



DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY

Friday

201901011

Health schemes

Government takes steps to bring health schemes on common platform (The Indian Express: 201901011)

<https://indianexpress.com/article/lifestyle/health/government-takes-steps-to-bring-health-schemes-on-common-platform-6063363/>

This means that any PMJAY beneficiary can be treated at an ESIC empanelled hospital and vice versa. Reimbursements will be made by the NHA or ESIC depending on the beneficiary's

NHA had a meeting with the Health Ministry to work out the arrangement with the Central Government Health Scheme (CGHS) that covers all Central government employees.

The National Health Authority (NHA) has tied up with the Employees' State Insurance Corporation (ESIC) for interoperability with PMJAY.

This means that any PMJAY beneficiary can be treated at an ESIC empanelled hospital and vice versa. Reimbursements will be made by the NHA or ESIC depending on the beneficiary's entitlement but at PMJAY rates.

This, officials say, is the first step in bringing all government health schemes under a single umbrella, a vision that was presented by NHA CEO Indu Bhushan at the Ayushman Bharat Manthan event last week, which was addressed by Prime Minister Narendra Modi.

NHA had a meeting with the Health Ministry to work out the arrangement with the Central Government Health Scheme (CGHS) that covers all Central government employees.

The Employees' State Insurance Act, 1948 (ESI Act), the first major legislation on social security for workers in independent India, encompasses certain health-related eventualities that factory workers are generally exposed to, such as sickness, maternity, temporary or permanent disability, occupational disease or death due to employment injury, resulting in loss of wages or earning capacity, total or partial.

ESIC currently covers 13 crore people through 3.5 crore health cards. PMJAY, which is the secondary and tertiary care arm of Ayushman Bharat — the flagship health programme of the NDA government — currently covers 10 crore people but intends to cover about 50 crore.

There are 18,000 hospitals empanelled under PMJAY, which has just completed a year. ESIC runs 147 hospitals of its own, and in addition, there are 1,400 empanelled hospitals. Beneficiaries from either scheme can go to any of these hospitals once the tie-up is enforced.

NHA last week signed two MOUs with ESIC but the final contours of the arrangement are still being worked out. “We will launch it first in some districts and see how it goes. The names will be finalised by the end of the week,” said a senior NHA official.

Sources said the PMO has indicated that it is in favour of all health schemes coming under a common platform. “Right now, the IT platform we have is the best in the country, not even private insurance companies have such a system. That is why we are working towards the eventual integration of all schemes such as CGHS and ECHS,” said an official.

Health programme

Health programme to be rolled out in schools The Indian Express: 201901011)

<https://indianexpress.com/article/lifestyle/health/health-programme-to-be-rolled-out-in-schools-6063369/>

The first look of the programme was unveiled on the first day of a meeting of the Central Council of Health and Family Welfare on Thursday.

Niti Aayog Health Index: Chief Secretary pulls up officials for ‘poor performance’ on health

Janaushadhi Suvidha scheme: A look at the challenges it faces a year after its launch

Sarangpur dispensary gets power after 18 days; doctors, patients heave sigh of relief

Under the programme, two teachers in every school across the country will be trained and designated as health and wellness ambassadors.

The Union Health Ministry is all set to roll out a health programme in schools to spread awareness on the health and wellness aspects of the Centre’s flagship Ayushman Bharat programme. The first look of the programme was unveiled on the first day of a meeting of the Central Council of Health and Family Welfare on Thursday.

Under the programme, two teachers in every school across the country will be trained and designated as health and wellness ambassadors. They will then conduct age-appropriate, culturally sensitive weekly sessions with students on facets of wellness, including importance of growing up healthy, nutrition, gender equality, reproductive health and HIV prevention. The Health Ministry will collaborate with the Ministry of Human Resources Development for the programme.

Talking about the programme, Health Secretary Preeti Sudan said: “Health and wellness ambassadors are crucial in bringing a culture of wellness right from the school level. If we can teach our children wellness at an early age, we would have built a new India. The idea is to ‘catch them young’ so that they make healthy habits a way of life. They will become ambassadors, who will then spread the message to their families and friends.”

Union Health Minister Dr Harsh Vardhan said: “Health needs to become a social movement in every state & UT (Union Territory) and the Eat Right and Fit India movements need to be taken up by states and UTs in a synergised manner, to ensure a healthy & robust India.”

At Thursday’s inaugural session, Dr Harsh Vardhan, along with the other ministers, launched a new initiative — ‘Surakshit Matritva Aashwasan (SUMAN)’ — with an aim to eliminate preventable maternal and newborn deaths completely. SUMAN was earlier named Pradhan Mantri – Assured and Safe Motherhood Initiative (PM-ASMI).

healthcare

HomeLifestyleHealthHealth Programme To Be Rolled Out In Schools

Joint cartilage'

Humans have salamander-like ability to regrow joint cartilage'(The Tribune: 201901011)

<https://www.tribuneindia.com/news/health/-humans-have-salamander-like-ability-to-regrow-joint-cartilage/845296.html>

Cartilage in human joints can repair itself through a process similar to that used by creatures such as salamanders and zebrafish to regenerate limbs, according to a study.

The finding, published in the journal Science Advances, could potentially lead to treatments for osteoarthritis, the most common joint disorder in the world.

The researchers at Duke University Medical Centre in the US identified a mechanism for cartilage repair that appears to be more robust in ankle joints and less so in hips.

"We believe that an understanding of this 'salamander-like' regenerative capacity in humans, and the critically missing components of this regulatory circuit, could provide the foundation for new approaches to repair joint tissues and possibly whole human limbs," said Virginia Byers Kraus, a professor at Duke University.

The researchers devised a way to determine the age of proteins using internal molecular clocks integral to amino acids, which convert one form to another with predictable regularity.

Newly created proteins in tissue have few or no amino acid conversions; older proteins have many.

Understanding this process enabled the researchers to use sensitive mass spectrometry to identify when key proteins in human cartilage, including collagens, were young, middle-aged or old.

They found that the age of cartilage largely depended on where it resided in the body.

Cartilage in ankles is young, it's middle-aged in the knee and old in the hips, the researchers said.

This correlation between the age of human cartilage and its location in the body aligns with how limb repair occurs in certain animals, which more readily regenerate at the furthest tips, including the ends of legs or tails.

The finding also helps explain why injuries to people's knees and, especially, hips take a long time to recover and often develop into arthritis, while ankle injuries heal quicker and less often become severely arthritic.

The researchers learned that molecules called microRNA regulate this process.

These microRNAs are more active in animals that are known for limb, fin or tail repair, including salamanders, zebrafish, African fresh water fish and lizards, they said.

These microRNAs are also found in humans—an evolutionary artifact that provides the capability in humans for joint tissue repair, according to the study.

As in animals, microRNA activity varies significantly by its location: it was highest in ankles compared to knees and hips and higher in the top layer of cartilage compared to deeper layers of cartilage.

"We were excited to learn that the regulators of regeneration in the salamander limb appear to also be the controllers of joint tissue repair in the human limb," lead author Ming-Feng Hsueh said.

"We call it our 'inner salamander' capacity," said Hsueh.

The researchers said microRNAs could be developed as medicines that might prevent, slow or reverse arthritis.

"We believe we could boost these regulators to fully regenerate degenerated cartilage of an arthritic joint.

"If we can figure out what regulators we are missing compared with salamanders, we might even be able to add the missing components back and develop a way someday to regenerate part or all of an injured human limb," Kraus said. — PTI

Traumatic

Resting after traumatic event may improve mental recovery: Study (The Tribune: 201901011)

<https://www.tribuneindia.com/news/health/resting-after-traumatic-event-may-improve-mental-recovery-study/845287.html>

A period of rest following a traumatic event can boost mental recovery from negative memories, according to a study which may help develop new treatment approaches for Post Traumatic Stress Disorder (PTSD).

The study, published in the journal *Scientific Reports*, revealed the neurological mechanisms at play when some people develop memory disturbances following trauma, while others do not.

The researchers, including those from University College London (UCL) in the UK, presented 85 participants with emotionally negative videos, after which they were either given a period of wakeful rest, or a simple control task requiring them to pay attention to numbers on a screen.

The videos had highly emotional content such as badly injured people, or serious accidents, the study noted.

According to the researchers, participants who had a period of rest after viewing the videos reported fewer memory intrusions over the following week.

On the contrary, there was no difference between rest and the simple control task on a memory test that assessed how much the participants remembered when they wanted to.

The researchers mentioned that rest and certain phases of sleep increased processing in the hippocampus—the brain region responsible for memory, which placed memories in context.

They suggested that a strengthening of this contextual memory system was beneficial in preventing involuntary memory intrusions following trauma.

"The coherence of memories is often compromised when people are exposed to psychological trauma, resulting in emotional memories popping up involuntarily and out of context," said co-author Neil Burgess of UCL.

However, Burgess added that the binding of an event memory with its context may be partly restored with rest, facilitating deliberate control of the memory.

The researchers mentioned that specific brain systems could be targeted to reduce the development of PTSD, as treatments focusing on re-exposure and integrating the trauma with other information are beneficial.

"Our findings contribute to a better understanding of the mechanisms that are at play when some people develop memory disturbances following trauma while others do not," said co-author of the study Lone Horlyck from UCL. — PTI

Healthier diet

Healthier diet may reduce depression risk: Study (The Tribune: 201901011)

<https://www.tribuneindia.com/news/health/healthier-diet-may-reduce-depression-risk-study/845275.html>

Eating a healthy diet rich in fruits, vegetables, fish, and lean meat is associated with a reduced risk of depression, according to a study.

The research, published in the journal PLOS ONE, found that young adults with depression whose diet is usually unhealthy showed significantly fewer symptoms of depression after eating a healthy diet for three weeks.

Researchers from Macquarie University in Australia, and colleagues studied 76 university students aged between 17 and 35 years.

They exhibited moderate-to-high depression symptoms and followed a poor diet based on the Australian Guide to Healthy Eating—high in processed foods, sugar, and saturated fats.

The researchers randomised participants into a “diet change” group or a “regular diet” group.

The diet change group was given brief instructions on improving their diet, as well as a healthy food hamper and 60 dollars towards future groceries.

Each group member also received two subsequent check-ins via phone call.

The regular diet group did not get any diet instructions and was simply asked to return after the three weeks were up.

Before and after the intervention, the researchers assessed participants’ scores for depression, anxiety and overall mood, and their performance on several learning and reasoning tasks.

At the end of the three weeks, the diet change group had successfully maintained a healthy diet and showed significant improvement in mood, with depression scores shifting into the normal range.

The regular diet group’s depression scores remained stable in the moderate-to-high range.

The diet change group also showed significantly lower anxiety scores than the regular diet group, though other measures were not significantly different between the groups.

The researchers followed up with 33 of the participants after three months.

In this small sample, they found that while only 21 per cent of these participants fully maintained the healthy diet, those that did maintained their improvements in mood.

The researchers noted that the findings are derived from a small, specific population of university students.

However, they provide preliminary evidence that relatively small, simple diet adjustments can directly improve depression symptoms, and that these effects can last up to three months.—
PTI

World Mental Health Day

World Mental Health Day: Eat happy to feel happy (The Tribune: 201901011)

<https://www.tribuneindia.com/news/health/world-mental-health-day-eat-happy-to-feel-happy/845268.html>

Feeling down in the dumps, consumed with anxiety at the thought of the day ahead or unable to muster the energy to face the outside world? Your mood enhancer is as close as the fridge, stocked hopefully with “happy food” like banana and berries, kale and cabbage.

‘You are what you eat’ should be an everyday mantra to keep you healthy in body and also to keep you fit mentally is the new thinking in the medical community, which is increasingly using “nutritional psychiatry” to combat a spectrum of ailments.

Consuming a “happy diet” can help “avoid, treat and prevent” depression, anxiety, post traumatic stress disorder (PTSD) and other mental illnesses, said several medical consultants and researchers on World Mental Health Day, observed every year on October 10.

According to clinical psychologist Preeti Singh, research in the field of nutritional psychiatry has shown that optimisation of micro-nutrients is a “viable way to avoid, treat and prevent mental illnesses”.

“Poor nutrition is a significant risk factor for developing mental illnesses,” the doctor at Gurgaon’s Paras Hospital told PTI.

Not more than a couple of decades old, nutritional psychiatry goes beyond treating mental illnesses solely through medication, and explores food items containing specific micro-nutrients (omega-3, B vitamins, amino acids, zinc, magnesium and iron) as a possible treatment to keep the mind happy.

A “happy diet” can comprise leafy vegetables like kale, cabbage and spinach as well as broccoli, mushrooms, red/yellow bell peppers, zucchini, onions, oregano, and vitamin rich fruits like berries, apples, oranges, peaches and pears.

Proteins can be consumed in the form of eggs, cheese, chicken and fish, while nuts, almonds, and pistachios can supply the micro-nutrients.

The mental health awareness movement gained momentum in India when Bollywood actor Deepika Padukone opened up about her battle with depression in 2015, reassuring those suffering that it was ‘okay to not feel okay’.

A 2018 study by global medical journal Lancet noted that people with mental illnesses accounted for nearly 6.5 per cent of the Indian population, which, it said, was likely to increase to 20 per cent in 2020.

Diagnosed with clinical depression, anxiety and PTSD a few years ago, UK-based teacher Kasturi Roy Bardhan said she found relief in medication, face-to-face therapy as well as a change in diet.

She was unable to find work for a long time and, when she did, dragging herself to work became an “everyday battle”, she recalled.

“Making sure you are eating healthy, or food that you generally associate with positive memories or thoughts makes you feel better emotionally,” the 29-year-old said.

A September 2019 study conducted by Australia's Deakin University revealed that dietary intervention can reduce depressive symptoms in individuals more efficiently than social support, which is known to be helpful for people with mental health issues.

For the experiment, adults with major depressive disorders were recruited and randomly assigned to receive either social support or support from a clinical dietician over a three-month period.

The results showed that around 33 per cent of those in the dietary support group met criteria for remission of major depression, compared to only 8 per cent of those in the social support group.

"The results of the team's new study offer a possible new treatment approach to depression, one of the world's most prevalent and costly medical disorders," Felice Jacka, director of Deakin's Food and Mood Centre, said in the report.

Biologically put, chemicals produced in the gut also affect the brain, and by altering the type of food, it is possible to improve one's brain health.

"Food is generally associated with just weight loss and weight gain," said Mumbai-based nutritional consultant Jaydeep Bhuta.

He explained that consumption of certain food items help release happy hormones that get processed by the brain and help improving the mood.

"There's a saying—'You are what you eat'. It simply means that whatever you eat, directly affects the structure and function of your brain and, ultimately your mood," Bhuta said.

Banana, for instance, is known to be a great mood lifter, added Delhi-based nutritionist Surbhi Aggarwal.

"It releases the happy hormone serotonin. So, we can say, 'Eating one banana every day, keeps the mental health issues away'," she added.

One can keep the happiness metre high by consuming antioxidant-rich products such as apricots, carrots, sweet potatoes, kiwis, tomatoes, along with healthy carbohydrates that can be found in abundance in legumes.

Gurgaon-based theatre artiste Sakshi Gandhi was prescribed food rich in iron, and vitamin D to treat her depression, which was adversely affecting her day-to-day life.

Her sleeping patterns changed, she would have disturbing thoughts and completely stopped socialising, she said.

"A change in diet along with exercises was prescribed. It helped in overall increase of energy levels, and I stopped feeling exhausted, both mentally and physically," she added.

Both medical experts as well as nutritionists agree that while a balanced diet can enhance the treatment of mental illnesses, it is not an alternative to traditional medication.

"Right food can enhance positive effect of medication but this can't be an alternative to psychotropic drugs (medication capable of affecting the mind, emotions, and behaviour)," said Shweta Sharma, clinical psychologist at Gurgaon's Columbia Asia hospital.

“With the right diet, one can control side effects and the duration to continue the medication,” she added.

So if you are not feeling great, talk to friends, exercise, seek professional help—but also remember to eat happy. — PTI

Tomatoes

Eating tomatoes could increase sperm count (The Tribune: 201901011)

<https://www.tribuneindia.com/news/health/eating-tomatoes-could-increase-sperm-count/845259.html>

Sperm quality could be improved with a simple diet supplement containing LactoLycopene found in cooked tomatoes.

LONDON: Tomatoes might cost you dearly in India nowadays, but adding one or two in your daily diet could keep your virility up and running, according to researchers.

A dietary compound called LactoLycopene found in tomatoes has been shown to improve sperm quality and those took this supplement had almost 40 per cent more fast swimming sperm with improvements to sperm size and shape.

“We didn’t really expect that at the end of the study, there would be any difference in the sperm from men who took the tablet versus those who took the placebo. When we decoded the results, I nearly fell off my chair,” said Allan Pacey, Professor of Andrology Reproduction and Head of the University of Sheffield’s Department of Oncology and Metabolism.

The discovery could transform the outlook for men with fertility problems as sperm quality could be improved with a simple diet supplement containing LactoLycopene found in cooked tomatoes.

The 12-week trial designed by Liz Williams, a leading specialist in human nutrition at the University of Sheffield, involved 60 healthy volunteers aged 19-30.

Half took LactoLycopene supplements and the other half took an identical placebo (dummy pills) every day for 12 weeks.

Sperm and blood samples were collected at the beginning and end of the trial.

The team discovered that it is possible to increase the proportion of healthy shaped sperm (sperm morphology) and boost ‘fast swimming’ sperm by around 40 per cent.

Lycopene can be found in some fruits and vegetables, but the main source in the diet is from tomatoes.

Lycopene is a pigment that gives tomatoes their red colour, but the dietary Lycopene is poorly absorbed by the human body, so the compound used for the trial was a commercially available formulation called LactoLycopene; designed by FutureYou Cambridge to improve bioavailability.

“The improvement in morphology, the size and shape of the sperm, was dramatic. This was the first properly designed and controlled study of the effect of LactoLycopene on semen quality, and it has spurred us to want to do more work with this molecule,” explained Pacey.

“We were surprised by the improvement in sperm quality shown by the results,” added Williams in a paper published in the European Journal of Nutrition.

The next step for researchers is to repeat the exercise in men with fertility problems and see if LactoLycopene can increase sperm quality for those men and whether it helps couples conceive and avoid invasive fertility treatments. — IANS

Antibiotic resistance

New method using viruses to kill bacteria may help fight antibiotic resistance (The Tribune: 201901011)

<https://www.tribuneindia.com/news/health/new-method-using-viruses-to-kill-bacteria-may-help-fight-antibiotic-resistance/845253.html>

Researchers have developed a new method to target and kill specific bacteria using viruses, an advance that may help overcome the growing threat of antibiotic resistance.

The results of the study, published in the journal Cell, showed that bacteria-infecting viruses called bacteriophages, or simply phages, could kill different strains of the bacterium E. coli by making mutations in a viral protein that bound to host cells.

The researchers, including those from Massachusetts Institute of Technology (MIT) in the US, collaborating with the US Army, showed that the phages they tweaked in the lab were less likely to provoke resistance in bacteria.

According to the researchers, antibiotic resistance is one of the most pressing public health concerns in the world.

For instance, a recent study, published in the journal Science, revealed that the rates of antibiotic resistance in bacteria present in animals raised for meat nearly doubled since 2000.

"Finding a cure for antibiotic-resistant bacteria is particularly important for soldiers who are deployed to parts of the world where they may encounter unknown pathogens or even antibiotic-resistant bacteria," said James Burgess, programme manager in the US Army.

Burgess added that wounded soldiers are even more susceptible to infections, and may come home carrying the drug-resistant bugs.

To tackle this looming crisis, the researchers created several engineered phages that could kill E. coli grown in the lab.

The team created phages with about 10 million different configurations to the part of the virus that attached to bacteria, called the tail fibres.

The researchers tested these variants against several strains of E. coli that had evolved to be resistant to the natural bacteriophage.

One way in which the E. coli became resistant to bacteriophages was by mutating certain receptors on its surface, the study noted.

But, the MIT team found that some of their lab grown phages could kill even strains of E. coli missing these receptors.

One of the newly created phages, the researchers said, could eliminate two E. coli strains that were resistant to naturally occurring phages.

"Phages represent a very different way of killing bacteria than antibiotics, which is complementary to antibiotics, rather than trying to replace them," said Timothy Lu, senior author of the study from MIT.

The researchers said that the Food and Drug Administration (FDA) in the US has approved treatments for killing harmful bacteria in food using bacteriophages.

However, they added that the method is not widely used to treat infections since finding naturally occurring phages that can target the right kind of bacteria is a "difficult and time-consuming process."

To overcome this problem, the researchers have been working on lab grown viral scaffolds that can be re-engineered to target different bacterial strains, or different resistance mechanisms.

"We think phages are a good toolkit for killing and knocking down bacteria levels inside a complex ecosystem, but in a targeted way," Lu said. PTI

Smoking (The Tribune: 20190101)

<http://onlinepaper.asianage.com/article/detailpage.aspx?id=13901124>

Act swiftly now, or allow India to go up in smoke!



Mohan Guruswamy

Speaking on his regular "Mann Ki Baat" radio programme recently, Prime Minister Narendra Modi urged the country to give up tobacco consumption and not to harbour any misconception about cigarettes. As a first step, the government has banned the sale of e-cigarettes. But much more needs to be done. The consumption of tobacco in all its forms — cigarettes, charoots, bidis, gutka and other forms of chewing tobacco — is our number one health challenge now. According to the World Health Organisation, there are approximately 120 million smokers in India, and India is the home of 12 per cent of the world's smokers. More than 10 million die each year due to tobacco in India. According to the same study, 70 per cent of adult males in India smoke. Among adult females, the figure is much lower, at between 13-15 per cent. The total tax

revenue derived from cigarettes and tobacco products is about ₹30,000 crores. According to a study commissioned by the government, the total economic costs attributable to all diseases related to tobacco consumption is over ₹1,04,000 crores. But there is good news from the cigarette industry. Finally, after decades of continuous growth, the industry has recorded a decline of 8.2 per cent in sales volume in 2015 over the previous year. The declining trend has been evident for the previous three years. Despite this, the numbers are still pretty impressive, the number of cigarettes smoked last year having declined to a whopping 86,547 million from 92,380 million. We do not know if there was a corresponding fall in the incidence of cancer and other smoking-induced ailments. That we will never know because the government, presumably under pressure from

the rich and powerful cigarette industry, has not yet conducted a detailed study of this, and the consequential cost to the economy despite a specific request from the department of revenue to enable it to evolve a scientific basis for cigarette taxation. Whatever be the drop in stick sales, it is very evident that rupee sales and profits have not shown any decline. Industry bosses can, like the cigarette-smoking Dev Anand in Hum Dono did, continue to sing "Aarbadhion Ka joshin manzeta chala gaya, har fikr ko dhuey mey udhatha chala gaya". Objectively speaking, this is not a bad situation at all, and is proof that government policy, whether deliberate or accidental, is still halfway good. For, as far as this industry goes, a good policy will ensure that the state gets more revenues, the companies prosper but not by too much, while the consumption keeps dropping each year. Last year's decline is accompanied by another silver lining. The consumption of mini-cigarettes has fallen sharply by 16.8 per cent. But this does not necessarily mean good news on the health front as dropouts may have switched to bidis. The consumption of regular cigarettes has more or less remained static, having fallen by only 1.7 per cent.

Tobacco farming makes a huge footprint on our agriculture and now accounts for 4,95,000 hectares of the most fertile land. Tobacco farmers derive all the largesses the Central and state governments confer on them. Nevertheless, the decline in consumption, attributed by the industry to higher excise duties in each of the previous few Budgets, means that the policy is in the right direction and that there is a case for increasing the tariffs on cigarettes and bidis once again this year. The cigarette industry will, no doubt, argue now that it is not wise to kill the goose that lays the golden egg. In this case, it is not a golden egg but a time bomb as each cigarette smoked now implies a future medical cost. Very recently, the American government negotiated a \$88-billion damages package from the US cigarette industry to pay for future health costs. As an adviser to the Union finance minister, I had once recommended that the health ministry be asked to similarly estimate future

health costs in India. It followed that excise duties should be determined with the idea of recovering these costs now. I also advised that raising excise duties each year is a win-win situation. If consumption drops, it means future savings. If in the process revenue does not go up too, it is still very good because it still implies future savings. Even if revenue comes down, the government should see this as an investment in the future. It is not that the incidence of smoking is low in India if we take into consideration the widespread bidi habit. NCAER has estimated that 216 million people belong to households with an annual income of over ₹12,200. Logic suggests that the vast majority of cigarette smokers must come from this segment. Assuming that every even half of all males over 18 years from this segment are smokers, we have a smoking cohort of about 60 million consuming 90 billion cigarettes each year, or a per capita consumption of about 1,500 cigarettes each year. This is, by any standards, a very high and dangerous figure. Another point of concern is that US congressional investigations have revealed that cigarette companies routinely spiked tobacco with extra nicotine to intensify addiction. It is rumored that

similar practices are still widespread in India. There is, therefore, a case for pegging excise duties with nicotine content also. One reason suggested for the drop in stick sales in the first half is that smuggled cigarettes ate into the share of locally-produced brands. Industry analysts estimate that of \$30 billion in worldwide cigarette sales, about \$10 billion worth are for illegal exports. They are called illegal exports because though the exports are legal, they are meant to end up smuggled into countries that curb imports or have high tariffs. Thus, in the books of the manufacturer, BAT or whoever, they show up as exports. But these are not exports to distributors in consuming countries but to intermediaries who are smugglers. The port of Antwerp is the hub of the international cigarette smuggling business. Antwerp is to cigarettes what Dubai is to gold! The Indian cigarette industry estimates that smuggled international brand penetration now accounts for two per cent of the market and to some 30-40 per cent of the segment for king size cigarettes. Cigarettes are an easy target because they are in the organised sector. But the consumption of bidis and chewing tobacco is just as dangerous, and

these sectors are growing. So the danger to public health only keeps increasing. The unfortunate part of this is that the government actively supports and subsidises the increased production of tobacco. Tobacco farming makes a huge footprint on our agriculture and now accounts for 4,95,000 hectares of the most fertile land. Apart from using up valuable agricultural land, tobacco farmers derive all the largesses the central and state governments confer on them. Free water and free power are the more obvious ones. Then there is subsidised fertiliser and tax-free status for all farming. The government must revise these policies. I would like to see tobacco farming taxed on an acreage basis to make it less profitable and for the government to recover all the unmerited subsidies tobacco farmers enjoy. This is easier said than done. The tobacco sector is a powerful vested interest. ITC and the other cigarette manufacturers are the top half of that pyramid. It's easy to take it on, but it is now time to take on the base. *The writer, a policy analyst studies economic and security issues, held senior positions in government and industry. He also specialises in the Chinese economy.*

Thyroid cancer

Thyroid cancer: New test could reduce unnecessary diagnostic surgeries (Medical News Today: 201901011)

<https://www.medicalnewstoday.com/articles/326623.php>

A novel test that looks for a molecular fingerprint in needle biopsies could help improve the diagnosis of thyroid cancer and reduce unnecessary surgeries, according to new research.

doctor checking person's glands

A new thyroid cancer test could prevent unnecessary invasive procedures.

A recent PNAS paper describes the new test and how it performed in a pilot study.

The findings showed the new method to be faster and around two-thirds more accurate than those that doctors currently rely on to diagnose thyroid cancer.

The researchers say that larger trials now need to validate these early findings before doctors can start using the new test as part of routine clinical diagnosis of thyroid cancer.

Should the larger studies confirm the findings, the new test could prevent thousands of unnecessary partial or total thyroid removals each year in the United States.

Many patients who undergo thyroid removal have to take hormone replacement therapy for the rest of their lives.

"If we could prevent people from having surgery they don't need and enable them to have a more precise diagnosis," says co-senior study author Livia S. Eberlin, Ph.D., assistant professor of chemistry and diagnostic medicine at The University of Texas at Austin, "we can improve treatment for patients and lower costs for the healthcare system."

Thyroid cancer diagnoses have gone up

The thyroid is a butterfly-shaped gland in the base of the throat under the Adam's apple, or thyroid cartilage. The gland has an important role in the endocrine system.

With the help of iodine, the thyroid gland releases hormones that control metabolic rate, heart rate, body temperature, and blood pressure.

What does a hypoechoic thyroid nodule mean?

What does a hypoechoic thyroid nodule mean?

Thyroid nodules are common and mostly harmless. However, they carry a low risk of cancer. Learn more in this article.

Since 1992, annual rates of thyroid cancer diagnoses in the U.S. have climbed from 6 to more than 14 per 100,000 adults, according to the Surveillance, Epidemiology, and End Results (SEER) Program of the National Cancer Institute (NCI), one of the National Institutes of Health (NIH).

The NCI's SEER program also estimate that there were 822,242 people living with thyroid cancer in the U.S. in 2016.

The American Cancer Society suggest that the main reason for the dramatic rise in thyroid cancer diagnoses in recent decades is the greater use of diagnostic technology such as ultrasound that can spot small nodules in the thyroid.

Limitations of current thyroid biopsy method

To diagnose thyroid cancer, doctors usually begin with a biopsy procedure called fine needle aspiration (FNA) to remove some thyroid tissue. A pathologist then examines the biopsy samples to see if the tissue is cancerous.

However, because of the limitations of the current tissue analysis tools, around 1 in 5 FNA tests cannot confirm whether cancer is present or not.

When FNA tests are inconclusive, doctors may then carry out genetic tests, but even these can return false-positive results: that is, indicate that thyroid cancer is present when it isn't.

Because of these uncertainties, doctors often suggest that patients undergo partial or total removal of the thyroid.

The team behind the current study used mass spectrometry imaging to develop a molecular profile, or fingerprint, of the cancer. This technology allows scientists to identify the chemical byproducts, or metabolites, of cancer cell activity.

To find out which particular metabolites to include in the fingerprint, the team compared molecular profiles from tissues of 178 people with or without thyroid cancer.

Faster and more accurate FNA tests

The researchers then tested the accuracy of the new fingerprint model in a pilot trial involving 68 people who underwent FNA tests. Nearly a third of these people had received inconclusive FNA results.

The findings revealed that the new fingerprint test produced false-positive results in around 1 in 10 cases only. A test with this level of accuracy could have kept 17 study participants from undergoing unnecessary surgery.

The team is already preparing a 2-year trial to validate the FNA findings of roughly 1,000 people in Australia, Brazil, and the U.S.

"With this next generation test," says co-senior study author Dr. James W. Suliburk, associate professor and chief of endocrine surgery at Baylor College of Medicine, in Houston, TX, "we can provide thyroid cancer diagnoses faster and with more precision than current techniques — this will be the new state-of-the-art."

"We are able to do this analysis directly on the FNA sample and much more rapidly than the current process, which could take between 3 and 30 days."

Depression

Depression: Brief change in diet may relieve symptoms (Medical News Today: 201901011)

<https://www.medicalnewstoday.com/articles/326593.php>

Published Today By Tim Newman Fact checked by Carolyn Robertson

In the first study of its type, researchers conclude that even a brief shift in dietary habits can alleviate the symptoms of depression in young adults. The findings offer hope, but more work is needed.

Young man grocery shopping

Is there a link between healthful food and good mental health?

Science has now clearly established the impact of poor diet on overall physical health.

Consuming large amounts of processed and sugary foods increases the risk of obesity, heart disease, and diabete

More recently, researchers have begun to focus on the impact of healthful or unhealthful eating on mental health.

In fact, as the authors of the latest study explain, diet is now considered a "modifiable risk factor for depression."

Although evidence is mounting, most of it is observational. In other words, currently, it is difficult to ascertain whether eating a healthful diet staves off depression or whether experiencing depression drives unhealthful eating habits.

Filling a gap

According to the authors, to date, only one randomized control trial has investigated a dietary intervention on adults with a clinical diagnosis of depression.

The 12-week study concluded that "dietary improvement may provide an efficacious and accessible treatment strategy for the management of [major depression]."

The latest study, appearing now in PLOS ONE, adds more flesh to the bones.

In this study, the scientists wanted to uncover whether young adults living with depression could benefit from a 3-week dietary intervention. At the same time, they were keen to know whether young people with depression would be able to stick to a dietary intervention.

The researchers chose to study young adults because, as they explain, "adolescence and young adulthood are a period where there is increased risk of depression, and these are also critical periods for establishing health patterns — such as diet — which will carry over into adulthood."

To investigate, researchers from Macquarie University in Australia recruited 76 participants between 17 and 35 years of age. All participants were experiencing moderate-to-high

symptoms of depression, and their standard diet included high levels of sugar, saturated fats, and processed foods.

The dietary interventions

The scientists split the participants into two groups; the "diet change" group and the "regular diet" group.

The scientists gave the diet change group nutritional advice in the form of a 13-minute video, which they posted online for the student to reference during the study.

Members of this group received a small hamper of healthful food and the promise of a \$60 gift card if they handed in their shopping receipts at the end of the study.

The diet change group also received two check-in calls during the study, on days 7 and 14. The "regular diet" group, however, received no dietary instructions, free food, or gift cards; the research team simply asked them to return after 3 weeks.

Why more depression treatments should include exercise

Why more depression treatments should include exercise

A recent review concludes that exercise can both prevent and treat depression.

At the beginning and end of the 3-week study, all participants went through a battery of tests. The scientists assessed levels of depression, mood, and anxiety, and also tested learning and reasoning skills.

As hoped, participants in the experimental group did adhere to the dietary changes. In this diet change group, depression scores improved significantly. Both anxiety and stress scores also improved.

Conversely, the regular diet group experienced no significant changes in depression score.

After 3 months, the researchers spoke with 33 of the participants over the phone. Although only seven of these individuals were maintaining the healthful eating plan, the improvements in mood were still significant across this small group.

Overall, the authors conclude:

"Modifying diet to reduce processed food intake and increase consumption of fruit, vegetables, fish, and olive oil improved depression symptoms in young adults. These findings add to a growing literature showing a modest change to diet is a useful adjunct therapy to reduce symptoms of depression."

Limitations and challenges

Although the current findings add to the evidence that food plays a role in mental health, the study does have significant limitations.

First and foremost, the study only recruited a small number of participants; and these were exclusively young adults that were attending the university, so the findings might not apply to other demographics.

Importantly, individuals in the regular diet group received no guidance, no free food, and no cash incentive; this is a considerable issue. Future studies may want to attempt to match the two conditions more closely. For instance, both groups could receive the same financial reward and check-in calls.

As for the 3-month follow-up, the research team conducted this over the telephone with just 33 participants, so it is difficult to extrapolate the findings further.

Because the relationship between nutrition and mental health is a hot topic, other researchers are likely to publish similar studies thick and fast. Both nutrition and mental health are challenging to investigate alone, so examining the interaction between the two is more difficult still.

Developing a clear picture of the role of diet in psychological well-being is complex indeed. With that said, the links between eating well and mental health are already growing stronger.

Mental Health (Navbharat Times: 201901011)

<http://epaper.navbharattimes.com/details/65999-58127-1.html>

ज्यादातर मानते हैं मेंटल हेल्थ दूसरी बीमारियों की तरह: सर्वे

■ एनबीटी, नई दिल्ली : मेंटल हेल्थ को लेकर लोगों के बीच जागरूकता बढ़ रही है। एक सर्वे के मुताबिक करीब 64 फीसदी भारतीयों का मानना है कि फिजिकल (शारीरिक) हेल्थ के साथ-साथ मेंटल (मानसिक) हेल्थ का ध्यान भी जरूरी है। वहीं 75 फीसदी भारतीय अपनी फिजिकल हेल्थ के लिए ज्यादा चिंतित हैं। वर्ल्ड मेंटल हेल्थ डे (10 अक्टूबर) के मौके पर ग्लोबल मार्केट रिसर्च कंपनी Ipsos ने यह सर्वे कराया। सर्वे में सामने आया है कि अधिकांश भारतीय मानते हैं कि फिजिकल और मेंटल हेल्थ पर समान रूप से ध्यान दिया जाना चाहिए और मेंटल हेल्थ भी दूसरी बीमारियों की तरह ही है। इसके लक्षण पता चलने पर डॉक्टर के पास जाना चाहिए। 45 फीसदी भारतीयों का मानना है कि देश में मेंटल और फिजिकल हेल्थ को बराबर तरजीह दी जाती है।



- 74 फीसदी भारतीय चाहते हैं कि मानसिक रोगों का सामना कर रहे लोगों के लिए समाज बदले
- 45% मानते हैं कि फिजिकल-मेंटल हेल्थ को बराबर तरजीह

मेंटल हेल्थ से जुड़े भ्रम हों दूर
भारतीय चाहते हैं कि मेंटल हेल्थ से जुड़े इलाज और इससे जुड़ी भ्रांतियों में साफतौर पर बड़ा बदलाव आना चाहिए। सर्वे के मुताबिक 64 फीसदी का मानना है कि मानसिक बीमारी अन्य दूसरी बीमारियों की तरह ही है।

Dementia ((Navbharat Times: 201901011)

<http://epaper.navbharattimes.com/details/66002-63350-1.html>

महिलाओं की याददाश्त अच्छी, डिमेंशिया जल्दी पता नहीं लगता

■ महिलाओं में याददाश्त कम होने या फिर डिमेंशिया के लक्षणों का पता देरी से चलता है। एक स्टडी में सामने आया है कि ऐसा इसलिए है क्योंकि महिलाओं की याददाश्त पुरुषों के मुकाबले अच्छी होती है। कई टेस्ट करने के बाद यह पता चला है। एक हजार वृद्ध लोगों पर की गई स्टडी में सामने आया कि पुरुषों के मुकाबले महिलाएं शब्दों की लिस्ट को याद रख पाईं। दस फीसदी महिलाओं ने यह टेस्ट पास किया जबकि वह ऐसा करने की



हालत में नहीं थीं। इस आधार पर विशेषज्ञों ने माना कि महिलाओं में डिमेंशिया या फिर याददाश्त कम होने से जुड़े लक्षण देरी से पता चल पाते हैं जबकि पुरुषों में इसके लक्षण पहले पता लगने लगते हैं। विशेषज्ञों का कहना है कि शोध से अल्जाइमर, डिमेंशिया जैसी बीमारियों के इलाज के नए तरीके पैदा किए जा सकते हैं। इससे यह पता लगाने में भी मदद मिलेगी कि किस उम्र में व्यक्ति को ये बीमारियां होने की संभावनाएं हैं। (एनबीटी)