. Researchers found that the alpha-synuclein protein rapidly recruited to the site of DNA damage in the neurons of mice. In addition, they found increased double-strand breaks in the DNA of human tissue and mice in which the protein was clumped together in the form of Lewy bodies in the cytoplasm surrounding the cell's nucleus. Taken together, the results suggest that alpha-synuclein plays a crucial role in binding broken strands of DNA within the cell's nucleus.

Ear 'tickle' therapy may help slow ageing, says study

July 31, 2019/The Asian Age

Tickling the ear with a small electric current may rebalance the nervous system in over-55s and help them age more healthily, a study claims. Scientists at the University of Leeds in the UK found that a short daily therapy delivered for two weeks led to physiological wellbeing, including a better quality of life, mood and sleep. The therapy, called transcutaneous vagus nerve stimulation, delivers a small, painless electrical current to the ear, which sends signals to the body's nervous system through the vagus nerve. The new research, published in the journal Aging, suggests the therapy may slow down an important effect associated with ageing. This could help protect people from chronic diseases which we become more prone to as we get older, such as high blood pressure, heart disease and atrial fibrillation. The researchers suggest that the 'tickle' therapy has the potential to help people age more healthily, by recalibrating the body's internal control system. "The ear is like a gateway through which we can tinker with the body's metabolic balance, without the need for medication or invasive procedures. We believe these results are just the tip of the iceberg," said Beatrice Bretherton, from the University of Leeds. "We are excited to investigate further into the effects and potential long-term benefits of daily ear stimulation, as we have seen a great response to the treatment so far," Bretherton said.

Vitamin A intake linked with lower skin cancer risk

August 1, 2019/The Tribune

Intake of vitamin A may be associated with a lower risk of a common type of skin cancer, a study claims. The study of about 125,000 Americans found that people with the highest intake of vitamin A lowered their risk of squamous cell skin cancer by around 15 per cent. Most of the vitamin A they consumed came from foods, according to the study published in the journal JAMA Dermatology. "These findings just add another reason to have a healthy diet with fruits and vegetables. Vitamin A from plant sources is safe," said Eunyoung Cho, an associate professor at Brown University in the US. Healthy food sources of vitamin A include sweet potato, cantaloupe, carrots, black-eyed peas, sweet red peppers, broccoli, spinach, dairy foods, fish and meat, especially liver, according to the US National Institutes of Health (NIH). Vitamin A is a fat soluble vitamin. That means it can collect in the fat cells. However, when taken in large amounts -- like those in supplements -- people can potentially reach an unsafe level of vitamin A, according to the NIH.

Adults shouldn't consume more than 10,000 international units (IU) of preformed vitamin A daily, the NIH said. Cho said too much preformed vitamin A -- typically from supplements and some animal foods -- increases the risk of osteoporosis and hip fractures. Squamous cell carcinoma is a common type of skin cancer. Over a lifetime, as many as 11 per cent of Americans will have squamous cell skin cancer, the researchers said. It tends to occur in areas exposed to a lot of sunlight, such as the face and head.

Beware of degrading indoor air quality

August 1, 2019/The Asian Age

If you think you are safe from pollution when you are indoors, think again. We spend almost 90 per cent of our times inside, and we are exposed to gases and volatile compounds that are released from furniture and cooking. Due to these gases, teamed up with poor ventilation, the air quality in our homes, schools and offices are degrading. The poor quality air can then interfere with our productivity at work and also result in low scores and more absentees in school. In extreme cases, it can result in "sick building syndrome", where a person develops symptoms like headache, sore throat and nausea from being in a particular building. Air quality and energy efficiency goes hand-in-hand. In 1983, WHO noted that well-sealed buildings having windows that could not be opened were linked to the "sick building syndrome." This research was conducted after a lot of people started feeling sick in buildings in the 1970s, reported BBC. Chemist Charlene Bayer investigated the reasons behind this syndrome. She studied the structure and layout of many buildings and discovered many design flaws. Office washrooms that were placed next to the hydraulic elevators were equipped with the automatic deodorisers that were popular in the 80s and 90s. When the elevator moved, a vacuum was created which drew in the deodorised chemicals and they were released onto the floor in which the lift opened.

"It distributed this stuff on every floor. And it got high enough that sensitive people started responding to it," she noted. "That was very, very early on when we were trying to convince people that indoor air [quality as a field] really had a reason to exist."

H1N1 virus may have altered, say experts

August 2, 2019/ET Healthworld

The advent of monsoon has brought in the expectant surge of patients afflicted with H1N1 virus — that causes swine flu — with some cases even leading to death. Till now, 108 patients have succumbed to the disease. The fact that none of them had comorbidities (any other illnesses that make a person more vulnerable to the virus) has worried the health experts. They believe that H1N1virus may be undergoing an antigenic shift; where two or more strain combine and alter the structure, build immune response and resistance. Studies point out that such changes to the virus may particularly take place in February and September. Given this possibility and the deaths, they have requested people to take flu symptoms seriously, as negligence could land them in trouble. “The National Institute of Virology continuously monitors the genetic changes in the virus. There is a global virus network that functions for the cause, and accordingly, the candidate for vaccine viral strain is decided. Regular reports for the strains are sent to the World Health Organisation (WHO). At present, the study on the virus that causes swine flu is in progress,” said Dr Pradeep Awte, state surveillance officer. The state health department has recorded 192 swine flu-related deaths between January 1 and July 31 this year and has confirmed 1,998 other cases. Of the deaths, 108 patients did not have comorbidities and succumbed solely to the virus, while the rest 84 were afflicted with other disease(s). Maximum deaths have been reported in Nashik — 36 — followed by 25 in Pune, 25 in Nagpur and 16 in Ahmednagar.

Liver Transplant and Healthcare Scenario in India

August 2, 2019/ET Healthworld

Since the first successful liver transplant in India in 1998, we have come a long way and this treatment is now readily available to those who seek it in the private sector. Unfortunately, the government hospitals have not taken this up in a big way except perhaps for transplants in AIIMS, New Delhi, PGI Chandigarh and PIGMER, Kolkata and Stanley Medical College, Chennai. The Institute of Liver and Biliary Sciences, New Delhi which is an enterprise of private and public partnership is actively engaged in liver transplant. However, the cost in this hospital is upwards of 10 lacs INR whereas in the private sector it is under 20 lacs INR. There is neither a shortage of experts nor deficiency in infrastructure in most of the big hospitals In India. The number of patients who need transplants are over 200 000 every year. Only a small fraction of these patients will get transplanted and it seems that the key factor is an acute shortage of donors. Cadaveric donations which has been pushed quite aggressively by media and the medical community has only met with limited success. As someone who has been closely involved with liver transplant in this country from 1998, the main reason seems a huge trust deficit between the patients and doctors. The recent increase in violence against doctors is a reflection of this. Side by side, as most donations seems to occur in government hospitals where most trauma victims are usually taken to first, organs are often transferred to private hospitals where liver transplants are commonly done. As a result, it seems that altruistic donations are only helping the rich which again has a negative impact on organ donation.

[Link between stress, cervical cancer uncovered](#)

August 2, 2019/Et Healthworld

D.C: A new study has established an association between cervical cancer and stress in patients, stating that females having cervical cancer with stress-related disorders are at a higher risk of succumbing to the disease. Findings of the study were published in the journal 'Cancer Research'. "Patients receiving a cancer diagnosis are at increased risk of several stress-related psychiatric disorders, such as depression, anxiety, and stress-reaction and adjustment disorders," said Donghao Lu, the study's author. Lu added, "Emerging evidence from both experimental and epidemiological studies indicates that psychological distress might affect the progression of many cancer types." For the following study, researchers gathered and examined records of 4,245 patients diagnosed with cervical cancer in Sweden between January 1, 2002, and December 31, 2011. At the same time, researchers also identified patients who had experienced a stressful life event, such as the death or severe illness of a family member, divorce, or being between jobs, as these events would increase emotional burden on patients. Moreover, researchers also identified women who had cervical cancer or unspecified uterine cancers as their cause of death. During the study, 1,392 patients died, and cervical cancer was listed as the cause of death for 1,005 of them. In all, researchers found that 1,797 patients either had stress-related disorders or had undergone stressful life events. Patients with either a stress-related disorder or a stressful life event were 33 per cent more likely to die of the disease. Those who had stress-related disorders were 55 per cent more likely to die of their cervical cancer, while those who had experienced a stressful life event were 20 per cent more likely to die of their disease.

With regards,

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