



INDIAN COUNCIL OF MEDICAL RESEARCH

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HEADLINES



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Antibiotics are 'avoidable trigger' for bowel disease: Study

October 27,2018/The Asian Age

Scientists have shown for the first time how antibiotics can predispose the gut to avoidable infections that trigger bowel disease in mice. The researchers from The University of Manchester in the UK also showed that substances derived from fibre prevent this damage to the gut, suggesting a high fibre diet could be useful when taken during and after a course of antibiotics. The study, which appears in the journal Science Translational Medicine, tested broad spectrum antibiotics on mice to assess their impact on the gut's microbiota, the community of microbes that live in the gastrointestinal tract. After a week long course of antibiotics, a harmful immune reaction started that lasted at least two months, an equivalent of many years in humans, said the researchers. The immune reaction meant that significantly fewer beneficial bacteria which make 'short chain fatty acids', which are good for the gut, grew back.

However, short chain fatty acids, produced by the fermentation of dietary fibre by the microorganisms which live in the gut, could prevent the harmful immune response.

"Epidemiological evidence already links antibiotics given to babies and young children, when the immune system is still developing, to inflammatory bowel disease, asthma, psoriasis and other inflammatory diseases later in life," said Elizabeth Mann from The University of Manchester.

Millions with high blood sugar face tuberculosis risk

October 27,2018/The Asian Age

Millions of people with high blood sugar may be at greater risk of tuberculosis than previously thought, scientists said Friday, warning that diabetes and TB could combine to create the "perfect storm" of disease. Tuberculosis, a severe infection caused by bacteria in the lungs, kills almost as many people each year as HIV/AIDS and malaria combined. In 2017 nearly 10 million people developed TB, according to the World Health Organization, and experts are concerned that a global explosion in diabetes will put millions more at risk. New research unveiled this week at a global lung health conference in The Hague also suggests further cause for worry. For the study, scientists at the London School of Hygiene and Tropical Medicine conducted blood tests on people living with tuberculosis and diabetes in four countries: South Africa, Romania, Indonesia and Peru. They then tested people with TB and blood sugar levels that were high, but below the threshold for diabetes. They found that blood samples from those who did not have diabetes still contained molecules associated with people suffering from TB/diabetes. "This tells us even before a person develops diabetes, the risk of developing TB is higher," Ajay Kumar, a research director at The International Union Against Tuberculosis and Lung Disease, who was not involved in the study, told AFP Friday.

This is how air pollution damages children's health

October 28,2018/Hindustan Times

Air pollution is the new tobacco and the simple act of breathing is kills 7 million people a year and harms billions more, said Dr Tedros Adhanom Ghebreyesus, the director general of the World Health Organisation (WHO) in an interview with The Guardian on



Saturday. An estimated 91% of the world's population is exposed to air pollution, which is the world's biggest environmental health risk, causing 4.2 million deaths from poor outdoor air and 3.8 million from household exposure from dirty cookstoves each year.

In India, pollution kills 1.1 million people, according to the State of Global Air 2018 report, which links air pollutants to 10.6% of all deaths in the country. Apart from asthma other respiratory diseases, pollution causes deaths from stroke, chronic obstructive pulmonary disease, heart disease, lung infections, and trachea, bronchus and lung cancers. For children, the risk begins in the womb and continues through the newborn and early childhood periods, which has prompted the WHO to put the spotlight on air pollution and children's health in a new report being released on Monday, two days before the world's first Global Conference on Pollution and Health on October 30-November 1. With the air quality in northern India deteriorating rapidly leading up to the Diwali, when the level of PM2.5, a fine dust that causes and exacerbates respiratory and lung diseases, was in Delhi last year 16 times more than the national standard and 40 times higher than the international safe limits of 20 microgram per cubic meter for PM10 and 10 microgram per cubic meter for PM2.5. Delhi has 38 real-time and 10 manual stations, compared to a handful in other major metros, where

Exercise, low calorie diet may cut stroke risk in menopausal women

October 28,2018/The Indian Express

Mid-aged women transitioning to menopause may be able to lower their risk of developing stroke, heart disease and Type-2 diabetes if they exercise more or eat a low calorie diet, suggests a research. The study showed that physically active women were less likely to get incidents of metabolic syndrome than inactive women.

Metabolic syndrome describes a cluster of risk factors that increase the chances of developing heart disease, stroke, and diabetes. Genetic factors, excess body fat, and lack of exercise can add to its development. Patients with metabolic syndrome are diagnosed when they have three or more of these risk factors — large amount of abdominal body fat, low (“good”) cholesterol, high levels of fat in the blood, high blood pressure, and high blood glucose. “Previous studies have largely focused on cardiovascular disease and Type-2 diabetes in postmenopausal women. This study is unique because it focuses on an earlier stage in women's lives, the menopausal transition in midlife, to potentially prevent such diseases from occurring,” said Jennifer S. Lee, Associate Professor at the Stanford Health Care in the US.

Early diagnosis and treatment, crucial to combating stroke

October 29,2018/The Times of India

What is a stroke? Stroke is one of the leading causes of death and disability in India. The incidence of stroke in India varies from 105 to 152 new cases per 100,000 population per year. Stroke is a brain attack similar to a heart attack. In a heart attack the blood vessel gets blocked, reducing the blood supply and damaging the heart. In a brain attack or stroke, the same process of blocking of blood vessels occurs, where one part of the brain does not get adequate blood supply, causing that area to become dead. This results in loss of brain function. Once damaged, the brain does not recover, causing severe disability for life. A severe heart attack may result in loss of life but if the patient survives, he/she often recovers well or may have to reduce the pace of daily activities. However, in a brain attack, patients usually do not die but are left paralysed on one side or experience speech deficit and are incapacitated for life, which in some sense is even worse.



[Air pollution leads to millions of asthma attacks annually worldwide: Study](#)

October 29,2018/The Indian Express

Air pollution may be to blame for up to 33 million emergency asthma attack visits to hospital every year, with half of the visits estimated to occur in South and East Asian countries, notably India and China, a global study has found. Asthma is the most prevalent chronic respiratory disease worldwide, affecting about 358 million people, said researchers, including those from the University of York in the UK. Countries like India and China may be harder hit by the asthma burden because they have large populations and tend to have fewer restrictions on factories belching smoke and other sources of pollution, they said. The findings, published in the journal Environmental Health Perspectives, suggests car emissions and other types of pollution may be a significant source of serious asthma attacks. “This is the first global study of the potential impacts of air pollution on serious asthma attacks that cause people to visit emergency rooms in hospitals around the world,” said Johan Kuylenstierna, Policy Director of the Stockholm Environment Institute (SEI) based at York. The study found that nine to 23 million annual asthma emergency room (ER) visits globally (8 to 20 per cent of total global asthma ER visits) may be triggered by ozone, a pollutant generated when car, power plant and other types of emissions interact with sunlight. Five to 10 million asthma emergency room visits every year (4 to 9 per cent of total global asthma ER visits) were linked to fine particulate matter, small particles of pollution that can lodge deep in the lung’s airway tubes.

[Dengue Symptoms: Early signs of Dengue fever and its prevention](#)

October 30,2018/The Times of India

The National Capital is again in the middle of a Denguecrisis. Millions of people are inflicted by the deadly dengue fever every year and there is no sign of its abatement. When such a raging issue accosts us every year, we definitely need to take some proactive measures to control the situation. Dengue fever is a mosquito borne viral infection that has flu like symptoms which can also be fatal in some cases. Dengue is transmitted by the bite of an Aedes mosquito which is infected by the virus and cannot be transmitted from one person to another. Knowing the symptoms of dengue fever is important as this can help in getting the right medical attention and can be crucial in saving lives!

Some very common symptoms of dengue are.

- Constant headache
- Pain in the bones, joint and muscles
- Feeling of nausea or vomiting
- Swollen glands
- Rashes all over body
- Pain behind the eyes

[Air pollution could increase chances of stroke among youngsters](#)

October 30,2018/Hindustan Times

Tiny [air pollution](#) particles can also increase the risk of stroke in youngsters and healthy people by damaging the inner lining of their veins and arteries, according to medical experts. Praveen Gupta, Director, Neurology, Fortis Memorial Research Institute, Gurgaon, said that there has been a rise of young patients in the last few years.



“We get around at least three new young patients almost every month. The number of young stroke patients has almost doubled as compared to last few years. Studies suggest that major risk factors like air pollution and smoking increase stroke incidences both in the short term and long term,” Gupta added. According to the experts, quality of air in Delhi and the National Capital Region (NCR) is already very toxic and such a high level of pollution increases the rate of strokes. “High level of PM 2.5 in the air increases risk of cardiovascular mortality. International studies have linked relation between pollution and stroke risk. In India situation can be more dangerous,” Vinay Goyal, professor, Department of Neurology, AIIMS, said on the occasion of World Stroke Day.

Air pollution kills 600,000 children each year: WHO

October 30,2018/The Indian Express

Exposure to toxic air both indoors and out kills some 600,000 children under the age of 15 each year, the World Health Organization warned Monday. Data from the UN health body shows that every day, 93 percent of children under the age of 15 – a full 1.8 billion youngsters, including 630 million under the age of five – breath dangerously polluted air. This has tragic consequences: In 2016 alone, some 600,000 children died from acute lower respiratory infections caused by polluted air, the WHO report found.

“Polluted air is poisoning millions of children and ruining their lives,” WHO chief Tedros Adhanom Ghebreyesus said in a statement. “This is inexcusable. Every child should be able to breathe clean air so they can grow and fulfil their full potential.” According to WHO data, more than nine out of 10 people on the planet breath dangerously toxic air, causing some seven million premature deaths each year. Air pollution is especially dangerous for children, and accounts for nearly one in 10 deaths among children under five around the globe, the report found.

Zika virus fever: Prevention, transmission and control measures

October 31, 2018/The Times of India

The Zika fever spreads by the bite of an infected Aedes mosquito, which is also responsible for causing dengue, chikungunya and malaria. The virus was first found in the Zika Valley in the year 1947 and over the past few years, it has spread to many other regions including south-eastern and southern Asia, America and Pacific islands. The virus is not dangerous for children and adults but it can be fatal for the newborns and pregnant woman's foetus.

Transmission

Primarily Zika virus is transmitted by the bite of an infected mosquito from the Aedes genus, mainly Aedes aegypti. This mosquito mostly bites during the day and is most active from dusk to dawn. Secondly, Zika can be transmitted sexually. Sexual contact during pregnancy can transmit Zika to the mother's foetus, which can be fatal. If the Zika virus is transmitted from mother to the foetus, it can lead to microcephaly (smaller head size) and other congenital malformations in infant, which is called congenital Zika syndrome. Zika can also be transmitted through infected blood transfusion and organ transplantation.

Prevention

Saving yourself from the mosquito bites during the day and evening is the best way to prevent oneself from Zika infection. Pregnant woman should take special care as the infection can lead to abnormalities in their child later. Wearing light coloured full clothes that cover your body fully is also an easy option.



Pollution chokes, kills you silently over a number of years: Experts

November 1, 2018/Hindustan Times

Viral fever, infections with symptoms of cough, lung infection and fevers that usually end in September have persisted and steadily risen through October this year. The number of people complaining of throat and airway infections, in fact, have gone up by close to 20% in the past one week. People with asthma and chronic bronchitis are having increasing trouble breathing over the past three weeks, with doctors estimating the numbers to go up by 30-40% of the normal after Diwali. While short-term exposure causes airway and lung infections and aggravates breathing disorders, chronic exposure can lead to several life-threatening diseases. "Pollution kills. Every year thousands die of pollution-related ailments in Delhi and NCR during the winters when the air is extremely foul. Pollution is a silent killer; it does not directly kill anyone but aggravates existing diseases," said Dr Randeep Guleria, director of All India Institute of Medical Sciences (AIIMS). This year, there has been no respite from infections. "There is usually a rise in the number of people with upper respiratory tract infections in the end of August, when the rains stops and it starts getting colder. The next spike happens in October, when the temperature dips and the crop burning starts. There is a sharp increase after Diwali that continues to February of next year," said Dr Vikas Maurya, head of department of pulmonology at Fortis hospital, Shalimar Bagh.

Delhi Pollution: Lung, heart diseases set to see a jump in next 10 years, say doctors

November 1, 2018/Hindustan Times

The most harmful pollutants are categorised into particulate matter and chemicals and gases, which enter and causes damage to our health if inhaled or ingested.

The size of the particulate matter hanging in the air is important as there is an increase in what is called the respirable size (particles less than 10 micron) that get lodged straight into the lungs, causing permanent damage. "There's long-term damage due to particulate matter that gets lodged deep inside the lungs and can cause progressive lung diseases. Even chemicals and gases are equally harmful as their side-effect is visible almost immediately," says Rajesh Chawla, consulting pulmonologist at Indraprastha Apollo hospital. Chemical pollutants, also known as volatile organic compounds — coming out of coal burning sites, vehicles and stone crushing sites — if inhaled even for a brief period, can lead to serious health conditions. Exposure to pollutants such as nitrogen oxides, sulfur oxides, carbon monoxide and volatile organic compounds such as benzene, toluene, ethylbenzene and xylene etc. (also known as Btex) is detrimental to human lung functioning, prompting very serious changes to occur in the lungs. These changes indicate restriction to the lung expansion, obstruction and narrowing of the airways.

Becoming more sensitive to pain increases risk of persistent knee pain

November 2, 2018/The Asian Age

According to a new study becoming more sensitive to pain, or pain sensitization, is an important risk factor for developing persistent knee pain in osteoarthritis.

The researchers at the University of Montreal and its affiliated Maisonneuve Rosemont Hospital Research Centre (CRHMR), in collaboration with researchers at Boston University, performed the research. Their findings were published in the Journal of Arthritis and Rheumatology.



Osteoarthritis (OA) is a common cause of pain and altered joint function, affecting 302 million adults worldwide. It can lead to chronic disability, frequently in the knee joint. Past research suggests that a number of factors outside of structural pathology may contribute to pain in patients with OA. “Understanding the factors that contribute to the development of persistent pain is critical to improving our ability to prevent its onset and the transition to more persistent pain,” said lead author Lisa Carlesso.

With regards,

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