

Health Matters

Potential risks of natural toxins in food

Many people are concerned about residues of chemicals, contaminants or microplastics in their food. However, it is less well known that many foods also contain toxins of completely natural origin. These are often chemical compounds that plants use to ward off predators such as insects or microorganisms. These substances are found in beans and potatoes, for example, and can pose potential health risks. However, according to a recent representative survey by the German Federal Institute for Risk Assessment (BfR), only just under half of the respondents (47 per cent) were even aware of plant toxic substances.

The BfR Consumer Monitor Special on naturally occurring plant toxins also revealed that this risk worries 27 per cent. In contrast, residues in food (e.g. from plant protection products) and contaminants, i.e. substances that are not intentionally added to food (e.g. heavy metals), cause concern for 63

and 62 per cent of respondents respectively. "The survey results make it clear that risks of natural origin tend to be underestimated, while risks of synthetic origin tend to be overestimated," says BfR President Professor Andreas Hensel."

Raw plant-based foods are consumed frequently by 34 per cent, occasionally or rarely by 45 per cent and very rarely or not at all by 19 per cent.

Which foods with naturally occurring plant toxins do you already know? If this question is asked openly and without pre-selection, potatoes are named first (15 per cent), followed by tomatoes, raw beans (nine per cent each) and mushrooms (five per cent).

Naturally occurring toxic substances worry 27 per cent in the survey. More than half of the respondents (53 per cent) feel poorly informed about plant toxins in food, while only eight per cent feel well informed.

At 63 per cent and 62 per cent respectively,



significantly more consumers are concerned about residues or contaminants.

Residues are residual amounts of substances that are used in the production of food. For example, residues can remain in fruit, vegetables or cereals even if plant protection products are used correctly.

Contaminants, on the other hand, are undesirable substances that unintentionally end up in food. They

can occur naturally in the environment, arise during the processing of raw materials into food or be released into the environment as a result of human activities. Contaminants are undesirable because they can be harmful to health under certain circumstances.

The study also shed light on the related topic of "mouldy food". Here, too, there is a clear need for education. Even small amounts of mould

toxins can be harmful to the health of humans and animals. Mouldy jam, for example, should therefore always be disposed of completely. Nevertheless, 25 per cent of respondents stated that they only remove the mouldy part. Even in the case of mouldy berries, affected and surrounding fruit should no longer be eaten. Only 60 per cent adhere to this rule.

RELATED TOPICS Health & Medicine, Staying Healthy, Foodborne Illness, Medical Topics, Nutrition, Plants & Animals, Food, Agriculture and Food, Food and Agriculture, Endangered Plants, RELATED TERMS, Detox, diet, Potato, Indoor air quality, Caffeine, Botany, Foodborne illness, Water purification, Plant defense against being eaten

in parallel in the same bacterial cell.

"Heteroresistance involving an increased number of copies of resistance genes is much more complex than previously thought. Bacteria can actually use three different mechanisms, all of which

can occur in parallel in the same bacterium, to temporarily increase the number of copies of resistance genes and thereby generate antibiotic resistance," says Hervé Nicoloff, the study's first author.

"All three mechanisms are unstable and can quickly revert to sensitivity in the absence of antibiotics. This makes it more difficult to detect the resistant bacteria during a clinical examination, as they disappear so quickly. Given what we now know, it is important to be able to develop better diagnostic methods that can detect increased antibiotic resistance," adds Helen Wang.

In this study, researchers revealed two new mechanisms involving plasmids, in which the number of copies of plasmids carrying resistance genes can increase up to 90 times. The study demonstrates that these two mechanisms and a third known mechanism involving gene amplification, can operate



phenomenon, as it is difficult to treat and risks accelerating the development of antibiotic-resistant bacteria, complicating antibiotic treatment for patients.

"It was completely unknown until now that these mechanisms could promote heteroresistance. Our study shows that they can accelerate the selection and growth of resistant bacteria during antibiotic treatment. This study, which partly involved animals, makes it more relevant to understanding these processes in humans," says Helen Wang, the last

author of the study. Bacteria can spread resistance genes to each other through plasmids.

Plasmids are small free-standing DNA rings in which bacteria frequently store some of their genes outside the chromosome.

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Benefits & harms of very early BP control



benefits of very early blood pressure treatment."

The Intensive ambulance-delivered blood pressure reduction in hyper-acute stroke trial (INTERACT4) was a multicentre, randomised, open-label, blinded-outcome study conducted across dozens of ambulance services in China.

2404 ambulance-assessed patients with suspected acute stroke causing a motor deficit within two hours of onset and elevated systolic blood pressure (≥ 150 mmHg) were randomly assigned to immediate blood pressure-lowering (target 130–140 mmHg) or usual blood pressure (BP) management in hospital.

"Our study shows clear benefits from administering early blood pressure lowering treatment to patients with intracerebral haemorrhage in the ambulance, although overall there was no difference in outcome from this early intervention for all patients with suspected stroke.

"In fact, in patients with a final diagnosis of ischaemic stroke, it actually worsened their outcome, so the ability to make a reliable diagnosis at this early stage is key to harnessing the

vessel into the brain tissue. ICH is the most deadly type of stroke, with up to one third of patients dying in 30 days, and it is more common in China where the study was conducted.²

"All treatments for acute stroke are highly time dependent - brain cells die rapidly when deprived of oxygen. But knowing the best treatment approach to take before being able to identify the type of stroke a patient has experienced, is difficult without brain imaging," Professor Anderson said.

"The results do not support in-ambulance administration of blood pressure lowering treatment in patients with suspected acute stroke - that is clear.

"But in the last few years, we've seen the introduction of mobile stroke ambulances equipped with a CT scanner and other diagnostic tools that aim to identify cases of ischaemic stroke for early administration of clot-busting treatment.

Intracerebral haemorrhage (ICH) represents over a quarter of all cases of stroke and occurs when blood leaks out of a blood

Early identification of stroke type could be key to harnessing the benefits of very early in-ambulance blood pressure lowering treatment in patients with suspected acute stroke, according to new research.

Professor Craig Anderson, Director of Global Brain Health at The George Institute for Global Health and lead investigator on the study, said that although more research was needed, the results provided a potential pathway to improving outcomes in patients with the most deadly type of stroke.

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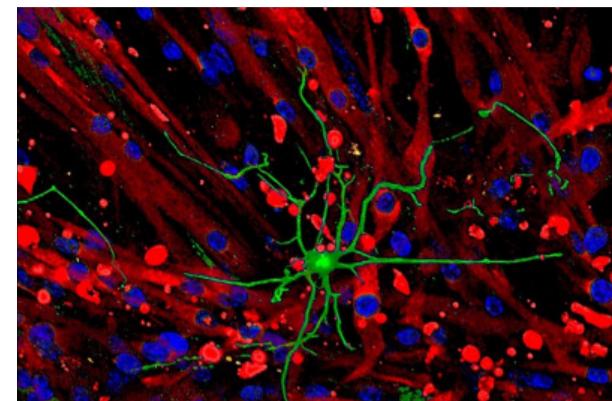
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Exercise spurs neuron growth & rewrites brain

Researchers from the University of Toronto, Canada, and Kyushu University, Japan, have found that increased neuron formation and the subsequent rewiring of neural circuits in the hippocampus through exercise or genetic manipulation helps mice forget traumatic or drug-associated memories. The findings could offer a new approach to treating mental health conditions like post-traumatic stress disorder (PTSD) or drug addiction.

PTSD is a mental health condition that can be triggered by experiencing or seeing a traumatic event, such as a natural disaster, serious accident, or attack. Worldwide, around 3.9% of the general population has PTSD, with symptoms including vivid flashbacks and avoidance behaviors, such as staying away from places or pushing away people that remind them of the traumatic event. Currently, PTSD is often treated through therapy or medications such as anti-depressants, but as many people do not respond effectively, researchers are still looking for different treatments.

In this study on mice, Assistant Professor Risako Fujikawa from Kyushu University's Faculty of Pharmaceutical Sciences, her former supervisor Professor Paul Frankland from the University of Toronto, and their team



members including Adam Ramsaran focused on how neurogenesis - the process of forming new neurons - in the hippocampus impacts the ability to forget fear memories. The hippocampus, a brain region important for forming memories linked to specific places and contexts, produces new neurons daily in an area called the dentate gyrus.

"Neurogenesis is important for forming new memories but also for forgetting memories. We think this happens because when new neurons integrate into neural circuits, new connections are forged and older connections are lost, disrupting the ability to recall memories," explains Fujikawa. "We wanted to see if this process could help mice forget stronger, traumatic memories too."

The researchers then explored whether these PTSD-like behaviors could be alleviated through exercise, which studies had shown boosted neurogenesis. The double-shocked mice were split into two groups and one group was provided with a running wheel. Four weeks later, these mice showed increased numbers of newly-formed neurons in their hippocampi, and importantly, the PTSD-like behaviors were less severe, compared to the double-shocked mice without wheel access.

Distraction cause for overconsumption



likely applies to other activities beyond eating. For example, people who are distracted while watching a movie or playing a game may be more likely to engage in additional consumption (e.g., checking social media) to compensate for a diminished enjoyment of the original activity.

The researchers also followed 220 participants aged 18 to 71 (again mostly female) for a week to investigate this broader effect. Participants filled out seven brief surveys per day via their smartphones regarding their hedonic consumption, distraction and satisfaction.

FORM G INVITATION FOR EXPRESSION OF INTEREST FOR M/S GREEN VALLEY'S SHELTERS PRIVATE LIMITED OPERATING IN CIVIL CONSTRUCTION SECTOR (Under Regulation 36A(1) of the Insolvency and Bankruptcy Board of India (Insolvency Resolution Process for Corporate Persons) Regulations, 2016)	
RELEVANT PARTICULARS	
1. Name of the corporate debtor along with PAN/ CIN/ LLP No.	M/S Green Valley's Shelters Private Limited CIN: U45201TN2004PTC052266 PAN: AACCG0749F
2. Address of the registered office	No. 9, 1st Floor, Bishop Walkers Avenue (East), Mylapore, Chennai Tamil Nadu 600004
3. URL of website	https://greenvalleys.in/
4. Details of place where majority of fixed assets are located	As on Insolvency Commencement Date (ICD), the fixed assets of the company are located at Chennai, Trichy, Coimbatore
5. Installed capacity of main products/ services	Projects of the Company: GVSPL Raksha, GVSPL Rajaljuri, Green Crest, GVSPL Mahameru, Green Park, GVSPL Green County.
6. Quantity and value of main products/ services sold in last financial year	As per last available Audited Financial Statement of FY 2019-20 there was revenue of Rs. 24,10,06,047.82/-
7. Number of employees/ workmen	15 employees (including those deployed at project sites)
8. Further details including last available financial statements (with schedules) of two years, lists of creditors, relevant dates for subsequent events of the process are available at:	Information can be sought through communication to the following email: E-mail: eoi.gvsp@gmail.com
9. Eligibility for resolution applicants under section 25(2)(h) of the Code is available at URL :	Information can be sought through communication to the following email: E-mail: eoi.gvsp@gmail.com The Expression of interest may be submitted for Company as a whole or project/s.
10. Last date for receipt of expression of interest	07 June 2024
11. Date of issue of provisional list of prospective resolution applicants	10th June 2024
12. Last date for submission of objections to provisional list	15th June 2024
13. Date of issue of final list of prospective resolution applicants	17th June 2024
14. Date of issue of information memorandum, evaluation matrix and request for resolution plans to prospective resolution applicants	18th June 2024
15. Last date for submission of resolution plans	18th July 2024
16. Process email id to submit EOI	eoi.gvsp@gmail.com

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