

Exposure to outdoor artificial light at night is associated with an increased risk of diabetes

A new study published in *Diabetologia* (the journal of the European Association for the Study of Diabetes [EASD]) finds that outdoor artificial light at night (LAN) is associated with impaired blood glucose control and an increased risk of diabetes, with more than 9 million cases of the disease in Chinese adults being attributed to LAN exposure. The study is by Dr Yu Xu and colleagues at the Shanghai Institute of Endocrine and Metabolic Diseases, Ruijin Hospital, Shanghai Jiaotong University School of Medicine, Shanghai, China.

Exposure to artificial LAN at night is a ubiquitous environmental risk factor in modern societies. The intensity of urban light pollution has increased to the point that it not only affects residents of big cities, but also those in distant areas such as suburbs and forest parks that may be hundreds of kilometres from the light source.

Earth's 24-hour day-night cycle has resulted in most organisms, including mammals, having an inbuilt circadian (roughly 24-hour) timing system which is adapted to the natural sequence of light and dark periods. Light pollution has been found to alter the circadian rhythm of insects, birds and other animals, resulting in premature death and loss of biodiversity.

Artificial LAN has also been implicated as a potential cause of metabolic dysregulation through altering the timing of food intake. Rats exposed to artificial LAN developed glucose intolerance, exhibiting elevated blood sugar and insulin. Another study found that mice exposed to nocturnal dim white light of minimal brightness for 4 weeks had increased body mass and reduced glucose tolerance compared to animals whose environment was completely dark at night, despite having roughly equivalent energy consumption and expenditure.

Associations have also been found between artificial LAN and health problems in humans. A study of night-shift workers found that those exposed to brighter LAN were more likely to have disrupted circadian rhythms, as well as a greater risk of coronary heart disease. Other research found that higher LAN exposure was associated with a 13% and 22% increase in the likelihood of being overweight and obese, respectively, while exposure to LAN in the bedroom was reported to be positively associated with the development of diabetes in elderly people.

Food intolerance and food allergies

SHARMIN SULTANA

Food intolerance and food allergy sometimes create confusion among people. Many of us don't know what are the differences, causes and management issues of these two.

Food intolerance is a problem in the digestive system. When our bodies fail to digest any specific food, we feel discomfort in our digestive system. This is food intolerance. The symptoms of food intolerance are nausea, vomiting, stomach pain, etc. Food allergy is a problem in the immune system.

When our bodies by mistake think a food is harmful for us and creates antibody against it to protect the body that is food allergy. The symptoms of allergies are rashes, itchiness, breathing problem, changes in heart rate and blood pressure.

Food intolerance is more common than food allergy. Food intolerances are not that damaging; however, food allergies can be life threatening.

Because of food intolerance, different types of carbohydrate and protein rich foods are difficult to digest. These may include:

Lactose intolerance is the most common food intolerance. To digest dairy products (lactose) the lactase hormone is required. Some people do not produce enough lactase hormone and others cannot produce that at all because of genetic problems.

Some children even cannot digest mother's milk. Yogurt and cheese are tolerable foods in some cases. Alternative foods are dairy free products like soy, almond and coconut milk.

Fructose intolerance is another type of intolerance. Fructose is a carbohydrate called monosaccharide and can be found in fruits, vegetables and different sweet products. This intolerance happens when our bodies cannot break down fructose properly. People who have this problem need to avoid or reduce the intake of beverage drinks such as soda, fruit juice, apple, grape, and limit consumption of

watermelon, peas, and Zucchini. They also should check food ingredients carefully to find out any hidden forms of fructose.

FODMAPs is a group of fermentable carbohydrates. It contains fermentable Oligo, Di, Mono-saccharide and Polyols, that means it has fructose, lactose, fructans and galactose. Examples are milk, cheese, honey, apple, artichokes, bread, beans, and lentils. In the FODMAPs problem people cannot digest the carbs. Low-FODMAP diets can be helpful in this situation. Meats, fish, eggs, nuts (except pistachios), lactose free dairy products, fruits like bananas, berries, lemons, melons (except watermelon), vegetables like carrots, eggplant,



spinach, tomatoes, bell peppers, grains like corn, oats, rice are some examples of low-FODMAP foods.

Gluten is a protein found in wheat, barley, rye, etc. Gluten intolerance, wheat intolerance or Celiac diseases are not the same. Celiac disease is an autoimmune disease in which gluten damages the intestine. Wheat is a big source of fiber, but because of intolerance, a person may have to reduce the intake of bread, pasta, cereal types of food. Alternatives to gluten-containing foods are quinoa, oats, buckwheat, almond flour, brown rice. One has to be careful because sauces, soups, salad dressings, processed meat and dairy items may have a trace amount of gluten.

There are many types of Amines, although Histamine creates intolerance most frequently. Some people cannot break down Histamine properly. People with Histamine intolerance should avoid or reduce

consumption of fermented foods, dried fruits, citrus fruits, eggplant, tomatoes, avocados, and smoked fish. Other intolerance may cause from food additives like sulfites, monosodium glutamate, etc.

Management of food intolerance:

- After identifying intolerance, diet modification is the main treatment.
- Keeping a food diary helps to track our foods.
- Enzyme supplementation, for an example, taking lactase enzyme supplements, may help digest dairy and fermentable carbohydrates.
- Probiotics can help improve microbial balance in the gut, which may help in digestion.

In general, protein-rich food creates **allergies**. Examples include milk, eggs, peanuts, tree nuts, shellfish, fish, soy, wheat. Even the vapors from cooking shellfish can trigger an allergy. In the case of food allergies, when the food is taken for the first time, the immune system thinks that it is a harmful substance and creates an antibody against it. When the same food is taken next time, that antibody is released in the body to defeat it.

In the case of a milk allergy, other milk products need to be avoided too. Heating eggs change the allergy causing proteins, and a person may not have to avoid all egg related foods. However, people allergic to tree nuts are also allergic to products made of these like nut butters and oil.

Management of allergies:

- The primary way to manage a food allergy is to avoid consuming the food that causes you problems.
 - Read food labels and check for ingredients that may include these items as condiments and seasoning.
 - Always carry emergency medication.
- The rise of allergies can be blamed to early life antibiotic use, less exposure to microbes, genes and environmental factors, dietary patterns, and climate change.

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HAVE A NICE DAY Personal happiness is the ultimate currency

DR RUBAIUL MURSHED

'Money, money, money', difficult to forget ABBA's classic that was sung from both a practical and philosophical perspective. According to researchers, money is only one part of psychological wealth. Money's impact on happiness is not as large as we might contemplate.

Some studies also show that our choices are based on more than just math—they are also influenced by a complex web of psychological and emotional factors. Well, certainly money can buy some happiness, but it is just one piece of the mystery. And there is a real danger that increased income can actually make a family miserable—if your desire to spend grows with it. But that does not mean we have to follow a hermit or monk's lifestyle. The key is finding a balance between having too little and having too much—middle path is the best.

Recent trends on measurement of happiness and well-being have elevated the scientific standards and objectivity associated with approaches for national and international comparisons of well-being. One major theme in this has been the shift toward multidimensional approaches over reliance on traditional metrics such as single measures like happiness, life satisfaction or economic proxies (GDP). Top of that, why is happiness with modesty and wellbeing important for me and my surrounding members? Because, it benefits one and all. Happiness is one of the key remedies and we have more value to those around us. Feeling good about ourselves allows us to be good to the people in our lives. Eventually, we start respecting people without any materialistic interest.

Not all wealthy people are happy, but all happy people are rich inside their mindfulness. Modern culture is consumption-driven. If we want a fulfillment curve at the end of the day, we should own 'happiness with modesty as our prestige and jewelry.'

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WORLD ANTIMICROBIAL AWARENESS WEEK (NOV 18-24, 2022)

Preventing antimicrobial resistance together

STAR HEALTH DESK

Antimicrobial resistance (AMR) occurs when bacteria, viruses, fungi and parasites change over time and no longer respond to medicines, making infections harder to treat and increasing the risk of disease spread, severe illness and death. As a result of drug resistance, antibiotics and other antimicrobial medicines become ineffective and infections become increasingly difficult or impossible to treat.

Researchers estimated that AMR in bacteria caused an estimated 1.27 million deaths in 2019. A global action plan to tackle the growing



problem of resistance to antibiotics and other antimicrobial medicines was endorsed at the Sixty-eighth World Health Assembly in May 2015. One of the key objectives of the plan is to improve awareness and understanding of AMR through effective communication, education and training.

World Antimicrobial Awareness Week (WAAW) is a global campaign that is celebrated annually to improve awareness and understanding of AMR and encourage best practices among the public, stakeholders and policymakers, who all play a critical role in reducing the further emergence and spread of AMR.

This year, the theme of WAAW is "Preventing Antimicrobial Resistance Together." The World Health Organisation calls on all sectors to encourage the prudent use of antimicrobials and to strengthen preventive measures addressing AMR, working together collaboratively.



INTERNATIONAL SCIENTIFIC CONFERENCE

Transformation of stroke care

Planetary Health Academia (PHA) is a medical education platform established in July 2020 by a group of non resident Bangladeshi physicians aiming to exchange views, reduce knowledge gap and provide training to junior physicians in collaboration with local expertise. They have over 150 faculty members from USA, UK, Sweden, Canada, UAE, Australia, New Zealand etc. and covers over 20 different subspecialties.

The organised a conference recently. The main theme of the conference were 'Transformation of stroke care in Bangladesh', 'Rapid response stroke care (Management of Hyper acute stroke and further prevention)' and 'Time is brain & door to needle approach: Saving lives and prevent disabilities' which

were hosted by Planetary Health Academia (PHA) in Sylhet.

The day-long scientific events brought together nearly 150 eminent professionals in the field of neurology and covered by three panel sessions accommodating sixteen (16) panel of experts and sixteen (16) speakers from home and abroad.

There is a huge burden of stroke patients in Bangladesh. The incidence of stroke is rising rapidly, especially in the developing nations. The events also highlighted the main challenges - developing an integrated treatment pathways for the best outcomes of the patients.

The special guest of this conference Professor Dr Quazi Deen Mohammad pictured "Stroke is one of the top most cause of

mortality and morbidity worldwide. The impact of stroke in Bangladesh are tremendous and is devastating. To know up-to-date treatment is of crucial importance so that morbidity can be reduced."

Holistic care of the patient with stroke begins in the prehospital settings, with quick recognition of potential stroke symptoms, activation of emergency systems, as needed, with rapid transportation of the patient to an appropriate emergency department in our settings.

The conference secretary and faculty lead (Haematology) of Planetary Health Academia Dr Amin Islam believes this conference will bridge between the developing and developed world to create modern stroke care and pathways.



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