

# Increasing urban vegetation can save over 1.1 mn lives from heat-related deaths: Study

Amid increasing global warming and heat-related deaths worldwide, a new study has shown that expanding urban vegetation cover by 30 per cent could save over one-third of all deaths caused due to heat, saving up to 1.16 million lives globally. Researchers from Monash University in Australia showed that increasing vegetation levels by 10 per cent, 20 per cent, and 30 per cent would decrease the global population-weighted warm-season mean temperature by 0.08 degrees Celsius, 0.14 degrees Celsius, and 0.19 degrees Celsius, respectively. It can also prevent 0.86,

1.02, and 1.16 million deaths, respectively. While increasing greenness has been proposed as a heat-related death mitigation strategy, “this is the first modelling study to estimate both the cooling and modifying effects of greenness, providing a more comprehensive assessment of its benefits in mitigating heat-related mortality,” said Professor Yuming Guo from the varsity. The findings, published in the journal The Lancet Planetary Health, are based on a 20-year modelling study of the impact of increasing greenness in more than 11,000 urban areas from 2000 to



2019. Urban areas in Southern Asia, Eastern Europe, and Eastern Asia were found to have the greatest reduction in heat-related deaths. “These findings indicate that preserving and expanding greenness might be potential strategies to lower tem-

perature and mitigate the health impacts of heat exposure,” Guo said. Heat exposure is a major public health threat and is increasing due to climate change. Between 2000-2019, heat exposure was associated with 0.5 million deaths per year,

accounting for 0.91 per cent of global mortality. According to Guo, estimates of heat-related deaths are projected to range from 2.5 per cent in North Europe to 16.7 per cent in South-East Asia during 2090-99, “under the most extreme global warming scenarios.”

Studies show that greenness has a cooling effect on temperature, via shading surfaces, deflecting radiation from the sun, and evapotranspiration (evaporation from both the ground and plants) which promotes air convection. This, in turn, cools the ambient temperature leading to a decrease in population heat exposure, thereby reducing the heat-related mortality burden. In addition, greenness could also modify other related factors such as mental health, social engagement, physical activity, and air pollution, the researchers said.

## Can Mushrooms help in Parkinsons disease

While psilocybin -- a natural compound found in certain mushrooms -- has shown promise in treating depression and anxiety, a new study showed its benefits in lifting mood and enhancing motor symptoms in Parkinson's disease patients. Researchers from the University of California San Francisco showed that psilocybin can be used to help Parkinson's patients who often experience debilitating mood dysfunction in addition to their motor symptoms and don't respond well to antidepressants or other medications. The team conducted a pilot on seven men and five women with mild to moderate Parkinson's disease. They were prescribed a psilocybin of 10 mg dose, followed two weeks later by a higher dose of 25 mg. The findings, published in



the journal Neuropsychopharmacology, showed that the drug was tolerated without any serious side effects or worsening symptoms. The pilot study also showed clinically significant improvements in mood, cognition, and motor function that lasted for weeks after the drug was out of the participant's systems. It is the first time a psychedelic has been tested on patients with any neurodegenerative disease. “We are

still in very early stages of this work, but this first study went well beyond what we expected,” said Ellen Bradley, Assistant Professor and associate director of UCSF's Translational Psychedelic Research Programme (TrPR). “Many people don't realise this, but mood symptoms in Parkinson's are linked to a faster physical decline,” she said. “And they are actually a stronger predictor of patients' quality of

life with Parkinson's than their motor symptoms.” Parkinson's disease is a progressive neurodegenerative disorder, characterised by uncontrolled movements due to abnormal brain activity. While medications like levodopa can relieve symptoms, there are no approved therapies to slow the progression or reverse the disease itself. Common early physical symptoms include tremors and foot-dragging, but Bradley said anxiety and depression in patients with no history of psychiatric problems often precede the onset of motor symptoms by several years. It's unclear why standard medications often don't work well for these patients, but mood changes could be part of the neurodegenerative disease process, the team said.

## Can Too Much Salt Increase Your Risk Of Stomach Cancer?

Salt is a vital seasoning, but excessive consumption can harm your health, especially your stomach. Studies have increasingly linked high salt intake to a heightened risk of stomach cancer, a condition often underdiagnosed in its early stages. Consuming too much salt damages the stomach lining, making it vulnerable to infection by Helicobacter pylori (H. pylori), a bacterium strongly associated with stomach cancer. The problem is particularly concerning in countries where salty foods, such as pickles, processed meats, and preserved fish, are dietary staples. Understanding the risks and taking proactive measures can help you maintain a balanced diet while protecting your stomach's health. How excessive salt intake increases the risk of stomach cancer

1. Excessive salt consumption directly impacts the stomach, creating conditions conducive to cancer development. Here are eight ways salt increases the risk.
1. Irritation of the stomach lining
2. Promotes H. pylori infection
3. Enhances carcinogen formation
4. Weakens stomach

defences

5. Increases oxidative stress
6. High sodium intake disrupts gut microbiota
7. Long-term exposure to salty foods
8. Amplifies risk factors in high-risk individuals

For people with a family history of stomach cancer or existing gastrointestinal issues, excessive salt acts as a catalyst, accelerating disease progression. While salt is essential for flavour and certain bodily functions, moderation is key to avoiding its harmful effects. To reduce your risk of stomach cancer, focus on fresh, whole foods, and limit your intake of processed, cured, and pickled items. Balance your diet with antioxidant-rich fruits and vegetables, which help combat oxidative stress. Hydration is also essential to maintain a healthy stomach lining. By adopting mindful eating habits and moderating salt intake, you can protect your digestive health and significantly lower your risk of stomach cancer over the long term.

# HEALTH Ultra-processed foods may be linked to early death



People who eat lots of ultra-processed foods (UPF) may be at greater risk of dying early, a study in eight countries including the UK and the US suggests. Processed meats, biscuits, fizzy drinks, ice cream and some breakfast cereals are examples of UPF, which are becoming increasingly common in diets worldwide. UPFs tend to contain more than five ingredients, which are not usually found in home cooking, such as additives, sweeteners and chemicals to improve the food's texture or appearance. Some experts say it's not known why UPFs are linked to poor health - there is little evidence it's down to the processing itself and could be because these foods contain high levels of fat, salt and sugar. 'Artificial ingredients' The researchers behind the study, published in the American Journal of Preventive Medicine, looked at previous research to estimate the impact of ultra-processed food intake on mortality. The study cannot definitively prove that UPFs caused any premature deaths. This is because the amount of ultra-processed foods in someone's diet is also linked to their overall diet, exercise levels, wider lifestyle and wealth, which can all also affect health. The studies looked at surveys of people's diets and at data on deaths from eight countries - Australia, Brazil, Canada, Chile, Colombia, Mexico, UK and US. The report estimates that in the UK and the US, where UPFs account for more than half of calorie intake, 14% of early deaths could be linked to the harms they cause. In countries such as Colombia and Brazil, where UPF intake is much lower (less than 20% of calorie intake), the study estimated these foods are linked to around 4% of premature deaths. Lead study author Dr Eduardo Nilson, from Brazil, said UPFs affected health "because of the changes in the foods during industrial processing and the use of artificial ingredients, including colorants, artificial flavours and sweeteners, emulsifiers, and many other additives and processing aids". By their calculations, in the US in 2018, there were 124,000 premature deaths due to the consumption of ultra-processed food. In the UK, nearly 18,000. The study says governments should update their dietary advice to urge people to cut back on these foods. But the UK government's expert panel on nutrition recently said there wasn't any strong evidence of a link between the way food is processed and poor health. What is ultra-processed food? There is no one definition that everyone agrees on, but the NOVA classification is often used. Examples include: cakes, pastries and biscuits crisps supermarket bread sausages, burgers, hot dogs instant soups, noodles and desserts chicken nuggets fish fingers fruit yoghurts and fruit drinks margarines and spreads baby formula What is ultra-processed food and what does it mean for my health? Still questions to answer The numbers in the study are based on modelling the impact of ultra-processed foods on people's health. Prof Kevin McConway, emeritus professor of applied statistics, Open University, said the study makes lots of mathematical assumptions which make him cautious about what the findings mean. "It's still far from clear whether consumption of just any UPF at all is bad for health, or what aspect of UPFs might be involved. "This all means that it's impossible for any one study to be sure whether differences in mortality between people who consume different UPF amounts are actually caused by differences in their UPF consumption. "You still can't be sure from any study of this kind exactly what's causing what." Dr Nerys Astbury, an expert in diet and obesity at the University of Oxford, also agrees there are limitations to the research. It's been known for some time that diets high in energy, fat and sugar can increase the risk of diseases, such as type 2 diabetes, obesity, heart conditions and some cancers, which can lead to premature death. "Many UPF tend to be high in these nutrients," she says, adding that studies to date haven't been able to prove that the effects of UPFs are due to anything more than "diets high in foods which are energy dense and contain large amounts of fat and sugar". This type of research cannot prove that consumption of ultra-processed foods is harmful, says Dr Stephen Burgess at Cambridge University. How physically fit someone is may be the main cause of poor health instead. But when numerous studies across many countries and culture suggest UPFs could be a risk to health, Dr Burgess says "ultra-processed foods may be more than a bystander". The Food and Drink Federation, which represents manufacturers, said the term 'ultra-processed food' "demonises a wide variety of food that can help people achieve a healthy balanced diet, such as yoghurt, pasta sauces or bread". It said all additives used by food manufacturers are approved by the Food Standards Agency, who ensure they are safe to eat and drink.

# Study finds new subtypes of fat cells in human body



A new international study has for the first time identified unique sub-populations of fat cells. Researchers from Israel's Ben Gurion University (BGU) noted that the study could pave the way for personalised medicine in obesity. Xinhua news agency reported. The study, part of the international Human Cell Atlas project, mapped fat cell populations in various human fat tissues, focusing on subcutaneous and visceral fat. Using technologies mapping RNA molecules, the team attached unique “barcodes” to RNA from

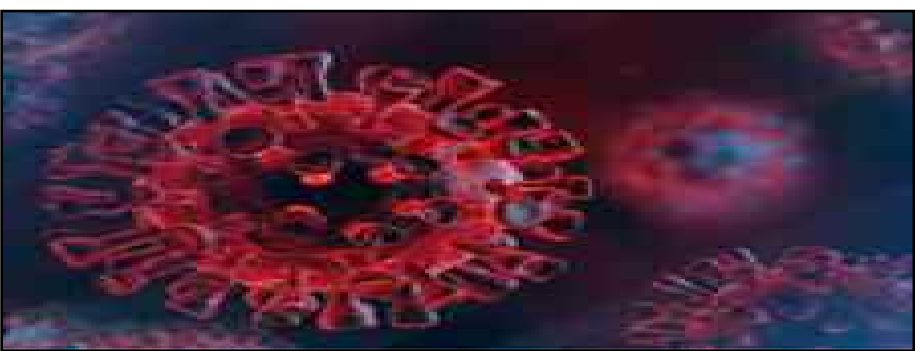
individual cells, allowing them to identify distinct cell types within fat tissue. The research, published in the journal Nature Genetics, revealed the previously uncharacterized subtypes, including fat cells involved in regulating inflammation, blood vessel formation, extracellular protein deposition, and fibrosis. In addition, one of the unique types of fat cells, identified for the first time in this research, appeared only in the intra-abdominal tissue. Over the past 30 years, the under-

standing of fat tissue has evolved from merely an energy storage site to recognised for producing proteins that regulate appetite, eating, and energy expenditure, such as leptin, which influences brain control centers. While most fat cells in subcutaneous and visceral fat were similar, subtle differences were found in their intercellular communication. Visceral fat cells were more engaged in pro-inflammatory processes, interacting with immune cells, whereas subcutaneous fat cells focused on anti-inflammatory processes. The team also discovered that the prevalence of these unique fat cells was related to the metabolic complications of obesity, with their relative proportion in the tissue higher the more severe the insulin resistance. According to the researchers, if unique fat cells predict personal risk for obesity complications or treatment response, the findings could significantly advance personalised obesity treatments.

# Study finds long Covid biomarkers in blood linked to respiratory problems

A team of Swedish researchers has identified biomarkers in the blood associated with symptoms of long Covid, particularly severe respiratory disorders. Long Covid is a condition characterised by persistent symptoms including acute breathlessness and fatigue, after an infection caused by the SARS-CoV-2 virus. The team from Karolinska Institutet discovered a set of proteins in the blood of people with long Covid. The findings may pave the way for future diagnosis and treatment.

"The proteins were mainly found in patients with long Covid and severe respiratory problems," said Marcus Buggert, docent at the Department of Medicine, Karolinska Institutet. "This is a biomarker pattern that we know to be linked to inflammatory signal pathways involved in cell death and lung damage and that has also been observed in other patient groups with severe pulmonary disorders," he added. For the study, the team analysed blood samples



from 265 patients in Sweden and the UK, who contracted Covid when no vaccine was yet available. Using advanced techniques, the researchers measured thousands of proteins in the blood plas-

ma, which they related to the patient's symptoms. The results, published in the journal Nature Immunology, exposed the underlying biological processes that can cause certain patients to experi-

ence severe symptoms long after previous Covid-19. "By identifying the proteins that are elevated in affected patients, we're creating a platform from which to develop diagnos-

tic tools and new targeted therapies," Dr. Buggert said. "This is especially important since there are no specific biomarkers and treatments for long Covid." The team next aims to study lung and gastrointestinal tissue to understand what underpins this pattern. This will likely enable them to locate the source of the identified proteins and find if there is any remaining inflammation or tissue damage in specific organs of patients with long Covid, they said.