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(Syed Adil Shamim Andrabi)
Information Interface Officer

Obesity, alcohol may up breast cancer risk: Study

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Obesity, alcohol may up breast cancer risk: Study

March 30, 2019/The Times of India

Drinking one alcoholic drink daily as well as being overweight can increase the risk of developing breast cancer, warns a study of over two lakh women. "That means that consequently, even relatively small preventable proportions translate into large numbers of preventable breast cancers," said Maarit Laaksonen, from the University of New South Wales in Australia. Over the next decade, drinking alcohol will lead to 13 per cent increase of breast cancer cases in pre-menopausal women and six per cent in post-menopausal breast cancers. Being overweight or obese will contribute to 13 per cent cases. Together, these modifiable risk factors -- regular alcohol consumption and excessive weight gain -- will be responsible for nearly 30,000 cases of breast cancer by next decade, noted the study published in the International Journal of Cancer. Similarly, long-term use of oral contraceptives accounted for seven per cent of pre-menopausal breast cancers. However, it is not recommended that women restrict their use of oral contraceptives as they are actually cancer-protective and provide long-term protection against endometrial and ovarian cancers, suggesting that the potential benefits, including reproductive benefits, outweigh the harms, Laaksonen said, adding that further studies are needed to confirm the results. Maintaining a healthy weight and not consuming alcohol regularly could help prevent thousands of breast cancer cases, he suggested.

Eye exam can predict Alzheimer's

March 30, 2019/The Tribune

The Alzheimer's disease is the most common type of dementia worldwide with no cure or treatment. It can severely disrupt the life of the patient and caregivers and is both emotionally and physically challenging for caregivers. There are millions living with Alzheimer's across the globe. With an aging population, the incidence is expected to increase significantly in the coming decades. Current tools for diagnosis rely on clinical exam and symptoms, invasive tests such as evaluating the cerebrospinal fluid using lumbar puncture or expensive neuro-imaging such as MRI or PET scans of the brain. There are as yet not accurate, rapid, cost-effective, easy to use and non-invasive tools for early diagnosis of Alzheimer's.

Eyes don't lie

A study of more than 200 subjects at Duke Eye Centre, Duke University, North Carolina, USA, published in the journal Ophthalmology Retina, suggests that the loss of blood vessels in the retina could signal Alzheimer's. The study included results of eye tests of 39 persons with Alzheimer's. It found that the web of capillaries in the superficial layer of the retina was less dense and even sparse in places compared to similarly aged healthy people. The changes were also seen in subjects with mild cognitive impairment which is often a precursor to Alzheimer's. These differences in blood-vessel density were statistically significant even after the researchers controlled for factors, including age, sex, and education. The Duke

research team was led by Dr Dilraj S Grewal, a doctor of Indian origin, a Duke ophthalmologist, retinal surgeon and a lead author on the study. The team also studied other changes in the retina that could signal trouble in the brain, such as thinning of some of the retinal nerve layers.

Vitamin C doses may shorten ICU stay

March 30, 2019/The Tribune

Administering vitamin C to patients in intensive care unit (ICU) can help shorten their stay, scientists say. The researchers from University of Sydney in Australia and University of Helsinki in Finland carried out a systematic review of vitamin C for ICU patients. They identified 18 relevant controlled trials, and 12 of them were included in the meta-analysis on the length of stay. On average, vitamin C administration shortened ICU stay by 7.8 per cent. In six trials, orally administered vitamin C with an average dose of 2 grams per day reduced the length of ICU stay on average by 8.6 per cent. “Vitamin C is a safe, low-cost essential nutrient. Given the consistent evidence from the trials published so far, vitamin C might be administered to ICU patients, although further studies are needed to find out optimal protocols for its administration,” researchers said. “A few common cold studies have indicated that there may be a linear dose response for vitamin C on common cold duration for up to 6 and 8 grammes per day,” they said. “Evidently the dose response for doses higher than 2 grammes per day should also be investigated for ICU patients,” they added. Given that vitamin C has shown diverse effects on medical conditions, it may influence practical outcomes such as the length of ICU stay, irrespective of the medical conditions affecting a patient, scientists say.

92% in Asia exposed to harmful air

March 31, 2019/The Hindu

Around 92% of the population in the Asia Pacific region are exposed to levels of air pollution that pose a significant risk to their health, according to UN Environment. Some of the Asian countries have taken steps to limit its effects. As public anger rises over toxic air, authorities have turned to spraying water, which is thought to stick to pollutants and carry them to the ground. But tools such as water cannons have been criticised as having little effect and being a “band-aid” solution that distracts from root causes. While New Delhi — the world’s most polluted major city -- tried in 2017 to use helicopters to sprinkle water over the city, but the choppers were not able to fly due to low visibility caused by smog. Bangkok tried a raft of measures to combat a murky haze that blanketed the city in January, including spraying overpasses with water, cloud seeding. Cloud-seeding is used to stimulate rain by injecting chemicals into clouds using rockets, cannons or aircraft, but the technique is not always successful. An attempt by South Korea to create artificial rain in January failed. The northern Chinese city of Xi’an is experimenting with a giant air purifier the size of an industrial smokestack which can reduce PM2.5 concentration by 15 per cent within 10 square kilometres, according to researchers. Hong Kong opened a tunnel equipped with air purification system.

Copycat fungus deactivates body's response to infection

March 31, 2019/Hindustan Times



Fungus can imitate signals from the immune system and prevent our body from responding to infection, scientists have found. Life-threatening fungal infection is a major killer of people with immune system problems such as blood cancers, HIV infection or following organ transplant. The study, published in the journal PLoS Pathogens, focused on one of the most dangerous infections for people with HIV/AIDS - Cryptococcus neoformans - which causes hundreds of thousands of deaths worldwide every year, scientists said in a statement. Fungi are known to make molecules similar to those of our own immune system, but why fungi make these molecules and what their function is has been a longstanding mystery.

Scientists from the University of Sheffield in the UK, have identified how specific immune signals called prostaglandins, made by fungi, are able to disarm immune cells. The team found that fungi which are not able to make these signals were less able to grow during infection. "We've discovered that these immune signals - fungal prostaglandins - deactivate immune cells, preventing them from destroying the infection," , said Simon Johnston, who led the team. "We found the fungus was activating a normal immune pathway that prevents overstimulation of the immune system, but is essential in stopping infections," said Johnston. "Opportunistic infections like Cryptococcus - which normally pose no threat, but are potentially life-threatening in those with weakened immune systems - are an increasing problem and are often very difficult to treat," he said.

Working in shifts may increase heart disease risk

April 1, 2019/Hindustan Times

People who work in shifts are at heightened danger of heart disease and the risk increases with years they work in shifts, finds a Chinese study of more than 300,000 people. Shift work "can earn more profit, but it can also cause harm to the health of employees. Thus, employers should reduce shift work as much as possible," lead author Weihong Chen, a researcher in occupational and environmental health at Huazhong University of Science and Technology in Wuhan, was quoted as saying to the Health Day. While the reason is unknown, disruption in the normal sleep-wake cycle could increase stress. In the study, published in the journal Occupational Medicine, the team analysed data from 21 earlier studies involving over 320,000 people and nearly 20,000 cases of coronary heart disease. The study was not designed to prove the cause and effect, but the data showed shift workers were 13% more likely to develop coronary heart disease than daytime workers. For every year spent working in shifts, there was a nearly one per cent increase in the risk of coronary heart disease, the report said.

According to Weihong, employers should pay attention to staff members who are experiencing symptoms of heart problems as well as those with a family history of heart disease. Employers could provide health promotion, such as information on how to prevent and deal with ischemic heart disease, she said. Companies could also consider providing health check-ups to detect early signs of heart problems, Weihong said.

Research finds rare genes linked with Alzheimer's disease

April 1, 2019/Hindustan Times



For the first time, research has identified two; extremely rare genetic variants associated with Alzheimer's disease (AD). According to the findings appeared in the Journal of JAMA Network Open, the variants, one located in the NOTCH 3 gene and the other in the TREM 2 gene, were observed in persons with AD.

According to the researchers, the NOTCH 3 variant has not been implicated in AD in previous large genetic studies, however, other mutations in this gene cause a very rare form of dementia called cadasil.

Cadasil begins with severe headaches and strokes in young adulthood followed by dementia by midlife (decades before the typical age when late-onset AD occurs).

Other mutations in the TREM 2 gene have been associated with AD, and it was previously shown that persons who carry two copies of this particular mutation (referred to as Q33X) have a very rare disorder called Nasu-Hakola disease which is characterised by the onset of dementia in midlife and polycystic bone lesions with fractures. Although the NOTCH 3 mutation causing AD is very rare in virtually all racial and ethnic groups, it is much more frequent in Ashkenazi Jews, and the researchers determined that nearly all of the AD cases with the NOTCH 3 mutation were of that descent. "Our findings indicate that different mutations in the same gene or a different number of copies of a particular mutation may lead to very distinct forms of dementia," explained Lindsay Farrer, corresponding author.

"Discovery of associations of Alzheimer's risk with rare genetic variants can lead to new insights about biological pathways involved in AD and strategies for developing novel treatments and biomarkers," Farrer added.

Excess body weight may up pancreatic cancer risk

April 2, 2019/The Indian Express

Being overweight before the age of 50 may significantly increase the risk of death from pancreatic cancer, a study has found. Pancreatic cancer is relatively uncommon, accounting for just over three per cent of all new cancer cases. However, it is an extremely deadly type of cancer, with a five-year survival rate of just 8.5 per cent, researchers said. "Pancreatic cancer rates have been steadily increasing since the early 2000s," said Eric J Jacobs, senior scientific director of Epidemiology Research at the American Cancer Society in the US.

"We've been puzzled by that increase because smoking – a major risk factor for pancreatic cancer – is declining," he said in a statement. Most previous studies on the link between weight and pancreatic cancer were based on weight measured in older adulthood, which may be less informative because it could reflect body fat gained too late in life to influence risk of pancreatic cancer during a typical lifespan, Jacobs said. Researchers sought to find out if excess weight measured earlier in adulthood might be more strongly linked to pancreatic cancer risk than excess weight measured at older ages. The team examined data from 963,317 US adults with no history of cancer. All participants reported their weight and height just once, at the start of the study, when some were as young as 30 while others were in their 70s or 80s. While the study only had information on deaths from pancreatic cancer, the disease is nearly always fatal, so results are expected to be similar to those for new diagnoses of pancreatic cancer, Jacobs said. Jacobs said the study results indicate that excess weight could increase risk of death from pancreatic cancer more than previously believed. "Our results strongly suggest that to stop and eventually reverse recent increases in pancreatic cancer rates, we will

need to do better in preventing excess weight gain in children and younger adults, an achievement which would help prevent many other diseases as well," Jacobs said.



Reaching for smartphone may be bad for your health: Study

April 3, 2019/The Tribune

Using your smartphone to relax and pass time may be associated with negative feelings, lack of control and a reduced sense of purpose in life, a study warns. The study, published in the journal *Computers in Human Behavior*, is the first to thoroughly evaluate how smartphone use is associated with measures of subjective and psychological wellbeing. Researchers at Deakin University in Australia showed habitual smartphone use and entertainment use—to relax, escape and pass time—were the best predictors of lower wellbeing. The survey of over 500 students found problematic smartphone use was associated with feelings of negative emotions, lack of control, a reduced sense of purpose in life, and a ability to resist social pressure. "There's a constant stream of news and entertainment in our life now, and if that content is not necessarily positive it might be contributing to technological overload or techno-exhaustion," said lead researcher Sharon Horwood from Deakin's School of Psychology. Past research has examined wellbeing in terms of life satisfaction and whether people tend to experience more positive emotions than negative emotions. "This research offers a more complete picture of what makes the 'good life' including positive social relationships, a sense of personal growth, autonomy, and having a sense of control over one's life," Horwood said. "While we found that smartphone use is unrelated to people's overall life satisfaction, it is associated with mood and these broader indicators of human flourishing," she said. "Wellbeing is about feeling satisfied with your life, managing day-to-day activities, and positive relationships. We found that problematic smartphone use impacts all those things," he said. Horwood said there are four main areas of wellbeing which negatively related to problematic smartphone use.

Just 20-minute 'nature pill' can lower your stress

April 4, 2019/The Tribune

Taking just 20 minutes out of your day to stroll or sit near nature will significantly lower your stress hormone levels, a new study suggests. Healthcare practitioners can use this finding to prescribe 'nature pills' to have a real measurable effect, according to researchers from the University of Michigan.

"We know that spending time in nature reduces stress, but until now it was unclear how much is enough, how often to do it, or even what kind of nature experience will benefit us," said lead author MaryCarol Hunter from the varsity.

For the study, published in the journal *Frontiers in Psychology*, the research team involved 36 participants. Over an eight-week period, they were asked to take a 'nature pill' for at least 10 minutes, three times a week. Levels of cortisol—a stress hormone—were measured from saliva samples taken before and after taking the 'nature pill', once every two weeks. The data revealed that just a 20 minute nature experience was enough to significantly reduce cortisol levels. And if you take in a little more nature experience - 20 to 30 minutes sitting or walking - cortisol levels dropped at their greatest rate, the researchers said.

Digital media multitasking associated with obesity risk, says study

April 5, 2019/Hindustan Times



A study has found that people who switch between digital services tend to gain weight. The study published in the journal 'Brain Imaging and Behavior' has revealed that media multitasking is associated with increased susceptibility to food temptations and lack of self-control, which may result in weight gain.

"Increased exposure to phones, tablets, and other portable devices has been one of the most significant changes to our environments in the past few decades, and this occurred during a period in which obesity rates also climbed in many places," said Richard Lopez, the study's lead author. "So, we wanted to conduct this research to determine whether links exist between obesity and abuse of digital devices, as captured by people's tendency to engage in media multitasking," Lopez said.

The research was conducted in two parts. In the first part, 132 participants between the ages of 18 and 23 completed a questionnaire assessing their levels of media multitasking and distractibility. This was done using a newly developed, 18-item Media Multitasking-Revised (MMT-R) scale. The MMT-R scale measures proactive behaviours of compulsive or inappropriate phone use (like feeling the urge to check your phone for messages while you're talking to someone else) as well as more passive behaviours (like media-related distractions that interfere with your work). The researchers found that higher MMT-R scores were associated with higher body mass index (BMI) and a greater percentage of body fat, suggesting a possible link. When media multitaskers saw pictures of food, researchers observed increased activity in the part of the brain dealing with food temptation. These same study participants, who also had higher BMIs and more body fat, were also more likely to spend time around campus cafeterias. Overall, Lopez said these findings, although preliminary, suggest there are indeed links between media multitasking, a risk for obesity, brain-based measures for self-control and exposure to real-world food cues.

With regards,

Syed Adil Shamim Andrabi
Information Interface Officer/PRO
Indian Council of Medical Research-
Department of Health Research
Ministry of Health and Family Welfare
proicmr@gmail.com, syed.adil@icmr.gov.in
Ext. 286, Phone. 26589130