



## DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY  
Monday 20190527

### Infant Mortality Rate (Hindustan:20190527)

[http://epaper.livehindustan.com/imageview\\_33533\\_61110778\\_4\\_1\\_27-05-2019\\_i\\_7.pagezoomsinwindows.php](http://epaper.livehindustan.com/imageview_33533_61110778_4_1_27-05-2019_i_7.pagezoomsinwindows.php)

## शिशु मृत्यु दर घटाने को लेकर कार्यशाला

**नई दिल्ली (का.सं.)।** नवजात शिशु मृत्यु दर घटाने के मकसद से स्वामी दयानंद अस्पताल में दो दिवसीय कार्यशाला का आयोजन हुआ। इसका समापन रविवार को हुआ। इस कार्यशाला में देशभर के 50 से अधिक डॉक्टर और नर्स ने हिस्सा लिया था।

कार्यशाला का आयोजन यूनीसेफ और नेशनल नियोनाटोलॉजी फोरम की तरफ से किया गया था। अस्पताल के वरिष्ठ डॉ. सुरेंद्र सिंह बिष्ट ने बताया कि विश्व के मुकाबले देश में शिशुओं की मृत्यु दर ज्यादा है। इस स्थिति से निपटने के लिए ऐसे कार्यक्रमों का आयोजन जरूरी है। यह कार्यशाला नॉन इनवेसिव वेंटिलेशन के विषय पर आधारित थी। कार्यशाला में नर्सों और डॉक्टर को बच्चों को नाक के जरिए श्वास देने के बारे में बताया गया। इसमें वेंटिलेटर की जरूरत नहीं पड़ती है।

# मोटापा बढ़ाने वाले जीन की पहचान

**न्यूयॉर्क**। शोधकर्ताओं ने एक जीन की पहचान की है जो बच्चों में मोटापे के खतरे को बढ़ाता है।

ओबेसिटी जर्नल में प्रकाशित एक अध्ययन में कोलम्बिया यूनिवर्सिटी के शोधकर्ताओं ने पाया कि एक विशिष्ट प्रकार (सिंगल न्यूक्लियोटाइड पॉलिमॉर्फिज्म) का जीन, जिसे 'एफटीओ' के नाम से जाना जाता है, खाने की आदतों को प्रभावित करता है। यह बच्चों में वजन बढ़ने का अनुमान लगा सकता है, जिन्हें मोटापे का खतरा है।



सेहत

वाशिगटन | एजेंसी

सामान्य से अधिक कसरत करने वालों किशोरों की नींद की गुणवत्ता में सुधार होगा और समय में भी बढ़ोतरी होगी। एक हालिया शोध में यह दावा किया गया है।

साइंटिफिक रिपोर्ट्स जर्नल में प्रकाशित शोध के अनुसार एक दिन में सामान्य से अधिक कसरत करने पर या सामान्य से अधिक आलस करने पर उसी रात को नींद पर प्रभाव पड़ता है।

शोध में पाया गया कि सामान्य से एक घंटा ज्यादा कसरत करने वाले किशोरों

## दावा

- दिन में आलस करने से रात की नींद की गुणवत्ता होती है खराब
- सामान्य से ज्यादा कसरत करने वालों को 18 मिनट पहले आई नींद

को 18 मिनट पहले नींद आ गई और उनकी नींद 10 मिनट देर से खुली। इसके अलावा उनके नींद को मेंटेन करने की क्षमता में भी एक फीसदी का इजाफा देखा गया। अमेरिका की पेनसिलवेनिया स्टेट यूनिवर्सिटी की वैज्ञानिक लिंडसे मास्टर ने कहा, किशोरावस्था सही नींद लेने के लिए काफी नाजुक समय होता

है क्योंकि नींद ज्ञानात्मक क्षमता, कक्षाओं में प्रदर्शन, तनाव और खानपान के व्यवहार को प्रभावित करती है। हमारे शोध के अनुसार किशोरों को दिन में ज्यादा से ज्यादा सोने के लिए प्रेरित करने से उस रात उनकी नींद की गुणवत्ता में इजाफा होगा।

शोधकर्ताओं के अनुसार कसरत के उलट ज्यादा आलस करने से किशोरों की नींद की गुणवत्ता और समय में कमी आ सकती है। शोध के दौरान जो प्रतिभागी दिन में ज्यादा देर तक आलस करते रहे और कोई काम नहीं किया वो देर से सोकर देर से उठे लेकिन उनकी कुल नींद का समय कम रहा।

## डायबिटीज

डायबिटीज को कंट्रोल करता है गिलोय, जानें इसके फायदे (Hindustan:20190527)

<https://www.livehindustan.com/health/story-health-tips-giloy-can-cure-the-problem-of-diabetes-know-its-benefits-2547833.html>

आज के समय में डायबिटीज (शुगर) की समस्या आम बात हो चली है। गलत खान-पान और जीवनशैली की वजह से डायबिटीज के मरीज बढ़ते जा रहे हैं और ये मरीज शुगर को नियंत्रित करने के

लिए हमेशा परेशान रहते हैं। क्योंकि डायबिटीज ना सिर्फ खुद एक गंभीर समस्या है, बल्कि कई खतरनाक बीमारियों के पनपने का मुख्य कारण है। डायबिटीज को गिलोय का इस्तेमाल करके नियंत्रित किया जा सकता है। आइए गिलोय खाने के फायदे जानते हैं।

गिलोय खाने के फायदे

1. डायबिटीज रोगियों के लिए गिलोय रामबाण दवा है। गिलोय में डायबिटीज नियंत्रित करने के तत्व पाए जाते हैं। इसमें हाइपोग्लैसेमिक गुण होते हैं जो चीनी को ठीक रखते हैं।
2. गिलोय आंखों के लिए भी बहुत फायदेमंद माना जाता है। यह आंखों की समस्याओं को दूर रखता है और उनकी रोशनी अच्छी करने में भी मदद करता है। गिलोय को पानी में उबालकर आंखों पर लगाने से आंखों के समस्त रोग दूर हो जाते हैं।
3. गिलोय में पाचन तंत्र को ठीक करने का गुण पाया जाता है। गिलोय का सेवन करने से बदहजमी, कब्ज, गैस, मरोड़ आदि समस्याएं दूर होती हैं। यह पाचन को बेहतर बनाता है।
4. गिलोय शरीर की प्रतिरोधक क्षमता को बढ़ाती है जिस कारण सर्दी जुखाम और दूसरी कई घातक बीमारियों से बचने में मदद मिलती है।

## अब पसीने, खून और लार से मापा जा सकेगा तनाव

■ भाषा, वाशिंगटन : वैज्ञानिकों ने एक नई जांच विकसित की है जो पसीना, खून, मूत्र या लार के जरिए सामान्य तनाव को आसानी से माप सकती है। तनाव को अक्सर 'साइलेंट किलर' कहा जाता है क्योंकि इसका असर हृदय रोग से लेकर मानसिक स्वास्थ्य तक पर पड़ता है। अमेरिका के सिनसिनाटी यूनिवर्सिटी के शोधार्थियों को उम्मीद है कि नई जांच के जरिए रोगी घर पर ही इस उपकरण का इस्तेमाल कर सकेंगे। विश्वविद्यालय के प्रोफेसर एंड्रयू स्टेकल ने कहा, 'हालांकि यह आपको सभी सूचना नहीं

देगा लेकिन आपको बताएगा कि क्या आपको किसी डॉक्टर की जरूरत है।' दरअसल, वैज्ञानिकों ने एक ऐसा उपकरण विकसित किया है जो खून, पसीना, मूत्र या लार में मौजूद तनाव को हार्मोन की पराबैंगनी किरणों के जरिए माप करेगा। हालांकि, यह लैबोरेट्री में होने वाली रक्त जांच की जगह नहीं लेगा।

### कार्यालय

☎ :- 0755-271

### निविदा सूचना

ई-टेंडरिंग पद्धति की वेबसाइट पर निविदा की सूचना

### एसएमए

पैदा होने वाले 11 हजार बच्चों में से एक इस बीमारी से पीड़ित, 14 करोड़ की खुराक करेगी ठीक (Dainik Jagran:20190527)

<https://www.jagran.com/world/america-one-off-gene-therapy-treatment-for-rare-infant-spinal-muscular-atrophy-disease-set-to-cost-over-14-crore-jagran-special-19259110.html>

दुनियाभर में पैदा होने वाले 11 हजार बच्चों में से एक एसएमए से पीड़ित होता है। कई बार इस बीमारी के कारण दो साल की उम्र में ही उनकी मौत हो जाती है।

द न्यूयॉर्क टाइम्स, वाशिंगटन। अमेरिका के फूड एंड ड्रग्स एडमिनिस्ट्रेशन ने गंभीर किस्म की बीमारी स्पाइनल मस्क्युलर अट्रॉफी (एसएमए) के इलाज के लिए जीन-थेरेपी को मंजूरी दे दी है। जोलेगेंस्मा नामक इस नई थेरेपी के जरिये एक ही बार में इस बीमारी का इलाज हो जाएगा जिसकी कीमत 21 लाख डॉलर (करीब 14 करोड़ रुपये) है। एक खुराक के लिहाज से इसे अब तक का सबसे महंगा इलाज बताया जा रहा है। एसएमए के इलाज के लिए पहले भी कई ड्रग्स विकसित की गई थी, लेकिन उनकी एक खुराक की कीमत दस डॉलर से ऊपर नहीं थी।

एसएमए एक तरह का न्यूरोमस्क्युलर डिसऑर्डर है जिससे मरीज की शारीरिक क्षमता घट जाती है और वह चल-फिर भी नहीं पाते। दुनियाभर में पैदा होने वाले 11 हजार बच्चों में से एक एसएमए से पीड़ित होता है। कई बार इस बीमारी के कारण दो साल की उम्र में ही उनकी मौत हो जाती है। इसके इलाज के लिए अब तक स्पिनरजा नामक दवा का इस्तेमाल हो रहा था। इसका उपचार करीब दस सालों तक चलता है जिसका खर्च 40 लाख डॉलर (करीब 27 करोड़ रुपये) पड़ जाता है। जोलेगेंस्मा को विकसित करने वाली कंपनी नोवार्टिस का कहना है उन्होंने भी थेरेपी की कीमत आधी घटाकर बताई है। कंपनी के सीईओ ने कहा, 'हम सही रास्ते पर हैं और एक दिन इस बीमारी को पूरी तरह खत्म कर पाएंगे।'

इलाज महंगा होने पर उठ रहे सवाल

एसएमए का इलाज उपलब्ध होने पर कई लोग खुश हैं लेकिन इसकी कीमत को लेकर उन्हें चिंता है। कई परिवार इतने महंगे इलाज का खर्च नहीं उठा सकते। कई जानकारों ने कंपनी पर जानबूझकर इलाज महंगा करने का आरोप भी लगाया है।

कई बीमारियों के इलाज में आता है लाखों का खर्चा

ऐसी कई बीमारियों हैं जिनके इलाज में लाखों-करोड़ों रुपये का खर्चा होता है, लेकिन फिर भी पूरी तरह से इलाज नहीं हो पाता। गंभीर तरह की दृष्टिहीनता के इलाज के लिए जीन थेरेपी का खर्च साढ़े आठ लाख डॉलर (करीब पांच करोड़ रुपये) से भी अधिक है। वहीं ल्यूकेमिया (ब्लड कैंसर) के इलाज में 4.75 लाख डॉलर (करीब तीन करोड़ रुपये) का खर्च आता है।

चार महीने के बच्चे पर सफल रहा था ट्रायल

ओहायो की रहने वाली टीना व टोरंस एंडरसन के बेटे मलाची एसएमए से पीड़ित थे। 2015 में उन्हें इसका पता लगा था तब मलाची केवल चार महीने का था। डॉक्टर ने एंडरसन दंपती को जवाब दे दिया था। बाद में मलाची को जोलेगेंस्मा के क्लीनिकल ट्रायल के लिए चुना गया। अब वह चार साल का है

और स्वस्थ है। वह खुद अपनी व्हीलचेयर भी चला पाता है। भविष्य में यह तकनीक स्पाइनल मस्क्युलर अट्रॉफी के मरीजों के लिए बेहद कारगर साबित हो सकती है।

**Medicinal Plant (The Asian Age:20190527)**

<http://onlinepaper.asianage.com/articledetailpage.aspx?id=13076162>

# Plant with high medicinal value found in Assam

**MANOJ ANAND**  
GUWAHATI, MAY 26

A new plant that could be an alternative to Jamun with higher medicinal value has been discovered in Assam.

The discovery has been published in one of the world's oldest journal of Paris — *Adansonia*, a peer-reviewed journal of plant biology, devoted to the inventory, analysis and interpretation of vascular plants biodiversity.

Noted research scholar Jatindra Sarma while posted in Karbi Anglong as district forest officer had spotted the new rheophyte species, which is restricted to the Kopili riverbed of West Karbi Anglong district of Assam. He was assisted in his research work later on by his associate scholars Hussain Ahmed Barbh-uyan and Santanu Dey also.

Referring to his research paper published in the latest edition of *Adnosia*, Mr Sarma pointed out that the present species shows little affinity with *Syzygium khasianum* in having lanceolate leaves,



paniculate inflorescence and calyprate petals, but differs in various aspects, such as shrubby rheophytic plant habit, narrower leaves, non-caudate leaf apex, shorter peduncles, larger flowers etc.”

During field explorations (2016-2018) at Koka, Panimur, Amreng and Zirikindeng regions of West Karbi Anglong district of Assam, the senior author found this rheophytic shrub growing on rock crevices at the edges of Kopili riverbed near Koka.

Observations in the field and critical examination of the voucher specimen have revealed a number of morphological differences from all other hitherto known species of genus *Syzygium* (Jamun), which warrants the description of a new species, the journal of plant biology said.

## **Air Pollution**

**For Delhi to survive, its trees must breathe free (Hindustan Times:20190527)**

<http://paper.hindustantimes.com/epaper/viewer.aspx>

Early summer is perhaps the best time to appreciate Delhi's trees. The Amaltas blooming in yellow and the Gulmohar in red break the monotony of the city's grey landscape. The canopies, heavy with fresh green leaves, are not only a visual delight but they also shelter pedestrians from the blazing sun and the harsh winds.

But, it is only when you look down do you realise what a tree has to battle to survive in Delhi. Many of them are choked by encroachment and concretisation, buried under construction debris and garbage, and bathed in paan and ghutka sprays.

Six years ago, the National Green Tribunal (NGT) had banned concretisation around the base of a tree.

Circulars were issued to government agencies to leave a one-metre space around the tree unpaved so that its roots could breathe.

On May 16, HT published a report on how trees were being choked by the cemented base at several locations in Delhi. In all cases, the violators were the government agencies.

While the one-metre rule is followed on arterial roads, there are few checks on internal roads, and in residential neighbourhoods. Here, many trees are sealed with cement tiles so that the paved spaces can be used for parking vehicles. In some other cases, trees are encased within boundary walls.

Even on the stretches where the NGT order is being followed, it is often more in letter than in spirit. Often, it is mere tokenism as the unpaved space maintained around trees in many places is much less than what the rules stipulate. Moreover, trees are living beings and their girth increases as they grow. One metre should be the bare minimum requirement, but the agencies seem to grudge even that. The rules further require that no construction or repairing work is done at least within one metre radius of the trunk of trees, debris should be removed immediately after civil works, and soil around trees be replenished. Not many oblige.

Even if there may not be any visible debris, in many places the soil around the trees is hardened with cement dust. In fact, much of Delhi's 'earth' is now made of construction dust and building material left behind from the last project. If you pick up a fistful, you'll see how it slips out of your hand.

Unsurprisingly, many of our street trees do not have any undergrowth — crucial for serving as a dust trap, absorbing rain water and hosting larvae of insects, which, by the way, is the

best food for birds. Worse, vehicle movement and overflowing wastewater have such compacting effect on the topsoil that nutrients and water do not reach the roots. It is a miracle that Delhi's trees are still standing.

“The resilience of trees is tested in the direst of situations,” wrote Harinidra and Seema Mundoli in their book *Cities and Canopies*. Citing the impact of the Bhopal gas tragedy, India's biggest industrial disaster, on that city's trees, they write how in two months even the worst affected peepul and neem trees, which had completely lost leaves following the gas leak, sprung out fresh ones.

Trees are a city's best health insurance. They fight atmospheric pollution and also double up as noise barriers, both important to a city with 10 million vehicles. Trees also soak up stormwater and replenish aquifers, both crucial for a city that suffers waterlogging after every shower even as its water table sinks to precarious lows.

On paper, harming a tree attracts a prison term of up to one year or a fine of up to ₹1,000 or both. In addition, the NGT order provisions a penalty of ₹10,000 on the civic agency that violates its order. But as forest officials told HT, the fines are rarely enforced.

Street trees are anyway the first to be axed for the widening of roads, construction of flyovers and Metro lines. The forest department data show that between 2005 and February 2018, the government allowed felling of 112,169 trees. Citizens are now battling to save at least 14,000 trees in seven Delhi neighbourhoods.

The compensatory plantation is a lame consolation for squandering legacies of decades. Even as Delhi sets another lofty target of planting millions of saplings in the upcoming mega-drive this monsoon, an official admitted that the new plants do not grow into robust trees like before because of soil degradation and the plummeting water table. That underlines the urgency of safeguarding the standing roadside trees against choking and decay. They are waiting for a medical check-up.

## Healthcare

### Ultrasound centres not inspected since Jan '18 (Hindustan Times:20190527)

<http://paper.hindustantimes.com/epaper/viewer.aspx>

RTI REPLY Health dept says it doesn't have enough officers to conduct checks

NEW DELHI: Delhi's health department has not inspected any ultrasound centre between January 2018 and February 2019, to check for violations of the Pre Conception- Pre Natal Diagnostics Technology Act (PC-PNDT), as per the reply to an RTI query.

As per the reply, 16 and 18 inspections were done by the state team in 2016 and 2017, respectively, while the last time there was no inspection was in 2009.

"There is a shortage of manpower. The office does not have sufficient officers to conduct the inspections," a senior official with the Delhi government's health department said.

In comparison, 16 cases under the PC-PNDT Act were registered in neighbouring Gurugram in 2018, which led to 30 arrests and three in 2019, which led to six arrests.

India's child sex ratio (0-6 years) fell from 927 girls/1,000 boys in 2001 to 919 girls /1,000 boys in 2011, according to the Census data. Delhi's child sex ratio is below the national average, at 871 girls/1,000 boys.

"We constantly receive tip-offs and information about sex determination clinics and illegal abortion centres from locals, most of who are pharmacists selling abortion pills. We gather information and the resources, and act on it as and when the situation is appropriate," said Amandeep Chauhan, Gurugram district drug control officer and a member of the PNDT committee.

The PC-PNDT Act was enacted in 1994 to prevent sex-selective abortions. Under the PC-PNDT Act, hospitals, nursing homes, and diagnostic centres are forbidden from using ultrasound to determine and communicate the sex of the unborn child to the parents. Breaking the law can lead up to three years of imprisonment and a fine of ₹10,000. For subsequent offences, the prison term may extend to five years and the fine, up to ₹1 lakh.

Action against clinics performing illegal sex determination improved Delhi's sex ratio from 902 girls/1,000 boys in 2016 to 913 girls/1,000 boys in 2017.

Since then, inspections reached a five-year low, to zero, in 2018. Inspections are done to check for irregularities, such as not filling out 'Form F' that records the medical history of pregnant women seeking ultrasounds, or for not registering ultrasound machines, as mandated by the law.

The number of inspections shot up to 19 in 2014, after hovering between one and six since 2009.

“It is good to see that the sex ratio in Delhi is improving, but with the lax implementation of the law, we are unlikely to see any more improvement, if not a decline. And, look at it this way— even if we go by the current sex ratio, still 4% of the 3.5 lakh children are being lost. For every illegal termination, three medical crimes are happening — two ultrasounds, to check the gender and then the abortion. The state authorities have to be active to prevent this,” said Sabu George, an activist who has been working to prevent female foeticide for three decades.

In February, the Delhi government approved are ward scheme, wherein an in former will receive ₹50,000 for a successful raid and pregnant women acting as decoy customers would receive ₹1.5 lakh. However, no raid has taken place so far.

## **HIV**

### **681, mostly children, test positive for HIV (Hindustan Times:20190527)**

<http://paper.hindustantimes.com/epaper/viewer.aspx>

ISLAMABAD: Pakistan said on Sunday over 600 people, mostly children, had tested HIV positive in a village in southern Sindh province.

Concern grew after hundreds of people were allegedly infected by a doctor using a contaminated syringe in Rato Dero and surrounding villages of Larkana district. “Some 681 people, of which 537 were children from 2-12 years of age, had been tested positive for HIV until yesterday in Rato Dero village,” special health adviser Zafar Mirza told a press conference in Islamabad.

He said 21,375 people had been screened in Rato Dero, adding “the increase in the number of patients being tested positive for HIV is a matter of grave concern for the government”.

## **CHINESE VICE PREZ EMBARKS N 3-DAY VISIT**

Chinese Vice President Wang Qishan embarked on a three-day official visit to Pakistan on Sunday, during which he will hold talks with President Arif Alvi and Prime Minister Imran Khan on issues including the smooth development of the China-Pakistan Economic Corridor.

Wang, 70, is a member of the ruling Communist Party of China's Politburo Standing Committee. He was received at the airport by foreign minister Shah Mehmood Qureshi.

Pakistan and China will sign Mo Us and agreements and inaugurate projects to enhance bilateral cooperation in abroad range of areas, state-run Radio Pakistan reported on Sunday.

#### FIRST MOON-SIGHTING WEBSITE LAUNCHED

Pakistan on Sunday launch edits first ever moon-sighting website in a bid to end decades-old controversy over start of the key lunar months that decides the beginning of the holy month of Ramzan and Eid festivals.

The inaugural of the website pakmoonsighting.pk came two weeks after federal minister for science and technology Fawad Chaudhry made an announcement regarding the preparation of a scientific lunar calendar.

He said the website would show the exact dates of important Islamic occasions--Ram zan, Eidul Fitr, Eidul Azha and Muharram, the Dawn reported. Speaking at the launch of the website, Chaudhry said that it will end the "moon-sighting controversy" in the country.

#### **Alzheimer's disease**

#### **Antibiotics may help curb Alzheimer's symptoms (Medical News Today:20190527)**

<https://www.medicalnewstoday.com/articles/325275.php>

Research showed that an antibiotic mix impacted the gut bacteria in mice to the point that it slowed the growth and development of Alzheimer's, but only in males.

New research in mice suggests that antibiotics may reduce Alzheimer's symptoms by impacting the gut bacteria.

The study, conducted at The University of Chicago, IL, demonstrated how long-term antibiotic use could reduce inflammation and slow the growth of amyloid plaques in male mice.

Amyloid plaques are a feature specific to Alzheimer's disease. They form when a particular protein within the neurons of the brain buildup and clump together. These amyloid plaques disrupt brain cell function and lead to the symptoms of Alzheimer's.

The team was led by Professor Sangram S. Sisodia, who is also the director of the Center for Molecular Neurobiology at The University of Chicago.

The team was already aware that people with Alzheimer's showed changes in their gut bacteria, and they had previously carried out studies showing how gut bacteria could potentially affect Alzheimer's-like symptoms in rodents.

This research found that changes to the microbiome limited the development of amyloid plaques in male mice, but not females.

Sisodia says of the research that "[w]hile compelling, our published studies on the role of the gut microbiome on amyloid plaque formation were limited to a single strain of mice."

#### Studying antibiotics and Alzheimer's

So, Prof. Sisodia and colleagues conducted a new study on a mouse model of Alzheimer's disease, that scientists call APPPS1-21. They used an antibiotic combination to see how it affected the formation of amyloid plaques and the activation of microglia in the rodents' brains. Microglia are immune cells that can cause inflammation in the brain when activated.

Prof. Sisodia and his team found that long-term antibiotic use affected the microbiome of male and female mice differently.

The researchers discovered that the antibiotics reduced the growth of amyloid plaques and changed microglia into a form that helps keep the brain healthy — but only in male mice.

For females, the gut microbiome changes affected their immune system, which increased the production of factors that could boost microglia activation. This did not happen in male mice.

The results appear in the *Journal of Experimental Medicine*.

To confirm their findings, the researchers transplanted fecal material from APPPS1-21 male mice that had not received the antibiotics into those that had received the long-term antibiotic treatment.

The team found that this reestablished the gut microbiome, which in turn, resulted in an increased amyloid plaque formation and activation of microglia.

#### Alzheimer's signs and symptoms

Alzheimer's disease is not a normal part of aging, although researchers note that increasing age is one of the most significant risk factors for developing the disease.

There is a possibility that genetics could play a role as well. Some research also suggests that Alzheimer's may have connections to a variety of other health and lifestyle factors, such as obesity, heart disease, high blood pressure, and diabetes.

#### Scientists confirm blood test could track Alzheimer's disease

The test could identify the condition 10 years before any symptoms occur.

Alzheimer's is a disease that gets progressively worse over time. Most people who develop this disease experience memory problems at the outset, which can manifest themselves in many ways.

This type of memory loss can interfere with daily life. As the disease progresses, people with Alzheimer's might repeat questions or get easily lost. They may also experience trouble handling money and paying the bills or have difficulty completing routine tasks at home or work.

Also, the disease might impair their judgment, and some may experience mood or behavior changes.

Translating the findings to human patients

There is currently no cure for Alzheimer's disease, but there are some treatments available to help people manage symptoms and others that slow down the progression of the disease.

However, research is ongoing to find a cure or treatment that halts the advancement of the disease.

This new study is promising, but the scientists need to do further research to uncover what benefit, if any, it might impart to humans.

"Our study shows that antibiotic-mediated perturbations of the gut microbiome have selective, sex-specific influences on amyloid plaque formation and microglial activity in the brain. We now want to investigate whether these outcomes can be attributed to changes in any particular type of bacteria."

Prof. Sangram S. Sisodia

## **Weight**

**Weighing yourself every day could prevent weight gain (Medical News Today:20190527)**

<https://www.medicalnewstoday.com/articles/325289.php>

New research tests a novel strategy for preventing holiday weight gain and proposes a psychological mechanism that explains why the strategy may work.

Researchers may have identified a new way to prevent weight gain over the holiday season.

More than 37% of adults in the United States are living with obesity, estimates show, and experts expect this number to increase. More than 32% of U.S. adults are also overweight.

Research shows that on average, people gain between 0.4 and 1 kilogram (kg) of weight per year. Although this may be a small amount, persistent weight gain can lead to obesity over time.

Most of us are familiar with the so-called holiday weight gain. During mid-November and January, adults tend to gain 0.4–1.5 kg, on average.

Now, research appearing in the journal *Obesity* suggests that weighing ourselves every day could be an effective way to prevent weight gain.

Jamie Cooper, Ph.D., who is an associate professor in the Department of Foods and Nutrition at the University of Georgia in Athens, led the new research.

Studying a new weight loss strategy

For their study, Cooper and colleagues recruited 111 adults who were 18–65 years old. The participants weighed themselves with varying degrees of frequency between mid-November 2017 and early January 2018.

The researchers asked the participants to complete three visits: one just before the holiday season, another one immediately after, and the third one 14 weeks after the intervention.

Cooper and team also asked the participants to use a Likert scale to assess the frequency with which they weighed themselves.

The key to weight loss: 'Log often, lose more'

New research finds that keeping a record of what you eat may help you lose weight.

During the intervention, the researchers asked the participants to try to maintain their initial weight throughout the study period, but they did not offer them any advice on how to do this. So, each participant was free to choose whatever method they wished, whether it involved exercising or dieting.

The researchers compared these participants with a control group who did not receive any instructions at all.

At the end of the study period, those who weighed themselves every day and got a graphical representation of their weight changes either maintained the same weight they had at baseline or lost weight.

"Maybe they exercise a little bit more the next day (after seeing a weight increase), or they watch what they are eating more carefully," comments Cooper.

"The subjects self-select how they are going to modify their behavior, which can be effective because we know that interventions are not one-size-fits-all."

In contrast, participants who did not self-weigh every day gained weight.

Self-perception is key for weight loss

Study co-author Michelle vanDellen, who is an associate professor in the Department of Psychology at the University of Georgia, explains the psychological mechanisms that might be at play behind these results.

"People are really sensitive to discrepancies or differences between their current selves and their standard or goal," vanDellen says. "When they see that discrepancy, it tends to lead to behavioral change. Daily self-weighing ends up doing that for people in a really clear way."

The authors are not sure whether daily self-weighing without the graphical representation would have the same effect.

"[R]eplication in larger studies with more diverse participants would help to determine the generalizability of this approach for weight gain prevention," comments Dr. Susan Yanovski, an obesity researcher at the National Institute of Diabetes and Digestive and Kidney Diseases.

"Vacations and holidays are probably the two times of year people are most susceptible to weight gain in a very short period of time," lead author Cooper concludes. "The holidays can actually have a big impact on someone's long-term health."

## **Depression**

**Researchers close in on a new depression mechanism (Medical News Today:20190527)**

<https://www.medicalnewstoday.com/articles/325276.php>

One key characteristic of clinical depression is anhedonia, the complete lack of pleasure in things and activities that used to be rewarding. A new study in rats has now uncovered an important biological factor that contributes to this state.

Researchers have found a new 'key player' in depression, and the discovery could lead to therapies for other conditions too.

The World Health Organization (WHO) state that across the world, more than 300 million people of all ages live with depression. Moreover, the WHO add, this condition is also "the leading cause of disability worldwide."

In the United States, more than 16.1 million adults have received an official diagnosis of major depressive disorder, according to the Anxiety and Depression Association of America.

Living with depression can significantly affect a person's quality of life. In part, this is because a primary trait of depression is anhedonia — the inability to enjoy experiences that used to offer a sense of pleasure, such as eating good food, participating in hobbies, or having sexual intercourse.

Recognized, approved drugs are available to treat the symptoms of depression, the most common of which are selective serotonin reuptake inhibitors, or SSRIs.

However, SSRIs can take a long time to start being effective, and many people with depression do not experience any improvements after taking these antidepressants.

Now, a team of researchers from the Department of Human Physiology at the University of Malaga Faculty of Medicine in Spain has identified a new mechanism that seems to contribute significantly to anhedonia.

The results of this study, which the investigators conducted in rats, appear in the Journal of Psychopharmacology. The authors believe that their findings may, in the future, lead to new therapies for depression.

Potential 'for endless therapeutic strategies'

In the study, the researchers focused on the role that a neuronal signaling molecule (a neuropeptide) called galanin plays in regulating emotion.

According to previous animal studies, the team notes in the study paper, galanin contributes to mechanisms relating to anxiety, as well as to depression-inducing mechanisms.

For the new research, the investigators wanted to find out whether galanin also plays a role in facilitating anhedonia. More specifically, they focused on a particular fragment of galanin: GAL (1-15).

Depression: Esketamine trial leaves 'more questions than answers'

An esketamine nasal spray gained FDA approval for the treatment of severe depression. What challenges remain?

"We have verified through different experiments how animals modify their response to high-reinforcement appetitive stimuli, such as saccharine or sexual attraction, after the administration of the galanin fragment," explains co-author Carmelo Millón.

The team found that administering GAL (1-15) at a concentration of 3 nanomoles led to the animals developing strong behaviors and symptoms of anhedonia. For example, they no longer seemed to desire to mate or to appreciate saccharine, which they usually respond to well.

The researchers identified an association between these changes and alterations in the brain system that is responsible for releasing dopamine, a hormone and neurotransmitter that is a key component in the reward response of the brain. This brain "program" stimulates individuals to engage in behaviors that promote survival, such as eating and having sex.

GAL (1-15) seemed to reduce the activity of the reward circuit in rats, rendering these animals much less responsive to normally appetizing food and the promise of mating.

While this may be a relatively minor discovery, the researchers believe that if they gain a good enough understanding of how galanin works in the brain, this could lead to new treatments not just for depression but also for addiction disorders. A malfunctioning reward circuit also characterizes these conditions.

"The understanding of these mechanisms opens the way for endless therapeutic strategies, hence its importance."

Carmelo Millón

## **Diet/Nutrition**

### **How a fruit compound may lower blood pressure (Medical News Today:20190527)**

<https://www.medicalnewstoday.com/articles/325282.php>

Blueberries, red grapes, red wine, and peanuts are some of the natural sources of resveratrol — a plant compound that has received much attention in the medical community recently. New research in mice and human cells breaks down the mechanism through which resveratrol may lower blood pressure.

Red grapes and some blueberries contain resveratrol.

From protecting our neurons against aging to potentially preventing cancer, a significant number of studies have recently hailed the health benefits of resveratrol.

Also, a lot of previous research has focused on the benefits of resveratrol for heart health.

Clinical studies in rats and mice have demonstrated protective effects against stroke, heart failure, and hypertension, among other heart conditions.

Although some researchers believe that the benefits of resveratrol come from its antioxidant properties, the mechanisms behind its cardioprotective effects remain unclear.

New research gets closer to understanding these mechanisms, and the findings are an intriguing paradox.

A team of scientists from King's College London (KCL), in the United Kingdom, added resveratrol to the diet of mice with high blood pressure. Joseph Burgoyne, Ph.D., a senior lecturer in cardiovascular sciences at KCL, is the lead author of the study, which appears in the journal *Circulation*.

The effects of resveratrol in mice

Burgoyne and the team induced high blood pressure in a group of wild-type mice. The researchers measured the rodent's blood pressure with implanted telemetry probes and monitored this for 15 days.

During this time, they fed the mice either a diet to which they had added resveratrol or a normal diet.

By the end of the study period, the researchers noted a drop of about 20 millimeters of mercury in the blood pressure of mice that had consumed resveratrol. The scientists also discovered that resveratrol relaxed the rodents' blood vessels by oxidizing the protein PKG1a.

"Resveratrol mediates lowering of blood pressure by paradoxically inducing protein oxidation, especially during times of oxidative stress, a mechanism that may be a common feature of 'antioxidant' molecules," conclude the authors.

Nasal delivery of grape compound shows promising results in lung cancer

Administering the compound through the nose may enhance its benefits.

The findings are counterintuitive, in the sense that the compound is believed to be an antioxidant, but this study shows that it behaves like an oxidant in order to lower blood pressure.

"We're slowly realizing that oxidants aren't always the villain. Our research shows that a molecule once deemed an antioxidant exerts its beneficial effects through oxidation. We think that many other so-called 'antioxidants' might also work in this way."

Joseph Burgoyne, Ph.D.

What do the findings mean for humans?

Importantly, the researchers were able to replicate the findings in human cell lines. Specifically, they applied resveratrol to smooth muscle cells taken from human blood vessels and noticed the same oxidization process.

However, the scientists caution against the interpretation that people should consume a lot of resveratrol-containing products in order to reap the same benefits that this study showcased in mice.

People should avoid red wine, in particular, the researchers warn. To recreate the benefits of the study in humans, say Burgoyne and colleagues, a person would have to consume 1,000 bottles of red wine every day. The compound is not very soluble, which is why high amounts of it are necessary.

"Our work could lay the foundations for chemically altering resveratrol to improve its delivery to the body," the study's lead author explains, "or designing new, more potent drugs which use the same pathway. In the future, we could have a whole new class of blood pressure drugs."

Metin Avkiran, Ph.D., a professor of molecular cardiology at KCL — who was not involved in the study — also comments on the significance of the findings.

"Unfortunately, this isn't the all-clear to open a bottle of merlot. To get the human equivalent dose of resveratrol used here, you'd need to drink an impossible amount of red wine every day."

Prof. Metin Avkiran, Ph.D.

"This study reveals the surprising way in which resveratrol works and opens up the possibility of new blood pressure drugs which work in a similar way," Prof. Avkiran adds. "The findings bring us a step closer to tackling this 'silent killer' which puts people at risk of having a devastating stroke or heart attack."

## **Autism**

### **Through my eyes: High functioning autism (Medical News Today:20190527)**

<https://www.medicalnewstoday.com/articles/325239.php>

At the risk of explaining the obvious to the neurotypicals — people not on the autistic spectrum — in the audience, I know that I am not every autistic person. I can only speak of my experience as a thirtysomething white cis man who grew up in semirural Hertfordshire.

'You don't seem autistic' is something that I hear a lot.

This is still an autistic experience and, while it is not the same autistic experience as those of people you might know or people you have yet to meet, it is still a story that might help you to understand your autistic neighbors.

"You don't seem autistic" is something that I hear a lot.

There are a number of preconceptions about how I'm supposed to look, as well as what an autistic person is and is not capable of.

When I ask what people mean by it, the response is usually that I "speak fluently" or "seem normal."

Defining normal is a task for another social anthropologist. I am who I am because of my journey through life, and my current autistic self is a reflection of that journey.

### Growing up with autism

I had a diagnosis of Asperger's syndrome, or high functioning autism, when I was about 8 years old. Considering that this diagnosis came about in the '90s, it was an early diagnosis, compared to some of my peers'.

I imagine that I was displaying most of the typical signs of autism: repetitive behavior, sensitivity to visual, audio, and tactile stimuli, narrow ranges of interest, and difficulties in understanding body language and the subtleties of social interaction.

The only unusual elements were that I engaged in imaginative play — an area that was supposed to be beyond my abilities — and that I wanted to engage with other people.

This led to a number of strange contradictions. Following an assessment, it came to light that I had a reading age of 18, but the professional opinion was that I wouldn't be able to comprehend the contents of a fictional book.

I didn't care that much at the time of my diagnosis. I was more interested in playing Sonic the Hedgehog, trying to get along with friends, and falling in love with the works of Terry Pratchett in my school library. My awareness of what autism was developed as I did.

Alongside my studies, I went to speech therapists and took part in a number of short "holidays" with others in similar situations, where I was encouraged to learn social skills through exercises and role play.

I practiced and tried to put my knowledge to the test in the real world, where nobody follows the rules — of taking turns, being polite, and not talking over someone — that we had learned.

### Levels of autism: Everything you need to know

Autism is a spectrum condition that can cause social and behavioral challenges. Learn more about the three levels of autism here.

### Social impact

One common myth is that being autistic makes you antisocial. It doesn't.

I love meeting people, spending time with others, and having a laugh. I am a member of various role playing and board games groups, while I also attend a writing group that occasionally goes out drinking and a drinking group that occasionally writes.

One aspect of my autism is that I'm constantly trying to read everyone around me.

I try to gauge moods that I might not be aware of and display the correct signs that I'm engaging with and wanting to take part in conversation.

It can take a lot out of me, and I need to spend a considerable amount of downtime unwinding and processing the events of the day. And yes, also getting to grips with the neuroses of any social faux pas that I may have committed.

For example, one of my work colleagues has suffered from a number of bereavements. I want to show that I'm sympathetic and that I empathize with her to the point that my heart feels heavy, but I am completely disfluent when it comes to expressing this verbally.

I am envious of those around me who are able to naturally and casually approach her and offer support. Instead, I have to rush off to get myself a coffee and return with my thoughts in order at a later time.

This is the pressure of being a high functioning autistic person. I have learned to portray the version of myself that a neurologically undiversified person would accept on a day to day basis, but when I am faced with difficult situations, I become unstuck. Unable to act appropriately, at best, and mute, frozen, or flapping, at worst. It is frustrating for neurotypical folk who know me at my best to try and understand this pressure. I find it just as frustrating.

This also extends to my online persona. I will have flurries of posts on social media before I become a ghost, haunting people's feeds, slowly stockpiling determination until I can respond to messages and reach out to friends after days of silence.

This doesn't mean that I am not trying. I love being around people, I just find it hard sometimes. I enjoy your company, even when I can't show you.

Before you ask — yes, I have tried yoga. I have taken part in yoga exercises as part of drama classes and student theater society meetings. I am inflexible, but I still enjoyed the exercises.

Yet, it doesn't stop the anxiety that I experience on a daily basis. After a session, I am still autistic. I am simply less likely to injure myself in moderate exercise.

People have previously asked me whether I have a "superpower." I don't have one. At least, not in the mold of those that are usually attributed to autism in fiction, like ultrafast computation or card counting.

I have an aptitude for a few subjects, and while I needed some extra time in exams, I performed well academically, attaining mostly As and Bs. While I managed to succeed in typically autistic subjects like maths and science, I really wanted to explore the arts.

Contrary to what professionals thought when I'd been diagnosed, I loved fiction and cultural critique. I decided that I wanted to study English literature at the University of Warwick. Not blessed with savant powers, I still needed mentoring and the use of a smart keyboard during lectures to help with my studies. I came out the other side with a 2:1.

Independence and looking forward

I graduated in 2009, with the aim that my experience and grades would help me find short-term employment before hopefully gaining a breakthrough and making it into publishing — a dream career path for me.

Contrary to what professionals thought when I'd been diagnosed, I loved fiction and cultural critique.

I spent 5 years trying to get short-term employment. I watched my peers on social media find jobs, get married, and make families, while I struggled to get an interview.

If I hadn't been honest in my applications about being autistic, I might have made it to an interview room — but then I wouldn't have received the support I needed to continue working.

I tried to gain more experience and qualifications. My family supported me as I studied for an MA in writing and earned a distinction.

I spent over 2 years volunteering in offices in order to gain the experience needed to break into a regular 9 to 5 job. I attended various job seeker's courses run by the National Autistic Society and my local government. Yet it was still a struggle to get a foot in the door and into an interview.

I had my first paid internship in 2014 in a school finance company. I failed to get an interview for the journalism or web content internships within the business, but I was taken on as a finance intern.

I still think this was based on the assumption that autistic people are "numbers and logic" people, but it was an opportunity to work, and it helped to prove that I was employable a year and a half down the line.

I'm just about independent nowadays. Thanks to my parents, I have set myself up in a one bedroom flat.

I mentally flit between my different anxieties about drifting out of contact with friends, about making sure my bills are paid on time, and about how the hell I am going to finish the novel that I have been writing for over 2 years.

I no longer play Sonic the Hedgehog — I prefer my games to be angsty and plot driven now — but I am still the same autistic person that I was as a child.

I have spent my life trying to empathize with the neurotypical population of the world, and I have given you a glimpse into what my life's like.

Empathy works both ways, though, and if there's one concept that I want you to consider, I would like you to take this knowledge and think about how you can empathize with an autistic person moving forward.

Think about ways that you can make autism-friendly adjustments at home, at work, or with that autistic person you are yet to meet.

And if that person is a thirtysomething white cis man who grew up in semirural Hertfordshire, just give them a bit of time to get their coffee.